



Switch Catalogue

Issue 9



About **Engelking**

Engelking Elektronik GmbH is an owner-managed company with a corporate history of 40 years. We are the leading solution provider for waterproof switches and connectors and are known for our broad portfolio.

No matter how challenging your requirements are, we are guaranteed to find the best solution – whether with a standard or a specially developed, individual product.

In this catalogue you will find a wide range of pushbuttons and piezo switches for all applications and uses.

Please feel free to contact us at any time if you have any questions. We look forward to helping you choose the right switches.



Engelking Elektronik GmbH

Albstraße 16
D-78609 Tuningen

Tel.: +49 (0)7464 9865 0
Fax: +49 (0)7464 9865 71
E-Mail: info@engelking.de
www.engelking.de

Geschäftsführer: Amos Engelking
UST-ID-Nr.: DE 189 714 518
Amtsgericht Freiburg (HRB 602241)

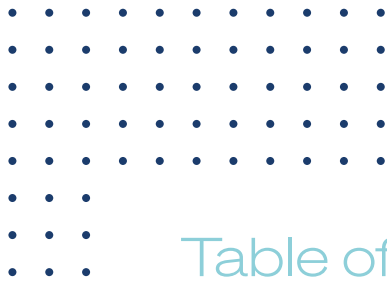


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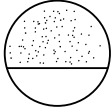
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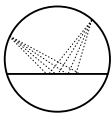
IP Degrees

First Digit

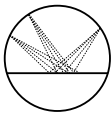


6: Dust tight. No ingress of dust.

Second Digit

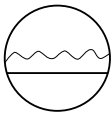


5: Protected against jets of water from any direction.

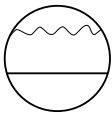


6: Protected against powerful jets of water. Prevents ingress
6: sufficient to cause harm.

Switches that fulfill the requirements of IPX6 also fulfill the requirements for IPX1 to IPX5.

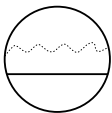


7: Protected against the effects of temporary immersion in
7: water (submerged for 30 minutes at 1m depth).

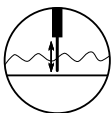


8: Protected against the effects of continuous immersion in
8: water (submerged for more than 30 minutes at more than
8: 1m depth, to be specified).

Extended IP (eIPxx) for harsh environments



C: Cleaning chemicals added to water, depth and duration to
C: be specified.







O: Duty cycle operated under water, depth to be specified.

Extended IP digits can be combined.

General Information

Key

 19mm	Mounting diameter	IP68	IP degree
 21.5mm	Outer diameter	eIPOC	Extended IP degree
 10mm	Depth	LED	LED illuminated switch
	Recommended for engraving (non-rotating button)		

Definition of Terms

- **Circuit:** The contact arrangement with the switch actuator and contacts in their free position.
- **Maintained Switch:** A switch with contacts that sustain in operated position when actuating force is removed.
- **Momentary Switch:** A switch with contacts that return from operated to free position when actuation force is removed
- **Fast Connect Terminals:** A plug-in type terminal designed for quick switch wiring.
- **Normally Closed Contacts (N.C.):** Provide a normally closed circuit when actuator is in free position.
- **Normally Open Contacts (N.O.):** Provide a normally open circuit when actuator is in free position.

Switch Types



Form Z: This breaks the circuit in two places. Also referred to as **Double Break Contacts**.



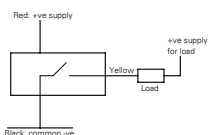
Form C: Switch which may either make or break a circuit, depending on how it is wired. Also referred to as **Single-Pole Double-Throw (SPDT)**.



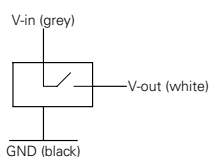
Form A: Normally open (N.O.) switch with only one moving and one stationary contact. Also referred to as **Single-Pole Single-Throw (SPST)**.



Form A: Normally closed (N.C.) switch with only one moving and one stationary contact.



Common Ground (NMOS): Is based on electronic circuitry. Switched output is pulled to ground when operated.



Common Plus (PMOS): Is based on electronic circuitry. Switched output is pulled to plus when operated.

Product Overview

Mechanical Switches




Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
 CM08	18mm	12mm	14mm	IP67		Momentary	2.0×0.5mm	Flat, raised	Form A
 CMI08	19.1mm	12mm	14mm	IP67	Ring, dot	Momentary	2.0×0.5mm	Flat, raised	Form A
 CM10	17.5mm, 20.1mm	16mm	18mm	IP65		Momentary	Screw, 2.0×0.5mm	Flat, raised, domed	Form A, Form B
 CMI10	20mm, 22.5mm	16mm	18mm	IP65	Ring, dot, power	Momentary	Screw, 2.0×0.5mm	Flat, raised, domed	Form A
 CM11	20.1mm	16mm	18mm	IP65		Momentary	Screw, 2.0×0.5mm	Flat, raised	Form A, Form B
 CMI11	20mm	16mm	18mm	IP65	Ring, dot	Momentary	2.0×0.5mm	Flat, raised	Form A
 CM57	19.7mm	16mm	18.5mm	IP67		Momentary, maintained	50cm leads, PC pins, 2.8×0.5mm	Flat	Form A
 CMI57	21mm	16mm	18.5mm	IP67	Ring, dot, power	Momentary, maintained	50cm leads, PC pins, 2.8×0.5mm	Flat	Form A
 CM15	35.7mm	16mm	18mm	IP67		Momentary, maintained	1.8×0.4mm	Flat, raised	Form C, 2x Form C
 CMI15	37mm	16mm	18mm	IP67	Ring, dot, power	Momentary, maintained	1.8×0.4mm	Flat, raised	Form C, 2x Form C
 CM16	35.7mm	16mm	18mm	IP67		Momentary, maintained	1.8×0.4mm	Flat, raised	Form C, 2x Form C
 CMI16	37mm	16mm	18mm	IP67	Ring, dot	Momentary, maintained	1.8×0.4mm	Flat, raised	Form C, 2x Form C
 ESO6	7.8mm, 10mm	19mm	21.5mm	IP68, eIPOC		Momentary	15cm leads, PC pins	Flat	Form A
 ESI11	16.5mm	19mm	21.5mm		Ring	Momentary	15cm leads	Flat	Form A
 CM20	24mm, 25.3mm	19mm	22mm	IP65		Momentary	Screw, 2.8×0.5mm	Flat, raised, domed	Form A
 CMI20	27.3mm, 27.4mm	19mm	22mm	IP65	Ring, dot	Momentary	Screw, 2.8×0.5mm	Flat	Form A
 CM21	24mm, 25.3mm	19mm	22mm	IP65		Momentary	Screw, 2.8×0.5mm	Flat, raised	Form A
 CMI21	27.3mm	19mm	22mm	IP65	Ring, dot	Momentary	Screw	Flat	Form A
 CM22	17.2mm, 19.1mm	19mm	22mm	IP65		Momentary	Screw, 2.0×0.5mm	Flat, raised, domed	Form A, Form B
 CM23	17.2mm, 19.1mm	19mm	22mm	IP65		Momentary	Screw, 2.0×0.5mm	Flat, raised	Form A, Form B
 CM25	33.5mm - 41mm	19mm	22mm	IP65, IP67		Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z
 CMI25	34.5mm - 41mm	19mm	22mm	IP65, IP67	Ring, dot, power	Momentary, maintained	Screw, 2.8×0.5mm	Flat, raised	Form Z
 CM26	33.5mm - 41mm	19mm	22mm	IP65, IP67		Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z
 CMI26	34.5mm - 41mm	19mm	22mm	IP65, IP67	Ring, dot	Momentary, maintained	Screw, 2.8×0.5mm	Flat, raised	Form Z
 CM30	36.7mm	19mm	22mm	IP67		Momentary, maintained	2.8×0.5mm	Flat	Form C, 2x Form C

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	CM I30	38mm	19mm	22mm	IP67	Ring, dot, power	Momentary, maintained	2.8×0.5mm	Flat	Form C, 2x Form C
	CM 31	36.7mm	19mm	22mm	IP67		Momentary, maintained	2.8×0.5mm	Flat	Form C, 2x Form C
	CM I31	38mm	19mm	22mm	IP67	Ring, dot	Momentary, maintained	2.8×0.5mm	Flat	Form C, 2x Form C
	CM 27	44.9mm, 51.2mm	19mm	22mm	IP65, IP67		Momentary, maintained	4.8×0.5mm	Flat	Form C, 2x Form C
	CM I27	44.9mm, 51.2mm	19mm	22mm	IP65, IP67	Ring, dot	Momentary, maintained	4.8×0.5mm, 2.8×0.5mm	Flat	Form C
	CM 35	34.8mm - 41mm	22mm	25mm	IP65, IP67		Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z
	CM I35	34.8mm - 41mm	22mm	25mm	IP65, IP67	Ring, dot, power	Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z
	CM 36	35.3mm, 40.3mm	22mm	25mm	IP65, IP67		Momentary, maintained	2.8×0.5mm	Flat	Form Z
	CM I36	35.3mm, 40.3mm	22mm	25mm	IP65, IP67	Ring, dot	Momentary, maintained	2.8×0.5mm	Flat	Form Z
	CM 37	25.3mm	22mm	25mm	IP65		Momentary	2.8×0.5mm	Flat	Form A
	CM 40	34.8mm - 41mm	25mm	28mm	IP65, IP67		Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I40	34.8mm - 41mm	25mm	28mm	IP65, IP67	Ring, dot, power	Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM 41	38.5mm, 40.8mm	25mm	28mm	IP65, IP67		Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I41	38.5mm, 40.8mm	25mm	28mm	IP65, IP67	Ring, dot	Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM 45	35mm, 38.4mm	28mm	32mm	IP65, IP67		Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I45	35mm - 40.9mm	28mm	32mm	IP65, IP67	Ring, dot	Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM 46	38.4mm, 40.8mm	28mm	32mm	IP65, IP67		Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I46	38.4mm, 40.8mm	28mm	32mm	IP65, IP67	Ring, dot	Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM 50	35mm - 40.9mm	30mm	35mm	IP65, IP67		Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I50	35mm - 40.9mm	30mm	35mm	IP65, IP67	Ring, dot	Momentary, maintained	Screw, 2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM 51	38.4mm, 40.8mm	30mm	35mm	IP65, IP67		Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I51	38.4mm, 40.8mm	30mm	35mm	IP65, IP67	Ring, dot	Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM 60	41.1mm	40mm	46mm	IP65		Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z
	CM I60	41.1mm	40mm	46mm	IP65	Ring	Momentary, maintained	2.8×0.5mm	Flat	Form Z, 2x Form Z















Product Overview




Plastic Switches

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	CM92	18.5mm	16mm	19.8mm	IP67		Momentary	15cm leads	Flat	Form A, Form B
	CM90	37.3mm	22mm	25mm	IP65		Momentary, maintained	2.8×0.5mm	Flat	Form C, 2x Form C
	CMI90	38.5mm	22mm	25mm	IP65	Power, surface	Momentary, maintained	2.8×0.5mm	Flat	Form C, 2x Form C



Non-moving Switches

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	EP03	10mm	16mm	20mm	IP68, IP69K		Momentary	15cm leads	Guided	Form A
	EPI03	10mm	16mm	20mm	IP68	Dot	Momentary	15cm leads	Guided	Form A
	NK03	10mm	16mm	20mm	IP68, IP69K		Momentary, maintained	15cm leads	Guided	NMOS
	EP06	10mm	19mm	21.5mm	IP68, IP69K		Momentary	15cm leads	Flat	Form A
	NK02	10mm	19mm	21.5mm	IP68, IP69K		Momentary, toggle	15cm leads	Flat	NMOS
	EP70	9mm	20mm	20mm	IP68, IP69K		Momentary	15cm leads	Flat	Form A
	EP15	17.8mm, 19.7mm	22mm	25mm, 26mm	IP68, IP69K		Momentary	15cm leads	Flat, guided	Form A
	NK15	17.8mm, 19.7mm	22mm	26mm, 28mm	IP68, IP69K		Momentary, toggle	15cm leads	Flat, guided	NMOS
	EPI16	10.5mm, 14mm	22mm	26mm, 28mm	IP68	Ring	Momentary	15cm leads	Flat, raised	Form A
	NKI16	10.5mm, 14mm	22mm	26mm	IP68	Ring	Momentary, toggle	15cm leads	Flat, raised	NMOS
	EPI50	17.5mm	30mm	33.5mm	IP68	Ring, dot	Momentary	20cm leads	Flat	Form A
	NKI50	17.5mm	30mm	33.5mm	IP68	Ring, dot	Momentary, toggle	20cm leads	Flat	NMOS



Capacitive Switches

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	CKI21	32mm	19mm	22mm	IP68, IP69K	Ring	Momentary, maintained	30cm leads	Flat, guided	PMOS
	CKI35	32mm	22mm	25mm	IP68, IP69K	Ring	Momentary, maintained	30cm leads	Flat	PMOS
	CKI36	32mm	22mm	25mm	IP68, IP69K	Ring	Momentary, maintained	30cm leads	Flat, guided	PMOS



Keypads

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	EPK10	4.5mm, 6.3mm	3x4	73x93mm, 78x97mm	(IP68)		Momentary	Pin header, cable		
	EPK15	4.5mm, 6.3mm	4x4	97x97mm	(IP68)		Momentary	Pin header, cable		

Indicators

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	CI04	26mm	8mm	11mm	IP67	Dot		1.8x0.4mm	Flat	
	CI05	39mm	8mm	9.5mm	IP67	Dot		2.8x0.5mm	Flat	
	CI08	27.4mm	12mm	15mm	IP67	Dot		1.8x0.4mm	Flat	

Accessories

	Series	Depth	Mounting Diameter	Outer Diameter	IP Degree	LED	Switch Function	Termination	Button Type	Circuit
	MPI-VSG	14.5mm						Spring loaded		
	AC									



CMO8 12mm Vandalproof Pushbutton

 12mm

 14mm

 18mm

IP67



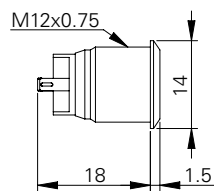
Specification

Termination	2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VDC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	20,000 (min)
Operating force	2.5N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 7.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

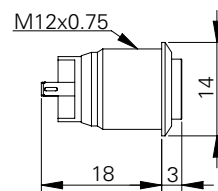
Product Dimensions

All dimensions in mm

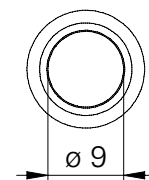
Flat



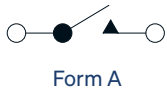
Raised



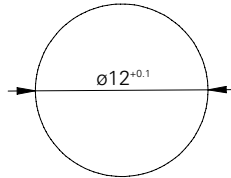
Front View (all versions)



Circuit Diagram



Mounting Dimensions



Ordering Information



Material

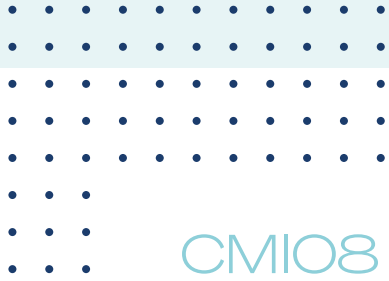
V2: Stainless steel¹
AS: Black aluminium

Button

F: Flat
R: Raised

CM08 / / / M / S / 20

¹ 14301



CMIO8 12mm Vandalproof Pushbutton



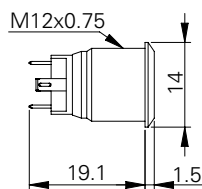
Specification

Termination	2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VDC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	200,000 (min)
Operating force	2.5N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 7.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

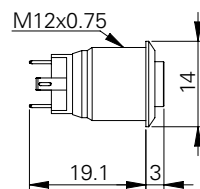
Product Dimensions

All dimensions in mm

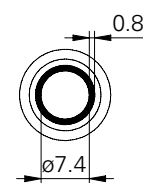
Flat



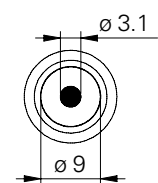
Raised



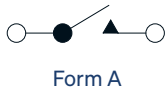
Front View (ring)



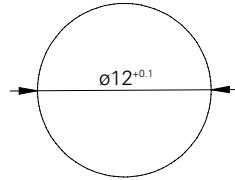
Front View (dot)



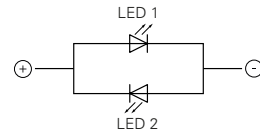
Circuit Diagram



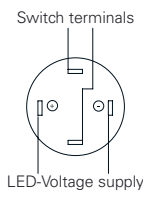
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material

V2: Stainless steel¹
AS: Black aluminium

Button

F: Flat
R: Raised

LED

R: Ring
D: Dot
P: Power²

LED Colour

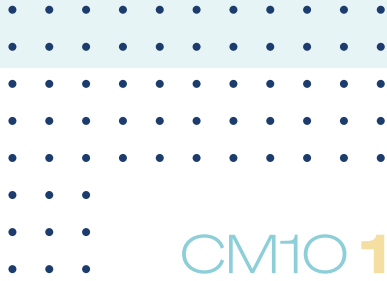
GN: Green
RD: Red
YL: Yellow
BL: Blue
WH: White
GR: Green/red^{3,4}
BR: Blue/red^{3,4}
GB: Green/blue^{3,4}

LED Voltage¹

00: No resistor⁵
06: 6 volt
12: 12 volt
24: 24 volt

CM108 / [] / [] / [] / [] / M / S / 20

¹ 14301
² Only available with flat button
³ Only available without resistor
⁴ 2 pins, colour change by swapping polarity
⁵ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)



CM10 16mm Vandalproof Pushbutton

 16mm	 18mm	 17.5mm	IP65
		 20.1mm	

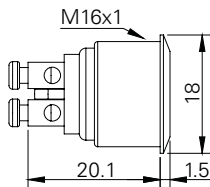
Specification

Termination	Screw or 2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VDC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 6.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

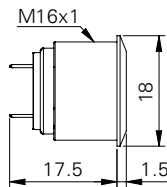
Product Dimensions

All dimensions in mm

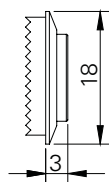
Screw Terminals Flat



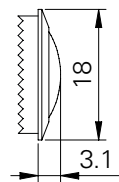
2.0mm Terminals Flat



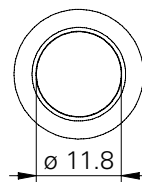
Raised



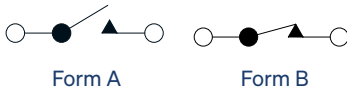
Domed



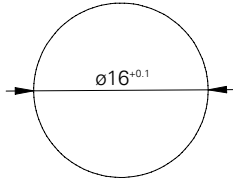
Front View (all versions)



Circuit Diagram



Mounting Dimensions



Ordering Information



Material

- V2: Stainless steel¹
- AB: Blue aluminium
- AG: Green aluminium
- AN: Natural aluminium
- AR: Red aluminium
- AS: Black aluminium
- AY: Yellow aluminium
- BN: Nickel plated brass
- GB: Gold plated brass

Button

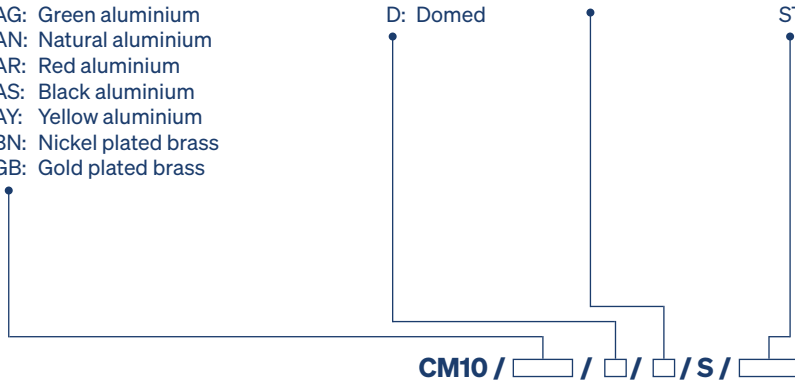
- F: Flat
- R: Raised
- D: Domed

Switch Function

- M: Momentary NO
- N: Momentary NC

Terminations

- 20: 2.0mm solder tabs
- ST: Screws



¹ 14301



CM110 16mm Vandalproof Pushbutton



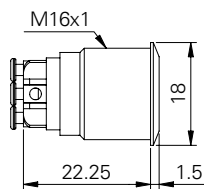
Specification

Termination	Screw or 2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VDC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 6.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

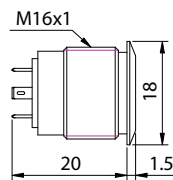
Product Dimensions

All dimensions in mm

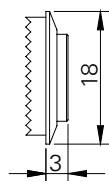
Screw Terminals Flat



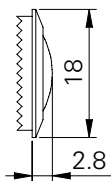
2.0mm Terminals Flat



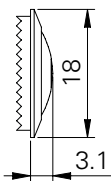
Raised



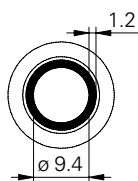
Domed (ring)



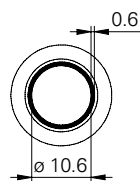
Domed (dot)



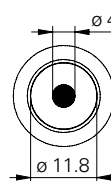
Front View (ring, flat or raised)



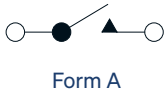
Front View (ring, domed)



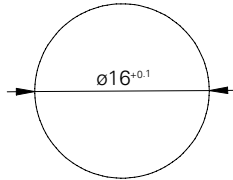
Front View (dot)



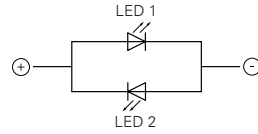
Circuit Diagram



Mounting Dimensions

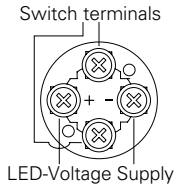


LED Circuit Diagram

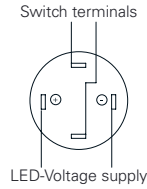


Wiring Instructions

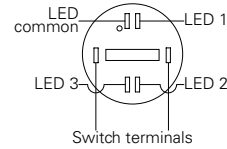
Screw terminals | 2 LED pins



Solder terminals | 2 LED pins



3&4 LED pins^{1,4}



Ordering Information



Material	Button	LED	LED Colour	LED Voltage	Switch Function	Terminations
V2: Stainless steel ¹ AS: Black aluminium	F: Flat R: Raised D: Domed	R: Ring D: Dot S: Powering ^{2,3} X: Custom ^{2,3,4}	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ⁵ BR: Blue/red ⁵ GB: Green/blue ⁵ 01: Green/red ^{3,6} 02: Green/blue ^{3,6} 03: Green/red ^{3,6} 11: RGB ^{3,7,9}	00: No resistor ⁸ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary	20: 2.0mm solder tabs ST: Screws

CMH10 / [] / [] / [] / [] / [] / S / []

¹ 14301
² Only available with flat button
³ Only available with solder terminals
⁴ IP65 (EN60529)
⁵ 2 pins, colour change by swapping polarity
⁶ 3 pins for LED connection (one per colour and common cathode (common anode available on request))
⁷ Red/green/blue, 4 pins for LED connection (one per colour and common cathode (common anode available on request))
⁸ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁹ Only available without resistor



CM11 16mm Vandalproof Pushbutton

16mm

18mm

20.1mm

IP65

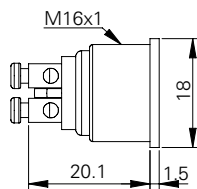
Specification

Termination	Screw or 2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VDC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 6.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

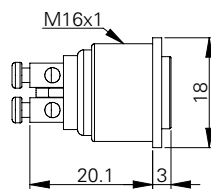
Product Dimensions

All dimensions in mm

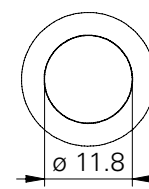
Flat Screw



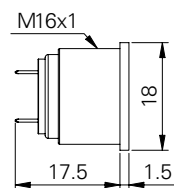
Raised Screw



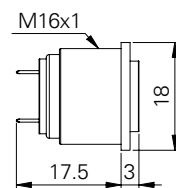
Front View (all versions)



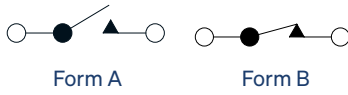
Flat 2.0mm



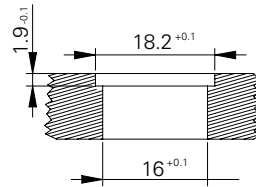
Raised 2.0mm



Circuit Diagram



Mounting Dimensions



Ordering Information



Material	Button	Switch Function	Termination
V2: Stainless steel ¹	F: Flat	M: Momentary NO	20: 2.0mm solder tabs
AS: Black aluminium	R: Raised	N: Maintained NC	ST: Screws
BN: Nickel plated brass			
GB: Gold plated brass			

CM11 / [] / [] / S / []

¹ 14301



CMI11 16mm Vandalproof Pushbutton



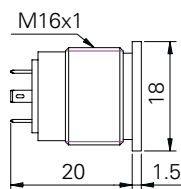
Specification

Termination	2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VDC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 6.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

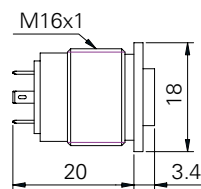
Product Dimensions

All dimensions in mm

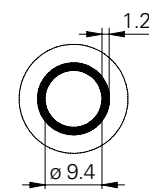
Flat



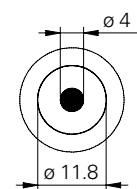
Raised



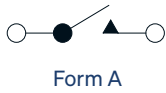
Front View (ring)



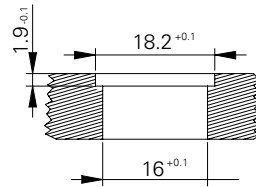
Front View (dot)



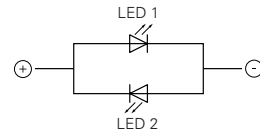
Circuit Diagram



Mounting Dimensions

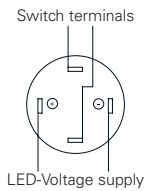


LED Circuit Diagram

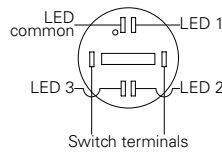


Wiring Instructions

2 LED pins



3 & 4 LED pins^{1,2}



Ordering Information








Material	Button	LED	LED Colour	LED Voltage	Switch Function
V2: Stainless steel ¹ AS: Black aluminium BN: Nickel plated brass	F: Flat R: Raised	R: Ring D: Dot X: Custom ²	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³ O1: Green/red ⁴ O2: Green/blue ⁴ O3: Blue/red ⁴ 11: RGB ^{5,7}	00: No resistor ⁶ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary

CMI11 / [] / [] / [] / [] / [] / S / 20

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ 3 pins for LED connection (one per colour and common cathode (common anode available on request))
⁵ Red/green/blue, 4 pins for LED connection (one per colour and common cathode (common anode available on request))
⁶ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁷ Only available without resistor

CM57 16mm Vandalproof Pushbutton

 16mm	 18.5mm	 19.7mm	 25.6mm	IP67
		 19.8mm		

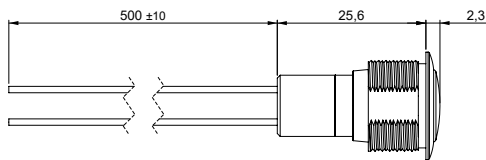
Specification

Termination	50cm flying leads, PC pins or 2.0×0.5mm solder terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	250mA, 48VDC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +85°C
Ingress protection	IP67
Duty cycle	50,000 (min)
Operating force	3N
Nut mounting torque	~ 1.0Nm
Panel thickness	0.5mm to 6.0mm
Body & button material	See ordering information
Contact material	Gold

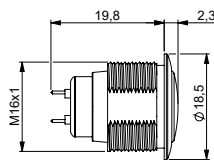
Product Dimensions

All dimensions in mm

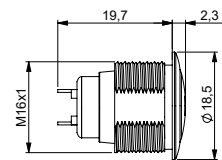
Flying Leads



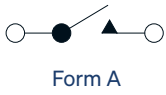
2.8mm Terminals



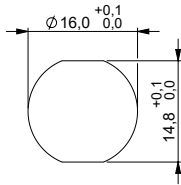
PC pins



Circuit Diagram



Mounting Dimensions



Ordering Information

Material

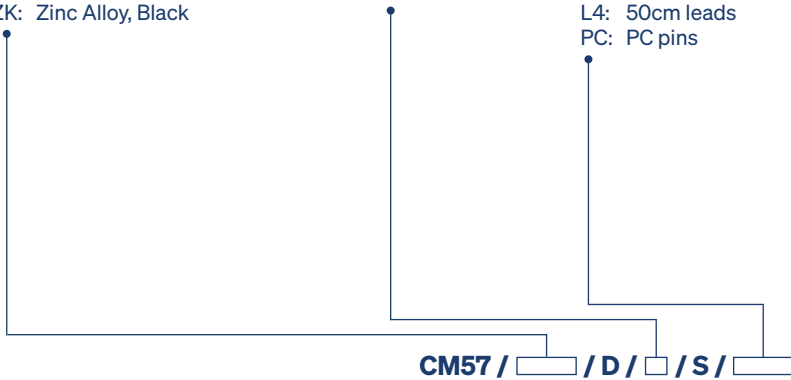
- V2: Stainless steel¹
- ZA: Zinc Alloy, Velour Chrome Plated
- ZK: Zinc Alloy, Black

Switch Function

- M: Momentary
- L: Maintained

Terminations

- 20: 2.0mm solder tabs
- L4: 50cm leads
- PC: PC pins



¹ 14301



CMI57 16mm Vandalproof Pushbutton

16mm	18.5mm	21mm	IP67
		25.6mm	

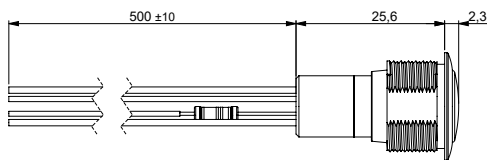
Specification

Termination	50cm flying leads, PC pins or 2.0×0.5mm solder terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	250mA, 48VDC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +85°C
Ingress protection	IP67
Duty cycle	50,000 (min)
Operating force	3N
Nut mounting torque	~ 1.0Nm
Panel thickness	0.5mm to 6.0mm
Body & button material	See ordering information
Contact material	Gold

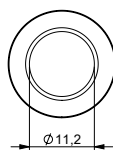
Product Dimensions

All dimensions in mm

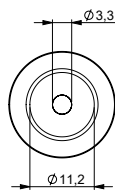
Flying Leads



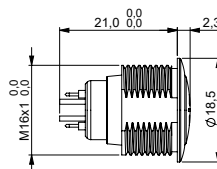
Front View (ring)



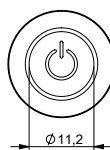
Front View (dot)



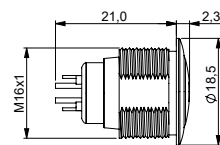
2.8mm Terminals



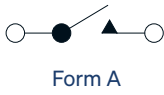
Front View (power)



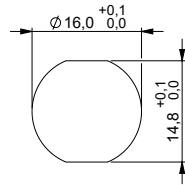
PC pins



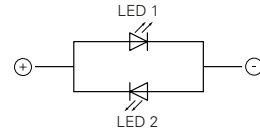
Circuit Diagram



Mounting Dimensions

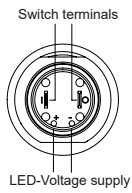


LED Circuit Diagram

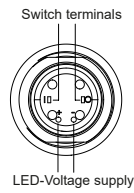


Wiring Instructions

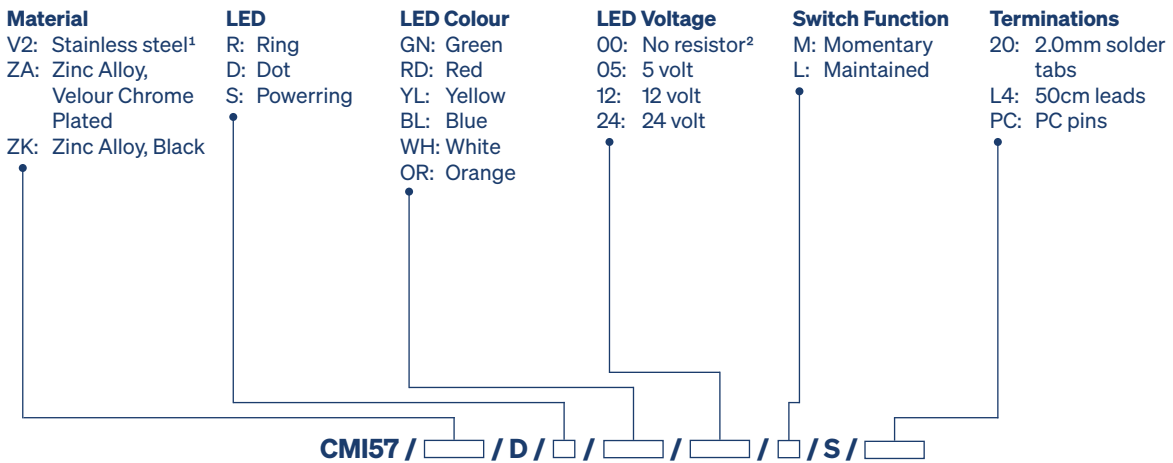
Solder terminals | 2 LED pins



PC terminals | 2 LED pins



Ordering Information



¹ 14301
² Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)



CM15 16mm Vandalproof Pushbutton



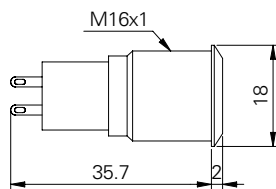
Specification

Termination	1.8×0.4mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	3A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

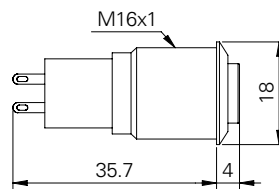
Product Dimensions

All dimensions in mm

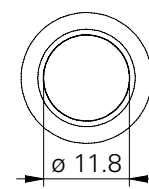
Flat



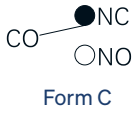
Raised



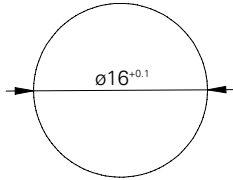
Front View (all versions)



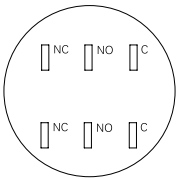
Circuit Diagram



Mounting Dimensions



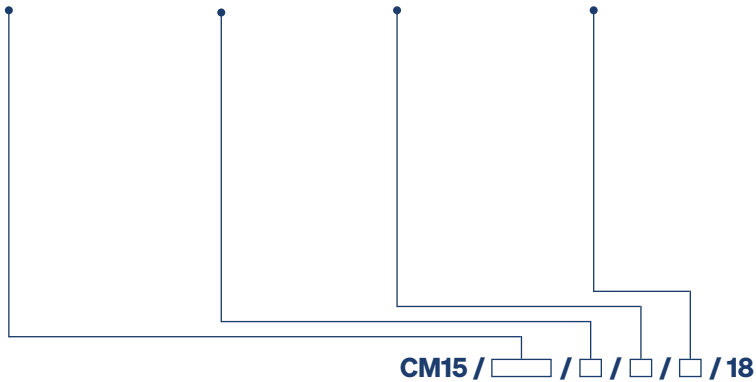
Contact Arrangement



Ordering Information



- | | | | |
|----------------------------------|---------------|------------------------|--------------|
| Material | Button | Switch Function | Poles |
| V2: Stainless steel ¹ | F: Flat | M: Momentary | S: Single |
| AS: Black aluminium | R: Raised | L: Maintained | D: Double |



¹ 14301

CM115 16mm Vandalproof Pushbutton

 16mm

 18mm

 37mm

IP67

LED



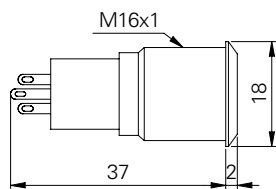
Specification

Termination	1.8×0.4mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	3A, 48AC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

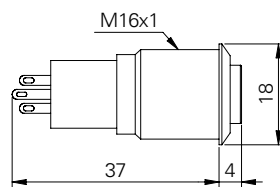
Product Dimensions

All dimensions in mm

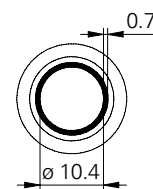
Flat



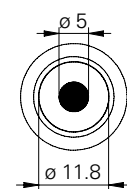
Raised



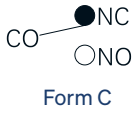
Front View (ring)



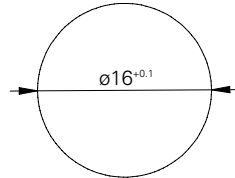
Front View (dot)



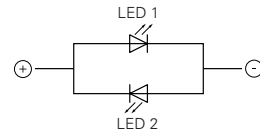
Circuit Diagram



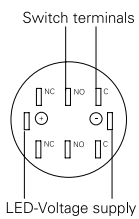
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	Button	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹ AS: Black aluminium	F: Flat R: Raised	R: Ring D: Dot P: Power ² S: Powerring ² X: Custom ^{2,3}	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ⁴ BR: Blue/red ⁴ GB: Green/blue ⁴	00: No resistor ⁵ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained	S: Single D: Double

CM115 / [] / [] / [] / [] / [] / [] / [] / 18

¹ 14301
² Only available with flat button
³ IP65 (EN60529)
⁴ 2 pins, colour change by swapping polarity
⁵ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)



CM16 16mm Vandalproof Pushbutton



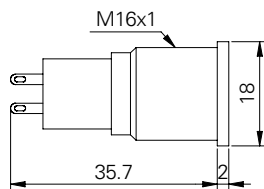
Specification

Termination	1.8×0.4mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	3A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

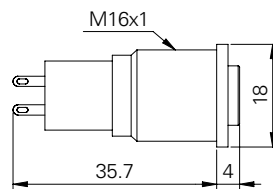
Product Dimensions

All dimensions in mm

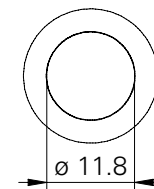
Flat



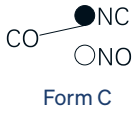
Raised



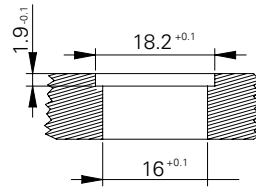
Front View (all versions)



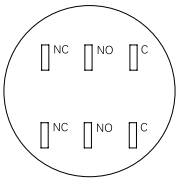
Circuit Diagram



Mounting Dimensions



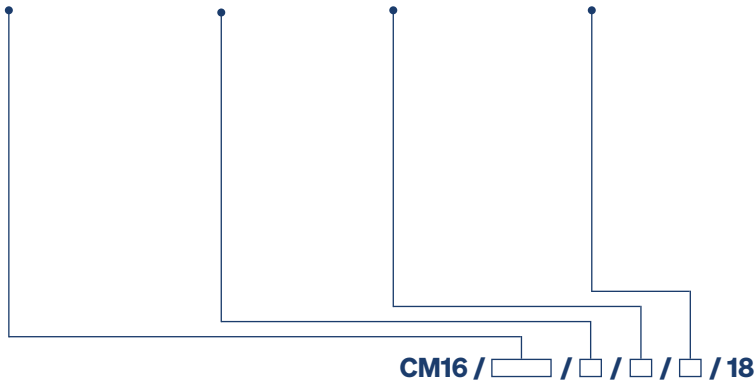
Contact Arrangement



Ordering Information



- | | | | |
|----------------------------------|---------------|------------------------|--------------|
| Material | Button | Switch Function | Poles |
| V2: Stainless steel ¹ | F: Flat | M: Momentary | S: Single |
| AS: Black aluminium | R: Raised | L: Maintained | D: Double |



¹ 14301

CM116 16mm Vandalproof Pushbutton

 16mm

 18mm

 37mm

IP67

LED



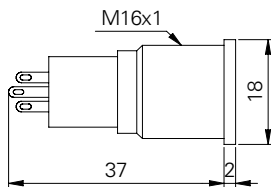
Specification

Termination	1.8×0.4mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	3A, 48VDC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.6Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

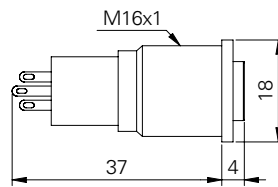
Product Dimensions

All dimensions in mm

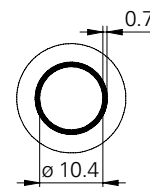
Flat



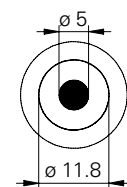
Raised



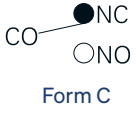
Front View (ring)



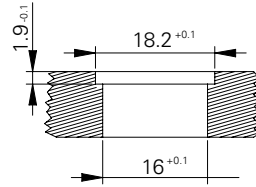
Front View (dot)



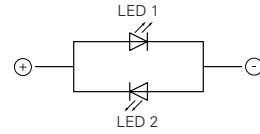
Circuit Diagram



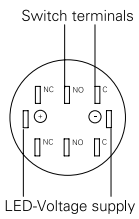
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	Button	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹ AS: Black aluminium	F: Flat R: Raised	R: Ring D: Dot X: Custom ²	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³	00: No resistor ⁴ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained	S: Single D: Double

CM116 / [] / [] / [] / [] / [] / [] / [] / 18

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

ESO6 19mm Vandalproof Pushbutton

 19mm	 21.5mm	 7.8mm	IP68	
		 10mm	eIPOC	

Specification

Termination	15cm flying leads or PC pins
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 42VDC
LED voltage	-
Contact resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP68 (EN 60529), eIPOC
Duty cycle	1,000,000 (min)
Operating force	3.3 ^{+0.6} N
Nut mounting torque	~ 2.5Nm
Panel thickness	1.0mm to 7.0mm
Body & button material	See ordering information
Contact material	Gold

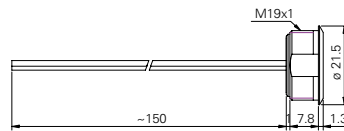
Product Dimensions

All dimensions in mm

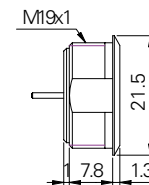
Flying Leads



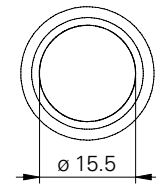
Flying Leads (aluminium)



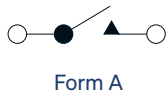
PC pins



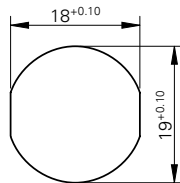
Front View



Circuit Diagram



Mounting Dimensions



Ordering Information



Material

V2: Stainless steel¹
MS: Chromed brass
AN: Natural anodised aluminium
A1: Red anodised aluminium²
A2: Blue anodised aluminium²
A3: Yellow anodised aluminium²
A4: Green anodised aluminium²

Terminals

L1: 15cm leads
PC: PC pins

ES06 FO0MM

¹ 14301

² Code is only for button material, housing is made of natural anodised aluminium

ESI11 19mm Vandalproof Pushbutton

 19mm

 21,5mm

 16.5mm

LED



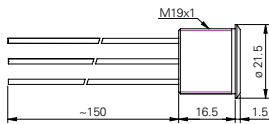
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	50mA, 24VDC
LED voltage	See ordering information
Contact resistance	100mΩ
Insulation resistance	> 100MΩ
Operating temperature	-20°C to +70°C
Ingress protection	-
Duty cycle	50,000 (min)
Operating force	1.8N
Nut mounting torque	~ 2.5Nm
Panel thickness	1.5mm to 13.0mm
Body & button material	See ordering information
Contact material	Gold

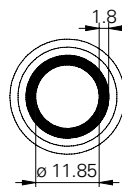
Product Dimensions

All dimensions in mm

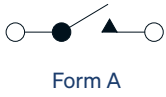
Flying Leads



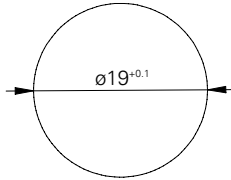
Front View



Circuit Diagram



Mounting Dimensions



Wiring Instructions

- Switch wire
- Switch wire
- Ground wire for LED
- LED colour wire for +LED

Ordering Information



Material

- V2: Stainless steel¹
- AS: Black aluminium
- AN: Natural aluminium
- PK: Black plastic
- PW: White plastic

LED Colour

- GN: Green
- RD: Red
- BL: Blue
- YL: Yellow
- WH: White
- GB: Green/blue

LED Voltage

- 00: No resistor²
- 05: 5 volt
- 12: 12 volt
- 24: 24 volt

ES111 / / F / R / / / M / S / L1

¹ 14301

² Green, blue, white: 3.2VDC | Red, orange: 2.5VDC (20mA)

CM20 19mm Vandalproof Pushbutton

 19mm	 22mm	 24mm	IP65
		 25.3mm	

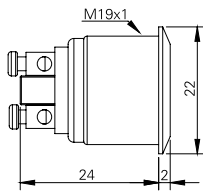
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

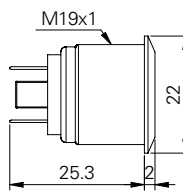
Product Dimensions

All dimensions in mm

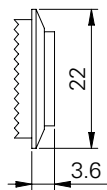
Screw Terminals Flat



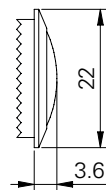
2.8mm Terminals Flat



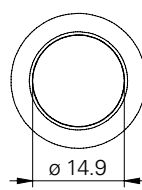
Raised



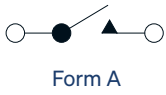
Domed



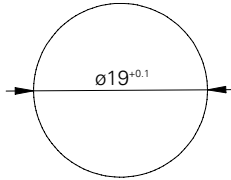
Front View (all versions)



Circuit Diagram



Mounting Dimensions



Ordering Information



Material

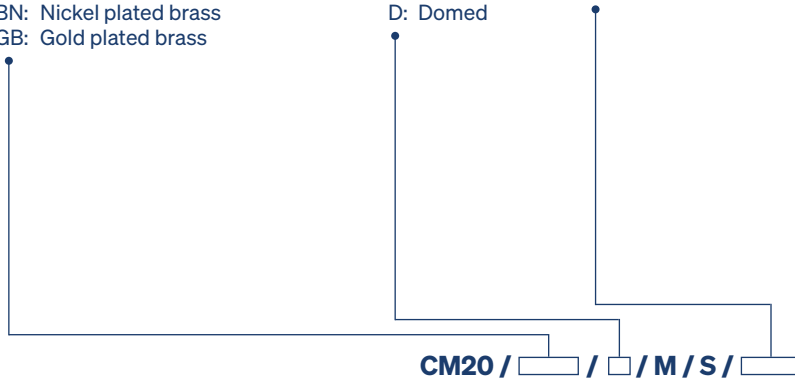
- V2: Stainless steel¹
- AS: Black aluminium
- BN: Nickel plated brass
- GB: Gold plated brass

Button

- F: Flat
- R: Raised
- D: Domed

Terminations

- 28: 2.8mm solder
- ST: Screws



¹ 14301

CMI20 19mm Vandalproof Pushbutton

 19mm	 22mm	 27.3mm	IP65	LED	
		 27.4mm			

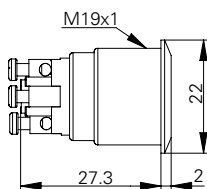
Specification

Termination	Screw or 2.8mm terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36DC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

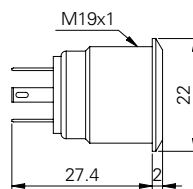
Product Dimensions

All dimensions in mm

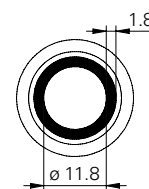
Solder Terminals Flat



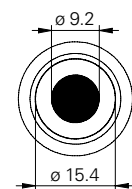
2.8mm Terminals Flat



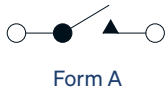
Front View (ring)



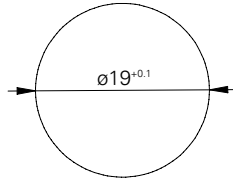
Front View (dot)



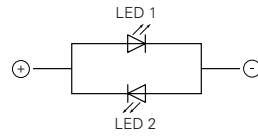
Circuit Diagram



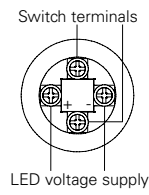
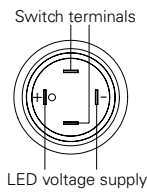
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material

V2: Stainless steel¹
AS: Black aluminium

LED

R: Ring
D: Dot

LED Colour

GN: Green
RD: Red
YL: Yellow
BL: Blue
WH: White
GR: Green/red²
BR: Blue/red²
GB: Green/blue²

LED Voltage

00: No resistor³
06: 6 volt
12: 12 volt
24: 24 volt

Termination

28: 2.8mm tabs
ST: Screws

CMI20 / [] / F / [] / [] / M / S / []

¹ 14301

² 2 pins, colour change by swapping polarity

³ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

CM21 19mm Vandalproof Pushbutton

 19mm	 22mm	 24mm	IP65
		 25.3mm	

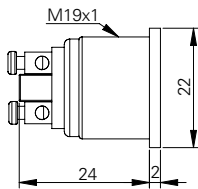
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

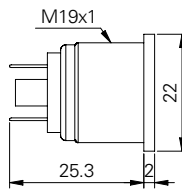
Product Dimensions

All dimensions in mm

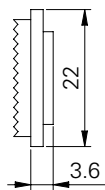
Screw Terminals Flat



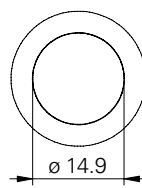
2.8mm Terminals Flat



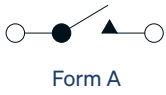
Raised



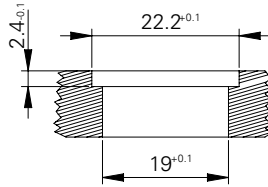
Front View (all versions)



Circuit Diagram



Mounting Dimensions



Ordering Information



Material

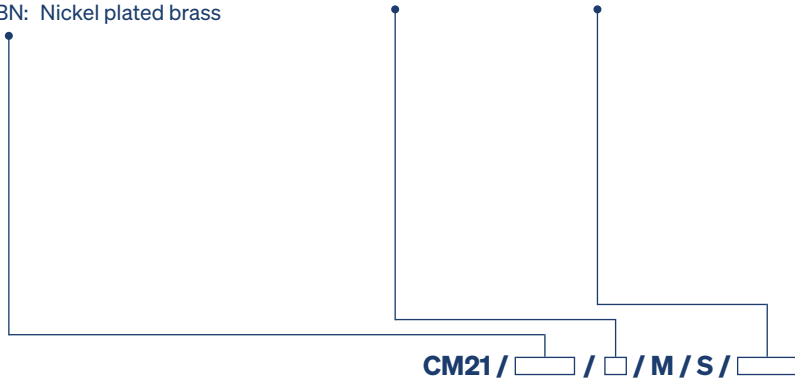
- V2: Stainless steel¹
- AS: Black aluminium
- BN: Nickel plated brass

Button

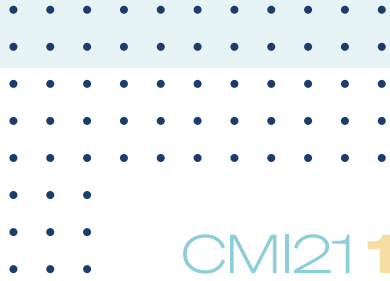
- F: Flat
- R: Raised

Terminations

- 28: 2.8mm solder
- ST: Screws



¹ 14301



CMI21 19mm Vandalproof Pushbutton

19mm

22mm

27.3mm

IP65

LED



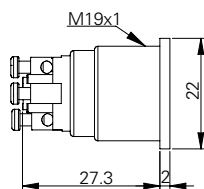
Specification

Termination	Screw terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36DC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

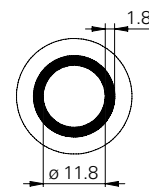
Product Dimensions

All dimensions in mm

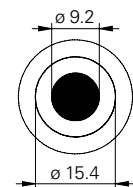
Side View



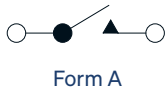
Front View (ring)



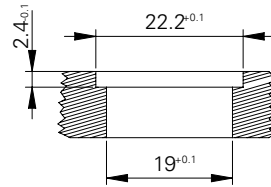
Front View (dot)



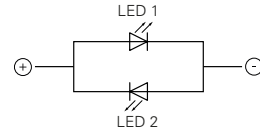
Circuit Diagram



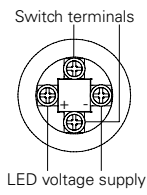
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage
V2: Stainless steel ¹	R: Ring	GN: Green	00: No resistor ³
AS: Black aluminium	D: Dot	RD: Red	06: 6 volt
		YL: Yellow	12: 12 volt
		BL: Blue	24: 24 volt
		WH: White	
		GR: Green/red ²	
		BR: Blue/red ²	
		GB: Green/blue ²	

CMI21 / [] / F / [] / [] / M / S / ST

¹ 14301
² 2 pins, colour change by swapping polarity
³ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

CM22 19mm Vandalproof Pushbutton

 19mm	 22mm	 17.2mm	IP65
		 19.1mm	

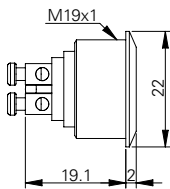
Specification

Termination	Screw or 2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 6.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

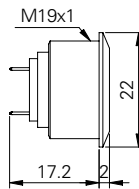
Product Dimensions

All dimensions in mm

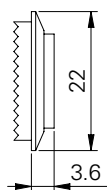
Screw Terminals Flat



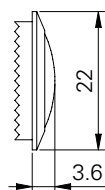
2.8mm Terminals Flat



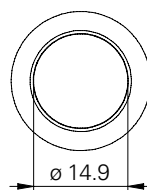
Raised



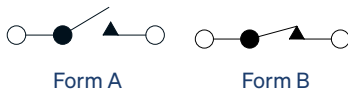
Domed



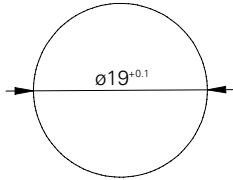
Front View (all versions)



Circuit Diagram



Mounting Dimensions



Ordering Information



Material

V2: Stainless steel¹
AS: Black aluminium

Button

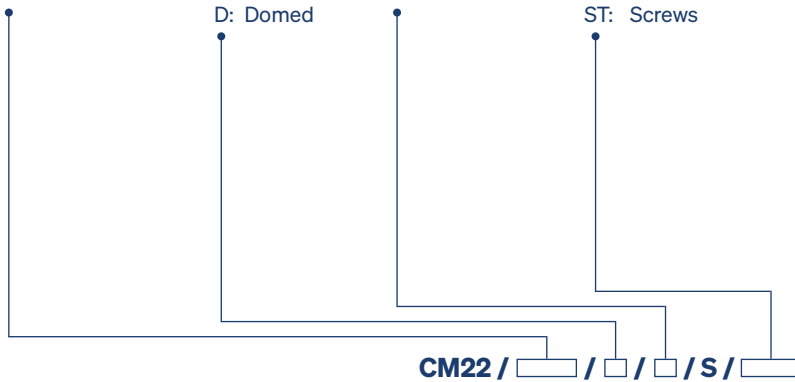
F: Flat
R: Raised
D: Domed

Switch Function

M: Momentary NO
N: Momentary NC

Terminations

20: 2.0mm solder tabs
ST: Screws



¹ 14301

CM23 19mm Vandalproof Pushbutton

 19mm	 22mm	 17.2mm	IP65
		 19.1mm	

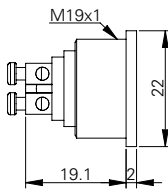
Specification

Termination	Screw or 2.0×0.5mm solder terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 6.0mm
Body & button material	See ordering information
Contact material	Silver plated brass

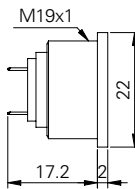
Product Dimensions

All dimensions in mm

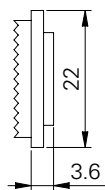
Screw Terminals Flat



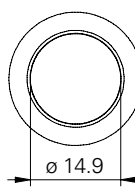
2.0mm Terminals Flat



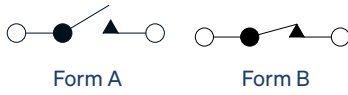
Raised



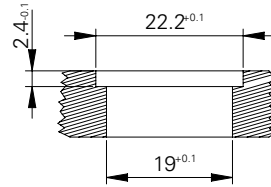
Front View (all versions)



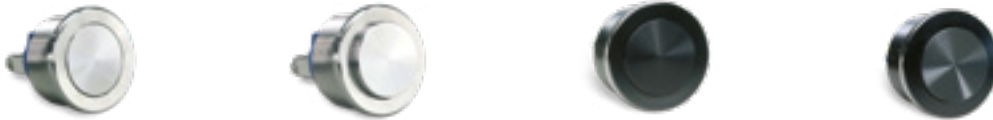
Circuit Diagram



Mounting Dimensions



Ordering Information



Material

V2: Stainless steel¹
AS: Black aluminium

Button

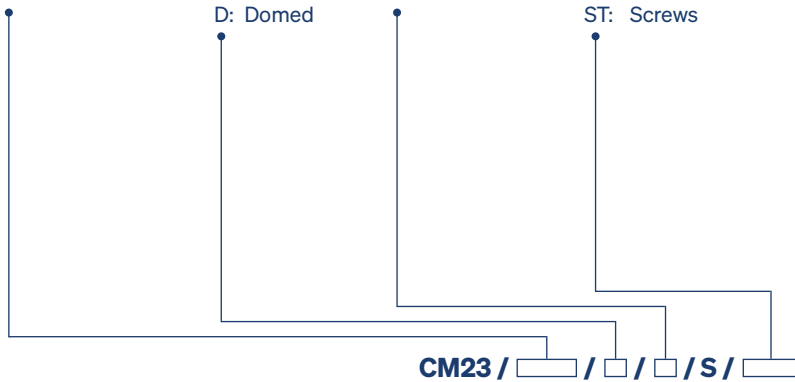
F: Flat
R: Raised
D: Domed

Switch Function

M: Momentary NO
N: Momentary NC

Terminations

20: 2.0mm solder tabs
ST: Screws



¹ 14301

CM25 19mm Vandalproof Pushbutton

 19mm	 22mm	 33.5mm	 39.5mm	IP65
		 35mm	 41mm	

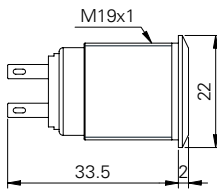
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

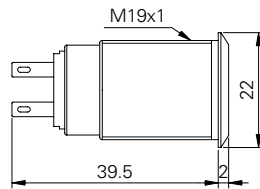
Product Dimensions

All dimensions in mm

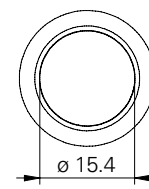
2.8mm Terminals Momentary



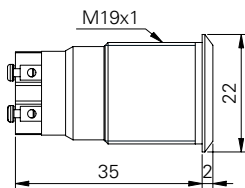
2.8mm Terminals Maintained



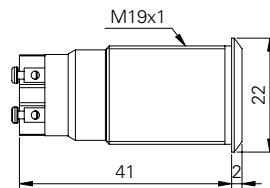
Front View



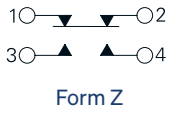
Screw Terminals Momentary



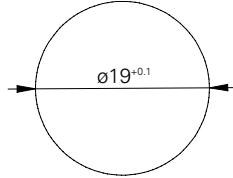
Screw Terminals Maintained



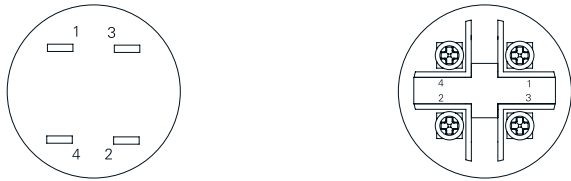
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

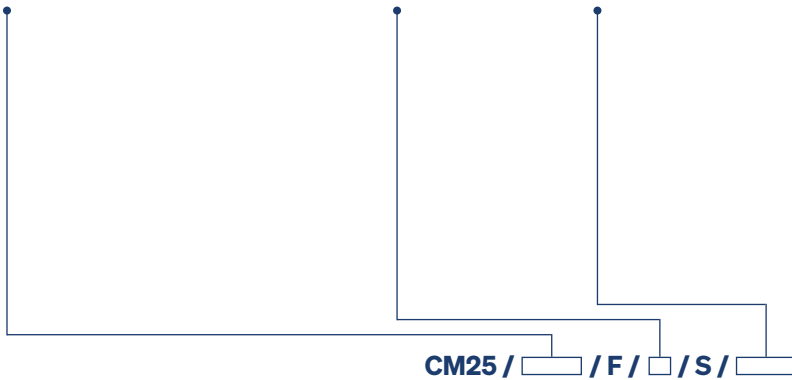
V2: Stainless steel¹
 AS: Black aluminium

Switch Function

M: Momentary
 L: Maintained²

Termination

28: 2.8mm tabs
 ST: Screws



¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI25 19mm Vandalproof Pushbutton

 19mm	 22mm	 34.5mm	 40.5mm	IP65	LED
		 35mm	 41mm	IP67	

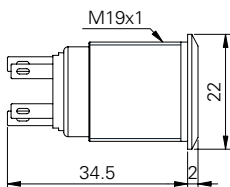
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

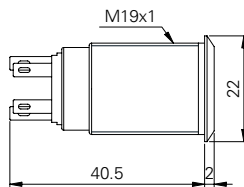
Product Dimensions

All dimensions in mm

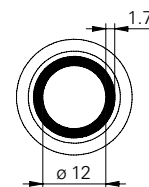
2.8mm Terminals Momentary



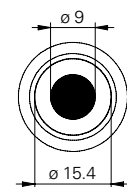
2.8mm Terminals Maintained



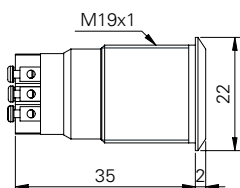
Front View (ring)



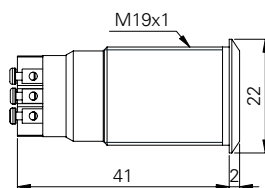
Front View (dot)



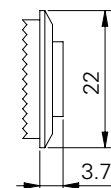
Screw Terminals Momentary



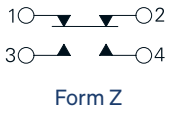
Screw Terminals Maintained



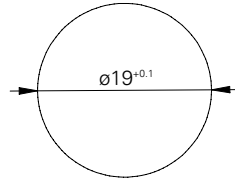
Raised



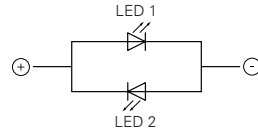
Circuit Diagram



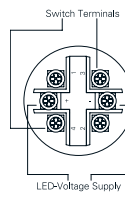
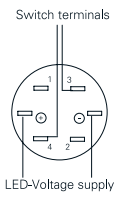
Mounting Dimensions



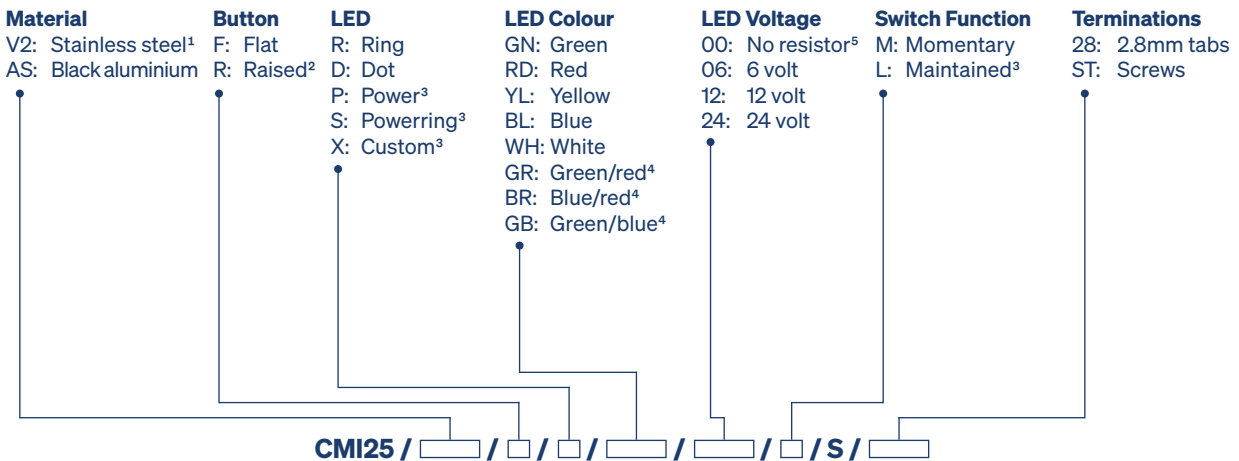
LED Circuit Diagram



Wiring Instructions



Ordering Information



¹ 14301
² Only available with ring illumination
³ IP65 (EN60529)
⁴ 2 pins, colour change by swapping polarity
⁵ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

Non rotating button available on request

CM26 19mm Vandalproof Pushbutton

 19mm	 22mm	 33.5mm	 39.5mm	IP65
		 35mm	 41mm	IP67

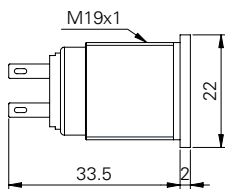
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

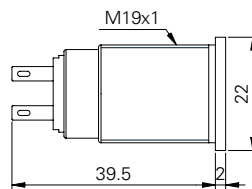
Product Dimensions

All dimensions in mm

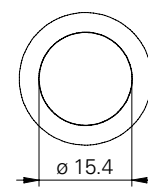
2.8mm Terminals Momentary



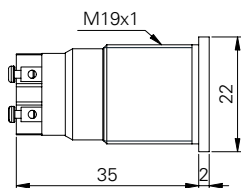
2.8mm Terminals Maintained



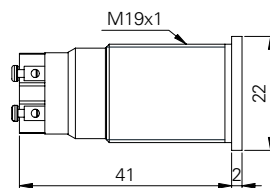
Front View



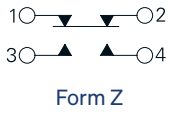
Screw Terminals Momentary



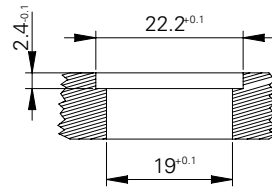
Screw Terminals Maintained



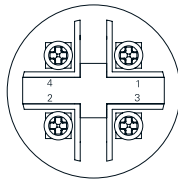
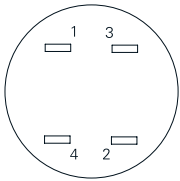
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

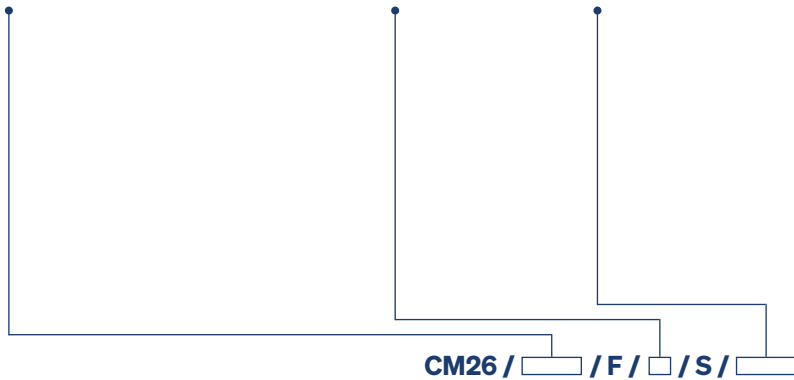
V2: Stainless steel¹
AS: Black aluminium

Switch Function

M: Momentary
L: Maintained²

Termination

28: 2.8mm tabs
ST: Screws



¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI26 19mm Vandalproof Pushbutton

 19mm	 22mm	 34.5mm	 40.5mm	IP65	LED
		 35mm	 41mm	IP67	

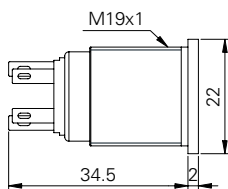
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

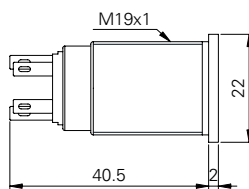
Product Dimensions

All dimensions in mm

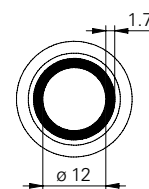
2.8mm Terminals Momentary



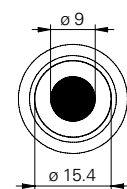
2.8mm Terminals Maintained



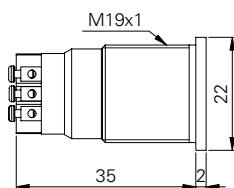
Front View (ring)



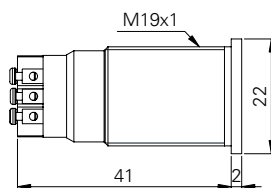
Front View (dot)



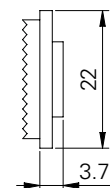
Screw Terminals Momentary



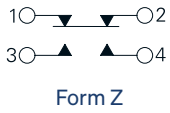
Screw Terminals Maintained



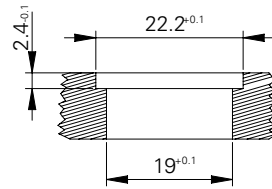
Raised



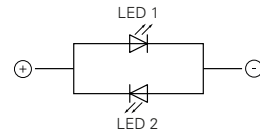
Circuit Diagram



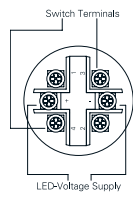
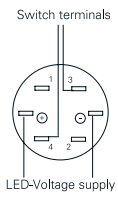
Mounting Dimensions



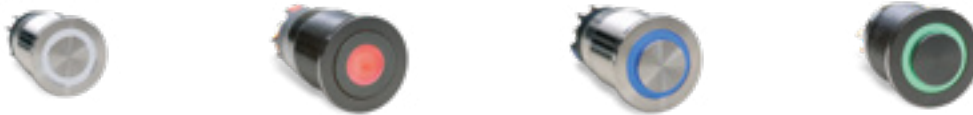
LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	Button	LED	LED Colour	LED Voltage	Switch Function	Terminations
V2: Stainless steel ¹ AS: Black aluminium	F: Flat R: Raised ²	R: Ring D: Dot X: Custom ³	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ⁴ BR: Blue/red ⁴ GB: Green/blue ⁴	00: No resistor ⁵ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ³	28: 2.8mm tabs ST: Screws

CMI26 / [] / [] / [] / [] / [] / S / []

¹ 14301
² Only available with ring illumination
³ IP65 (EN60529)
⁴ 2 pins, colour change by swapping polarity
⁵ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

Non rotating button available on request

CM30 19mm Vandalproof Pushbutton

 19mm

 22mm

 36.7mm

IP67



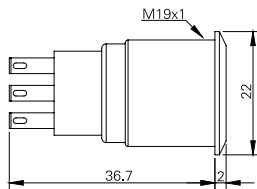
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	50A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN60529)
Duty cycle	50,000 (min)
Operating force	3N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

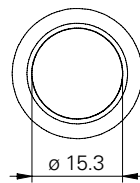
Product Dimensions

All dimensions in mm

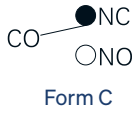
Side View



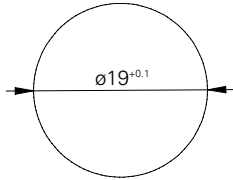
Front View



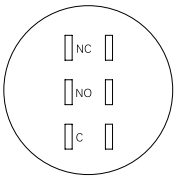
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

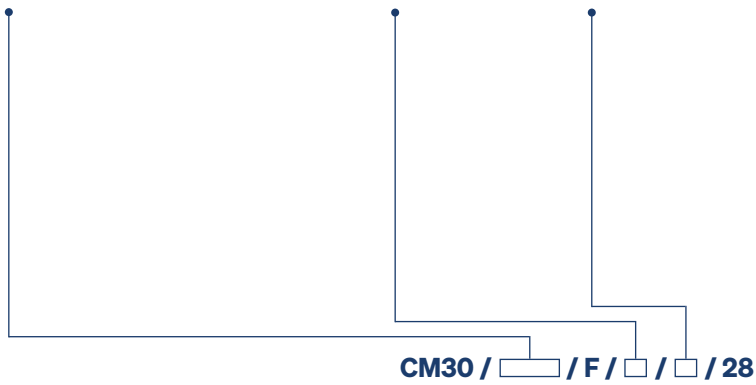
V2: Stainless steel¹
AS: Black aluminium

Switch Function

M: Momentary
L: Maintained

Poles

S: Single
D: Double



¹ 14301

CM130 19mm Vandalproof Pushbutton

 19mm

 22mm

 38mm

IP67

LED



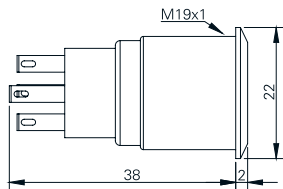
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	50,000 (min)
Operating force	3N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

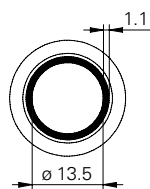
Product Dimensions

All dimensions in mm

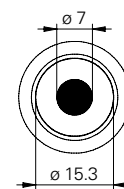
Screw Terminals Flat



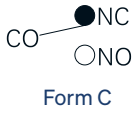
Front View (ring)



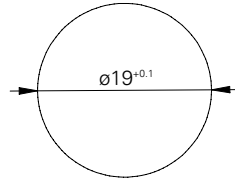
Front View (dot)



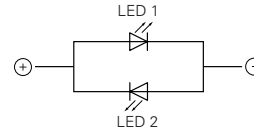
Circuit Diagram



Mounting Dimensions

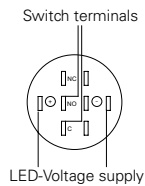


LED Circuit Diagram

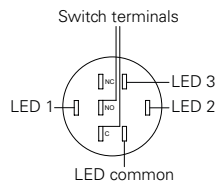


Wiring Instructions

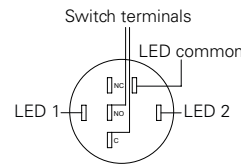
2 LED pins



4 LED pins (RGB)⁵



3 LED pins (bi-colour)⁴



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹	R: Ring	GN: Green	00: No resistor ⁶	M: Momentary	S: Single
AS: Black aluminium	D: Dot	RD: Red	06: 6 volt	L: Maintained	D: Double
	P: Power	YL: Yellow	12: 12 volt		
	S: Powerring	BL: Blue	24: 24 volt		
	X: Custom ²	WH: White			
		GR: Green/red ³			
		BR: Blue/red ³			
		GB: Green/blue ³			
		O1: Green/red ^{4,7}			
		O2: Green/blue ^{4,7}			
		O3: Blue/red ^{4,7}			
		T1: RGB ^{5,7}			

CMi30 / [] / F / [] / [] / [] / [] / 28

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ 3 pins for LED connection (one per colour and common cathode (common anode available on request))
⁵ Red/green/blue, 4 pins for LED connection (one per colour and common cathode (common anode available on request))
⁶ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁷ Only available with single pole



CM31 19mm Vandalproof Pushbutton

 19mm

 22mm

 36.7mm

IP67



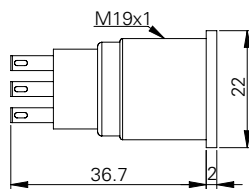
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	50A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN60529)
Duty cycle	50,000 (min)
Operating force	3N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

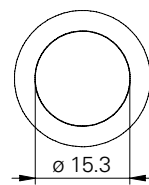
Product Dimensions

All dimensions in mm

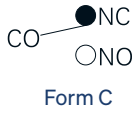
Side View



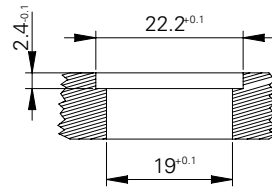
Front View



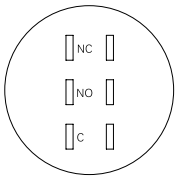
Circuit Diagram



Mounting Dimensions



Contact Arrangement



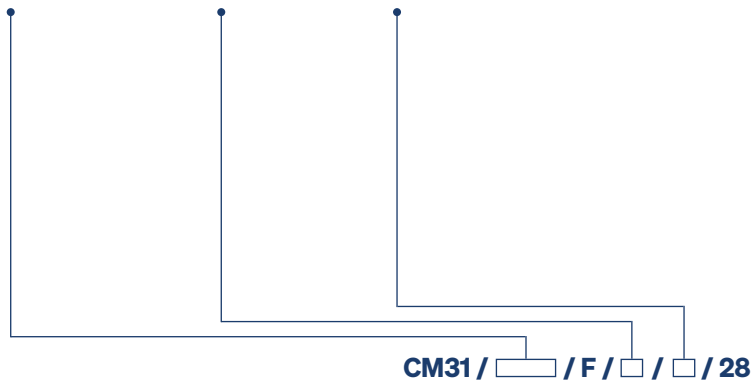
Ordering Information



Material
 V2: Stainless steel¹
 AS: Black aluminium

Switch Function
 M: Momentary
 L: Maintained

Poles
 S: Single
 D: Double



¹ 14301

CMI31 19mm Vandalproof Pushbutton

 19mm

 22mm

 38mm

IP67

LED



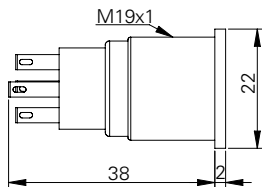
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Duty cycle	50,000 (min)
Operating force	3N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

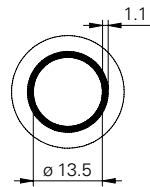
Product Dimensions

All dimensions in mm

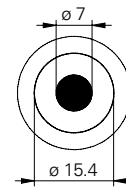
Side View



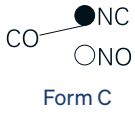
Front View (ring)



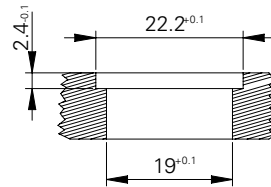
Front View (dot)



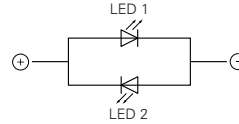
Circuit Diagram



Mounting Dimensions

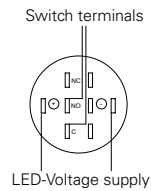


LED Circuit Diagram

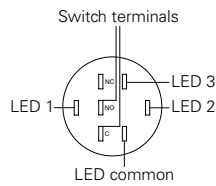


Wiring Instructions

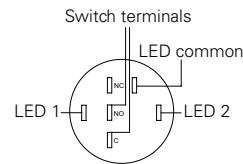
2 LED pins



4 LED pins (RGB)⁵



3 LED pins (bi-colour)⁴



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot X: Custom ²	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³ O1: Green/red ^{4,7} O2: Green/blue ^{4,7} O3: Blue/red ^{4,7} T1: RGB ^{5,7}	00: No resistor ⁶ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained	S: Single D: Double

CMI31 / [] / F / [] / [] / [] / [] / 28

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ 3 pins for LED connection (one per colour and common cathode (common anode available on request))
⁵ Red/green/blue, 4 pins for LED connection (one per colour and common cathode (common anode available on request))
⁶ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁷ Only available with single pole

CM27 19mm Vandalproof Pushbutton

 19mm	 22mm	 44.9mm	IP65
		 51.2mm	IP67

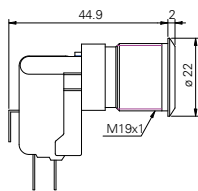
Specification

Termination	4.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	16A, 250VAC (resistive)
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 8.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

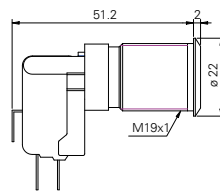
Product Dimensions

All dimensions in mm

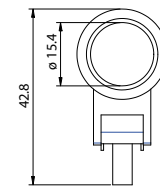
Momentary



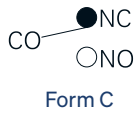
Maintained



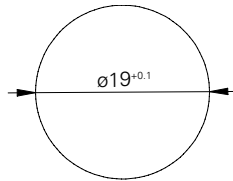
Front View



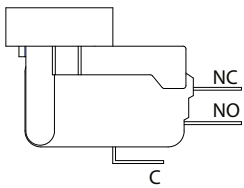
Circuit Diagram



Mounting Dimensions



Contact Arrangement



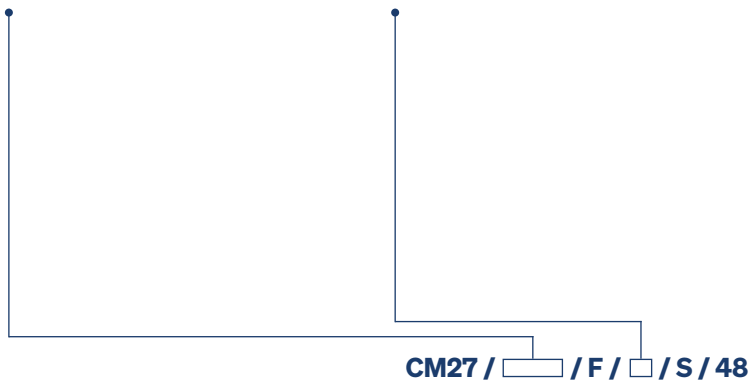
Ordering Information

Material

V2: Stainless steel¹
AS: Black aluminium

Switch Function

M: Momentary
L: Maintained²





¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI27 19mm Vandalproof Pushbutton

 19mm	 22mm	 44.9mm	IP65	LED
		 51.2mm	IP67	

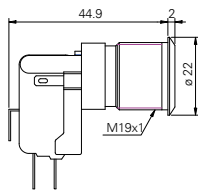
Specification

Termination	4.8×0.5 + 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	16A, 250VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 8.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

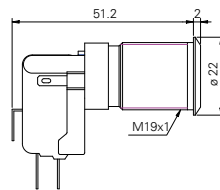
Product Dimensions

All dimensions in mm

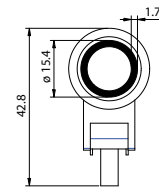
Momentary



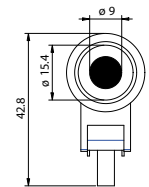
Maintained



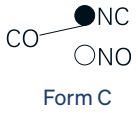
Front View (ring)



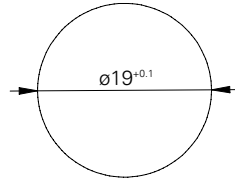
Front View (dot)



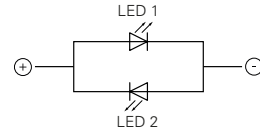
Circuit Diagram



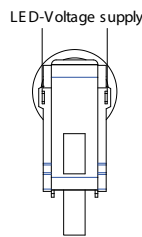
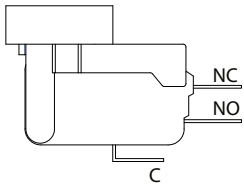
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function
V2: Stainless steel ¹	R: Ring	GN: Green	00: No resistor ⁴	M: Momentary
AS: Black aluminium	D: Dot	RD: Red	06: 6 volt	L: Maintained ²
	S: Powering ²	YL: Yellow	12: 12 volt	
	X: Custom ²	BL: Blue	24: 24 volt	
		WH: White		
		GR: Green/red ³		
		BR: Blue/red ³		
		GB: Green/blue ³		

CMI27 / [] / F / [] / [] / [] / S / 48

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

Non rotating button available on request

CM35 22mm Vandalproof Pushbutton

 22mm	 25mm	 34.8mm	 40.3mm	IP65
		 35.3mm	 41mm	IP67

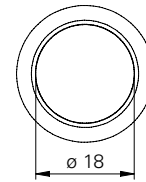
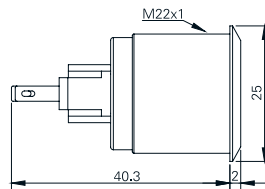
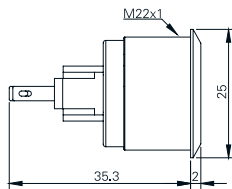
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 8.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

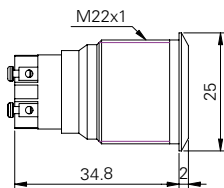
Product Dimensions

All dimensions in mm

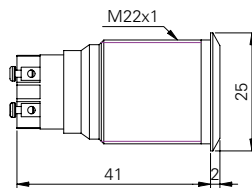
2.8mm Terminals Momentary 2.8mm Terminals Maintained Front View (all versions)



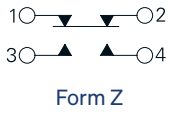
Screw Terminals Momentary



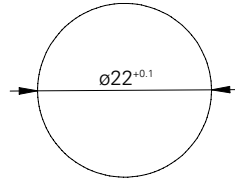
Screw Terminals Maintained



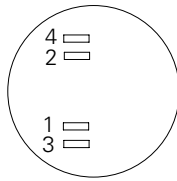
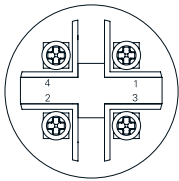
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

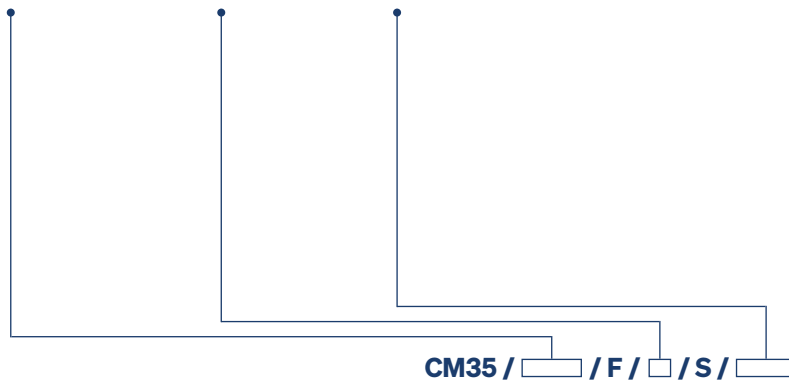
V2: Stainless steel¹
AS: Black aluminium

Switch Function

M: Momentary
L: Maintained²

Termination

28: 2.8mm tabs
ST: Screws



¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI35 22mm Vandalproof Pushbutton

 22mm	 25mm	 34.8mm	 40.3mm	IP65	LED
		 35.3mm	 41mm	IP67	

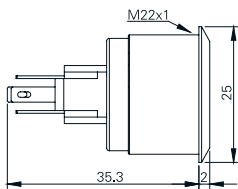
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 8.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

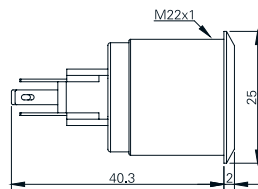
Product Dimensions

All dimensions in mm

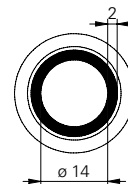
2.8mm Terminals Momentary



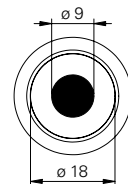
2.8mm Terminals Maintained



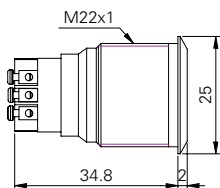
Front View (ring)



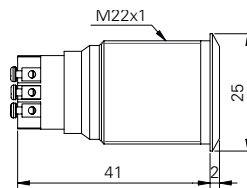
Front View (dot)



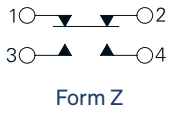
Screw Terminals Momentary



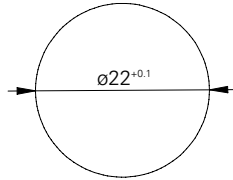
Screw Terminals Maintained



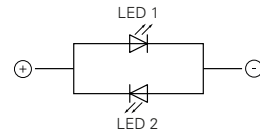
Circuit Diagram



Mounting Dimensions

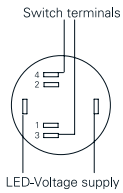


LED Circuit Diagram

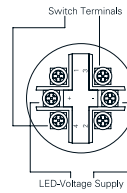
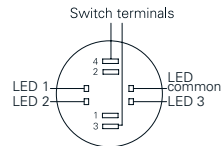


Wiring Instructions

2 LED pins



3&4 LED pins^{4,5}



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Termination
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot S: Powering ² X: Custom ²	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³ O1: Green/red ^{4,7} O2: Green/blue ^{4,7} O3: Blue/red ^{4,7} T1: RGB ^{5,7,8}	00: No resistor ⁶ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ²	28: 2.8mm tabs ST: Screws

CMI35 / [] / F / [] / [] / [] / S / []

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ 3 pins for LED connection (one per colour and common cathode (common anode available on request))
⁵ Red/green/blue, 4 pins for LED connection (one per colour and common cathode (common anode available on request))
⁶ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁷ Only available with solder terminals
⁸ Only available without resistor

Non rotating button available on request

Rev. 7 | Engelsing retains the right to change the specifications at any time without prior notice.

Tel: +49 (0)7464 9865 0 Email: info@engelking.de www.engelking.de



CM36 22mm Vandalproof Pushbutton

 22mm	 25mm	 35.3mm	IP65
		 40.3mm	IP67

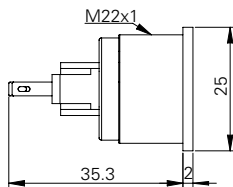
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 8.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

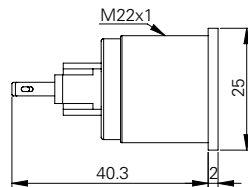
Product Dimensions

All dimensions in mm

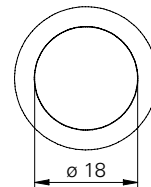
Momentary



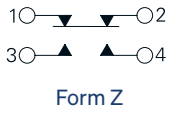
Maintained



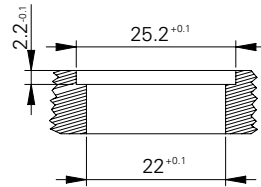
Front View (all versions)



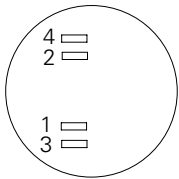
Circuit Diagram



Mounting Dimensions



Contact Arrangement

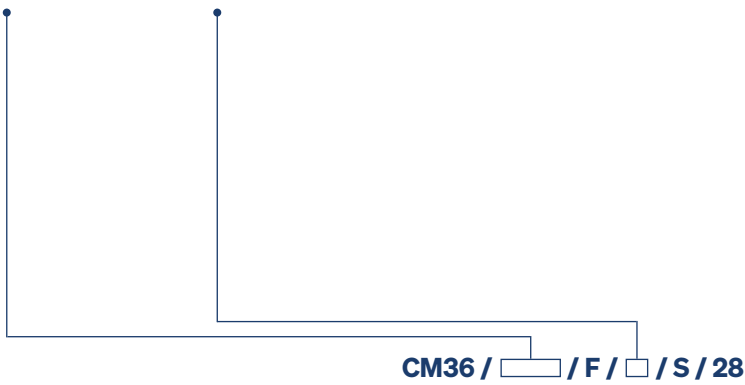


Ordering Information



Material
 V2: Stainless steel¹
 AS: Black aluminium

Switch Function
 M: Momentary
 L: Maintained²




¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI36 22mm Vandalproof Pushbutton

 22mm	 25mm	 35.3mm	IP65	LED
		 40.3mm	IP67	

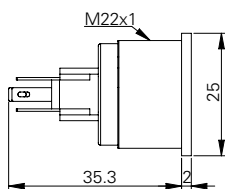
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 8.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

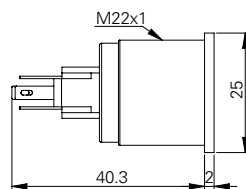
Product Dimensions

All dimensions in mm

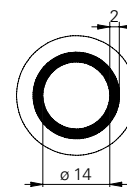
2.8mm Terminals Momentary



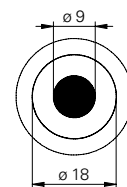
2.8mm Terminals Maintained



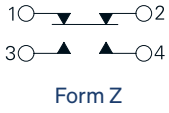
Front View (ring)



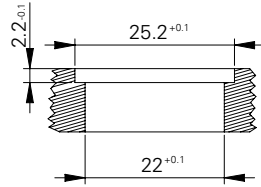
Front View (dot)



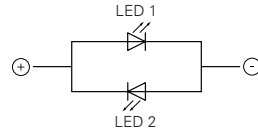
Circuit Diagram



Mounting Dimensions

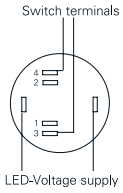


LED Circuit Diagram

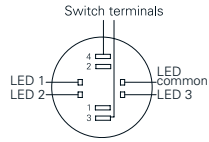


Wiring Instructions

2 LED pins



3&4 LED pins^{4,5}



Ordering Information



Material

V2: Stainless steel¹
AS: Black aluminium

LED

R: Ring
D: Dot
X: Custom²

LED Colour

GN: Green
RD: Red
YL: Yellow
BL: Blue
WH: White
GR: Green/red³
BR: Blue/red³
GB: Green/blue³
O1: Green/red⁴
O2: Green/blue⁴
O3: Blue/red⁴
T1: RGB^{5,7}

LED Voltage

00: No resistor⁶
06: 6 volt
12: 12 volt
24: 24 volt

Switch Function

M: Momentary
L: Maintained²

CMI36 / [] / F / [] / [] / [] / S / 28

¹ 14301

² IP65 (EN60529)

³ 2 pins, colour change by swapping polarity

⁴ 3 pins for LED connection (one per colour and common cathode (common anode available on request))

⁵ Red/green/blue, 4 pins for LED connection (one per colour and common cathode (common anode available on request))

⁶ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

⁷ Only available without resistor

Non rotating button available on request

CM37 22mm Vandalproof Pushbutton



22mm



25mm



25.3mm

IP65

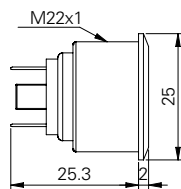
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 36VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN60529)
Duty cycle	200,000 (min)
Operating force	4N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Silver Alloy

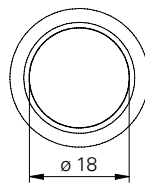
Product Dimensions

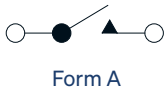
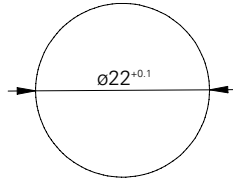
All dimensions in mm

Side View



Front View









Circuit Diagram**Mounting Dimensions****Ordering Information****Material**

V2: Stainless steel¹
 AS: Black aluminium

CM37 / / F / M / S / 28

¹ 14301

CM40 25mm Vandalproof Pushbutton

 25mm	 28mm	 34.8mm	 40.8mm	IP65
		 38.5mm	 41mm	IP67

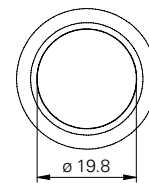
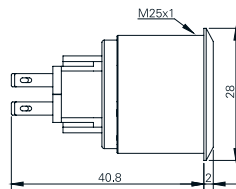
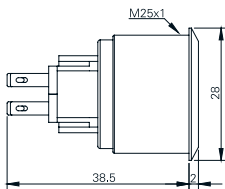
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

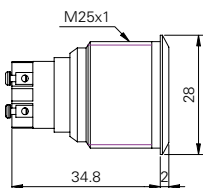
Product Dimensions

All dimensions in mm

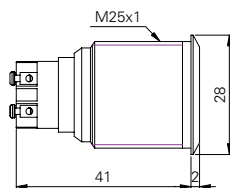
2.8mm Terminals Momentary 2.8mm Terminals Maintained Front View (all versions)



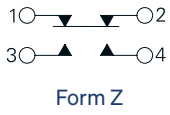
Screw Terminals Momentary



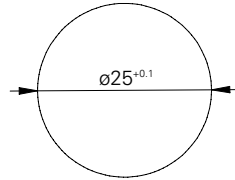
Screw Terminals Maintained



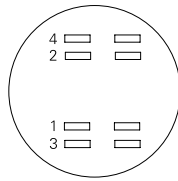
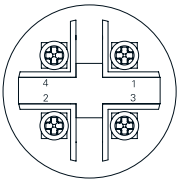
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

V2: Stainless steel¹
 AS: Black aluminium

Switch Function

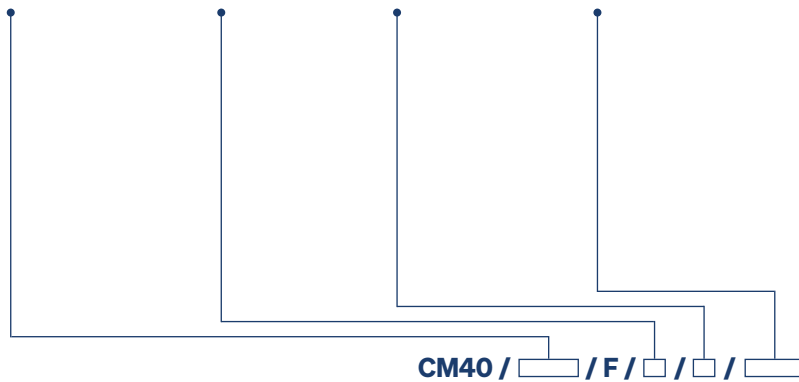
M: Momentary
 L: Maintained²

Poles

S: Single
 D: Double

Termination

28: 2.8mm tabs
 ST: Screws³



¹ 1.4301

² IP65 (EN60529)

³ Only available with single pole

Non rotating button available on request

CMI40 25mm Vandalproof Pushbutton

 25mm	 28mm	 34.8mm	 40.8mm	IP65	LED
		 38.5mm	 41mm	IP67	

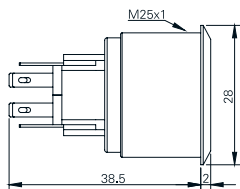
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

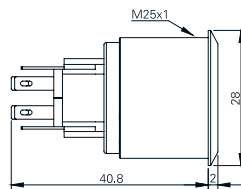
Product Dimensions

All dimensions in mm

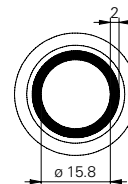
2.8mm Terminals Momentary



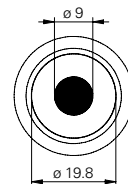
2.8mm Terminals Maintained



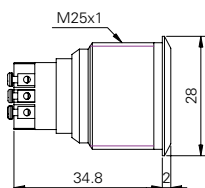
Front View (ring)



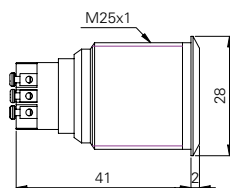
Front View (dot)



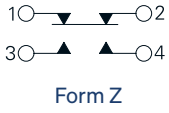
Screw Terminals Momentary



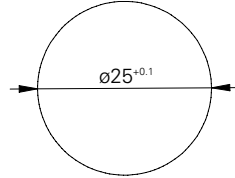
Screw Terminals Maintained



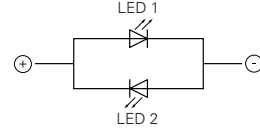
Circuit Diagram



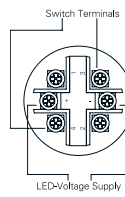
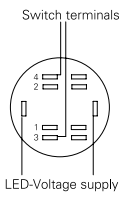
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles	Terminations
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot S: Powering ² X: Custom ²	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³	00: No resistor ⁴ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ²	S: Single D: Double	28: 2.8mm tabs ST: Screws ⁵

CMI40 / [] / F / [] / [] / [] / [] / [] / []

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁵ Only available with single pole

Non rotating button available on request

CM41 25mm Vandalproof Pushbutton

 25mm	 28mm	 38.5mm	IP65
		 40.8mm	IP67

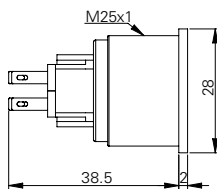
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

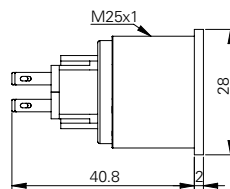
Product Dimensions

All dimensions in mm

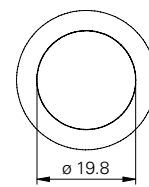
Momentary



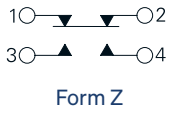
Maintained



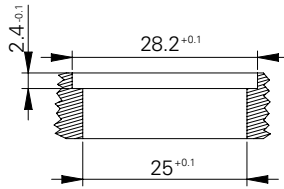
Front View (all versions)



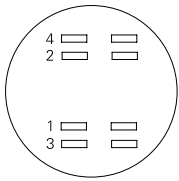
Circuit Diagram



Mounting Dimensions



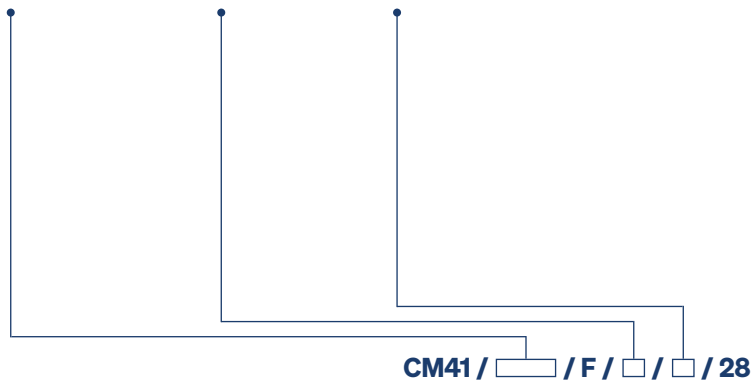
Contact Arrangement



Ordering Information



Material	Switch Function	Poles
V2: Stainless steel ¹	M: Momentary	S: Single
AS: Black aluminium	L: Maintained ²	D: Double







¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI41 25mm Vandalproof Pushbutton

 25mm	 28mm	 38.5mm	IP65	LED
		 40.8mm	IP67	

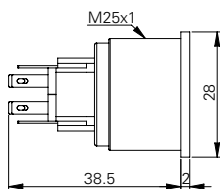
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

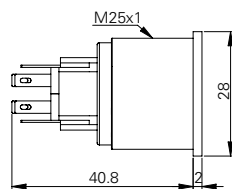
Product Dimensions

All dimensions in mm

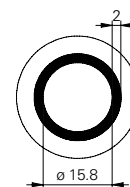
Momentary



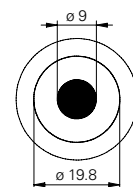
Maintained



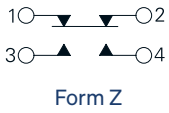
Front View (ring)



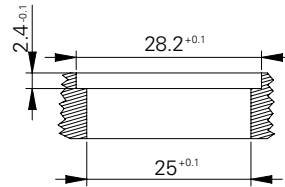
Front View (dot)



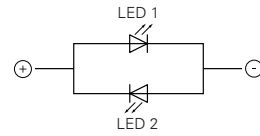
Circuit Diagram



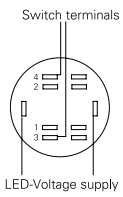
Mounting Dimensions



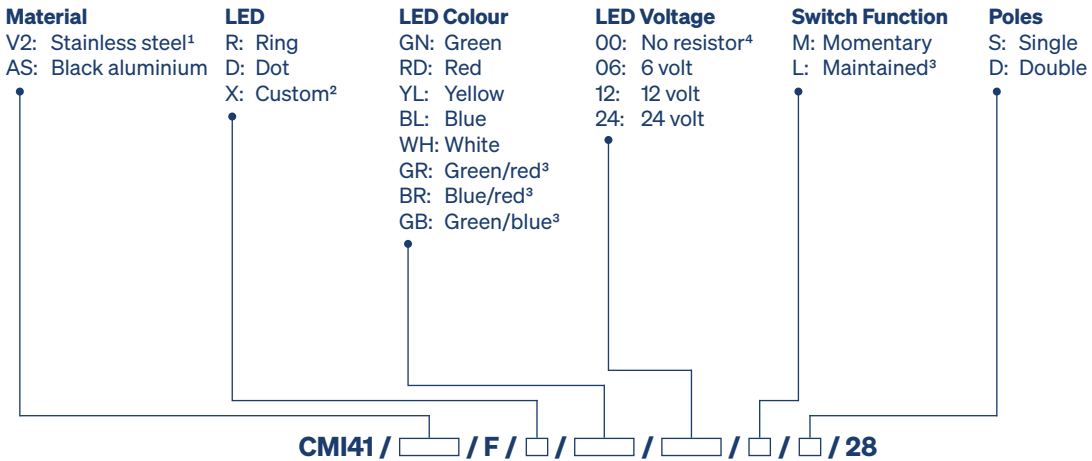
LED Circuit Diagram



Wiring Instructions




Ordering Information



¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

CM45 28mm Vandalproof Pushbutton

 28mm	 32mm	 35mm	 40.8mm	IP65
		 38.4mm	 40.9mm	IP67

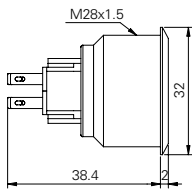
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

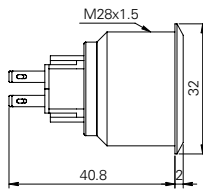
Product Dimensions

All dimensions in mm

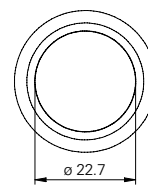
2.8mm Terminals Momentary



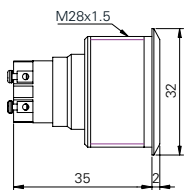
2.8mm Terminals Maintained



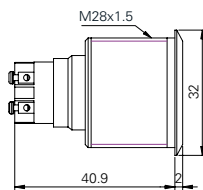
Front View (all versions)



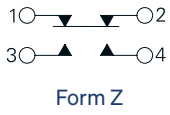
Screw Terminals Momentary



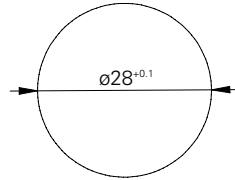
Screw Terminals Maintained



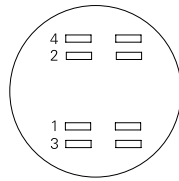
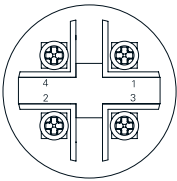
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

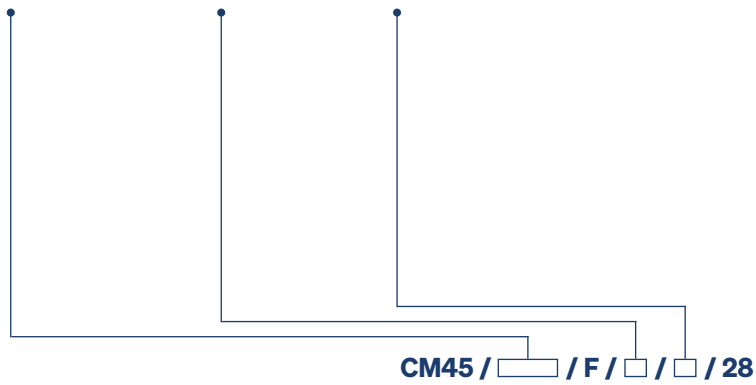
V2: Stainless steel¹
 AS: Black aluminium

Switch Function

M: Momentary
 L: Maintained²

Poles

S: Single
 D: Double



¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request



CMI45 28mm Vandalproof Pushbutton

28mm	32mm	35mm	40.8mm	IP65	LED
		38.4mm	40.9mm	IP67	

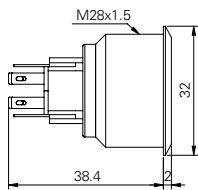
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

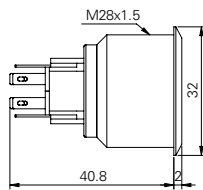
Product Dimensions

All dimensions in mm

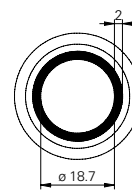
2.8mm Terminals Momentary



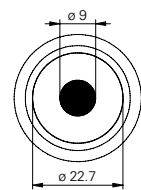
2.8mm Terminals Maintained



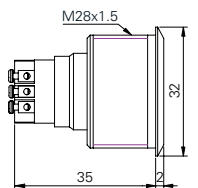
Front View (ring)



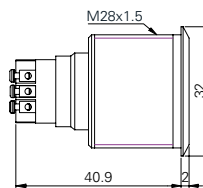
Front View (dot)



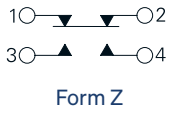
Screw Terminals Momentary



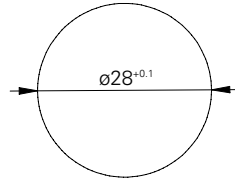
Screw Terminals Maintained



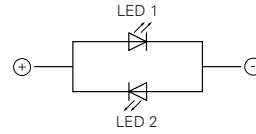
Circuit Diagram



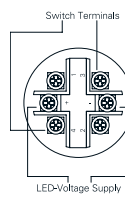
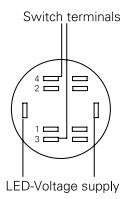
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³	00: No resistor ⁴ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ²	S: Single D: Double

CMI45 / [] / F / [] / [] / [] / [] / 28

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

Non rotating button available on request

CM46 28mm Vandalproof Pushbutton

 28mm	 32mm	 38.4mm	IP65
		 40.8mm	IP67

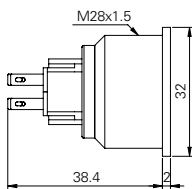
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

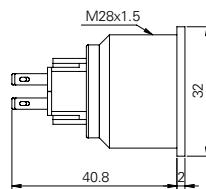
Product Dimensions

All dimensions in mm

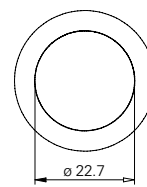
Momentary



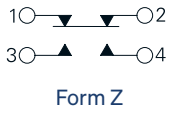
Maintained



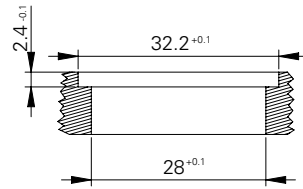
Front View



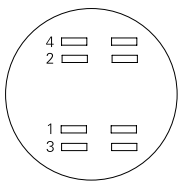
Circuit Diagram



Mounting Dimensions



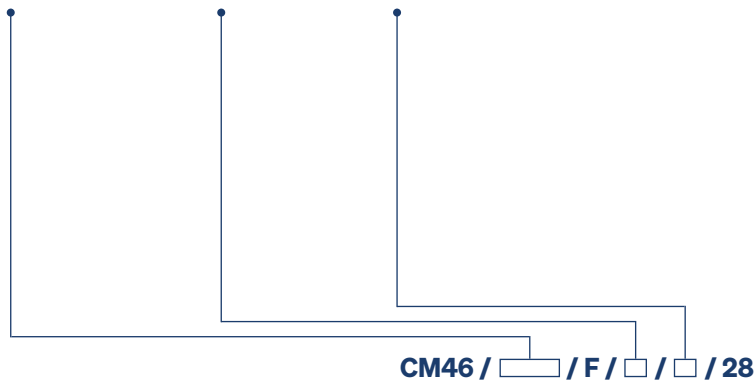
Contact Arrangement



Ordering Information



Material	Switch Function	Poles
V2: Stainless steel ¹	M: Momentary	S: Single
AS: Black aluminium	L: Maintained ²	D: Double







¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI46 28mm Vandalproof Pushbutton

 28mm	 32mm	 38.4mm	IP65	LED
		 40.8mm	IP67	

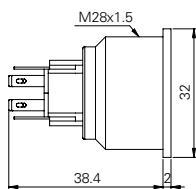
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

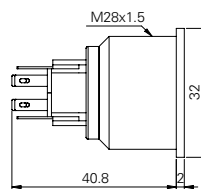
Product Dimensions

All dimensions in mm

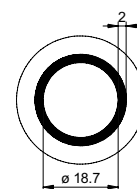
Momentary



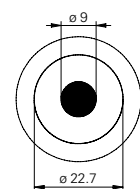
Maintained



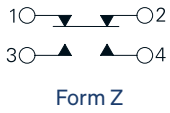
Front View (ring)



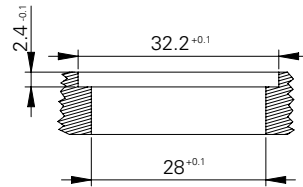
Front View (dot)



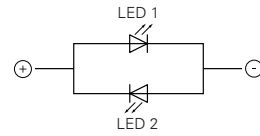
Circuit Diagram



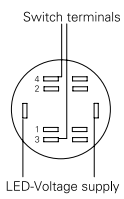
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³	00: No resistor ⁴ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ²	S: Single D: Double

CMI46 / [] / F / [] / [] / [] / [] / 28

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)



CM50 30mm Vandalproof Pushbutton

30mm	35mm	35mm	40.8mm	IP65
		38.4mm	40.9mm	IP67

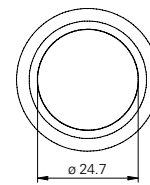
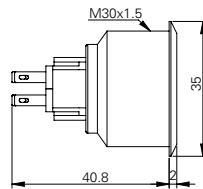
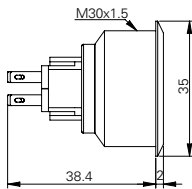
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

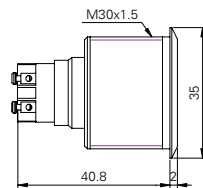
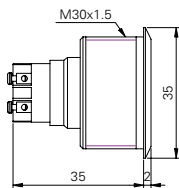
Product Dimensions

All dimensions in mm

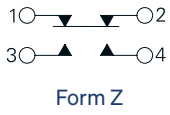
2.8mm Terminals Momentary 2.8mm Terminals Maintained Front View



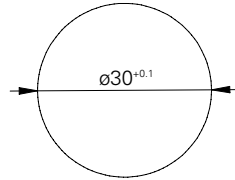
Screw Terminals Momentary Screw Terminals Maintained



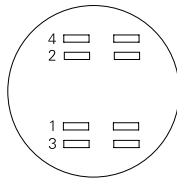
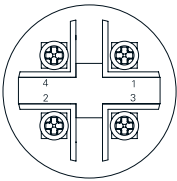
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

V2: Stainless steel¹
AS: Black aluminium

Switch Function

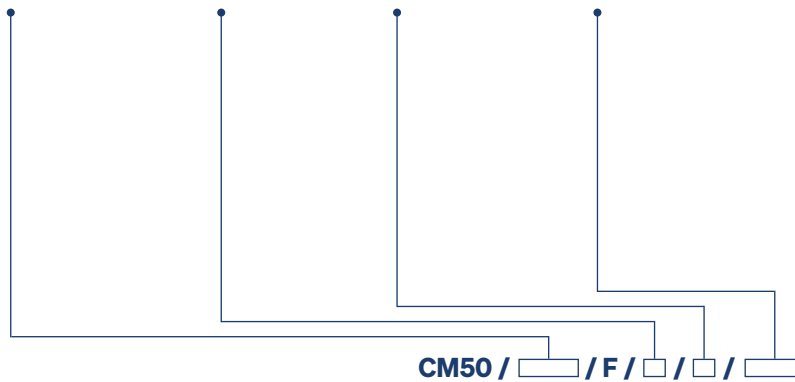
M: Momentary
L: Maintained²

Poles

S: Single
D: Double

Termination

28: 2.8mm tabs
ST: Screws³



¹ 1.4301

² IP65 (EN60529)

³ Only available with single pole

Non rotating button available on request



CMI50 30mm Vandalproof Pushbutton

30mm	35mm	35mm	40.8mm	IP65	LED
		38.4mm	40.9mm	IP67	

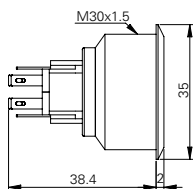
Specification

Termination	Screw or 2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

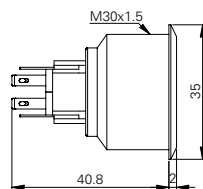
Product Dimensions

All dimensions in mm

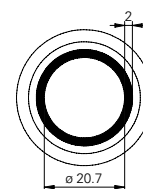
2.8mm Terminals Momentary



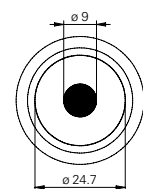
2.8mm Terminals Maintained



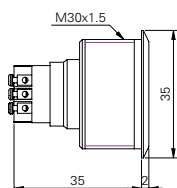
Front View (ring)



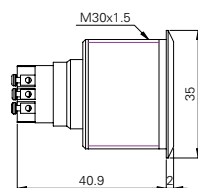
Front View (dot)



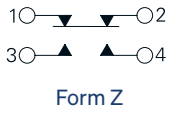
Screw Terminals Momentary



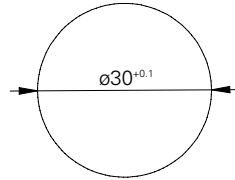
Screw Terminals Maintained



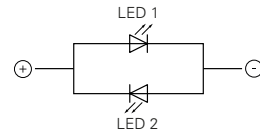
Circuit Diagram



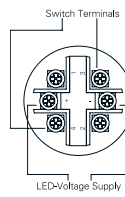
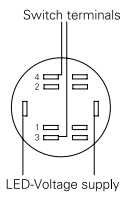
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles	Terminations
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³	00: No resistor ⁴ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ²	S: Single D: Double	28: 2.8mm tabs ST: Screws ⁵

CMI45 / [Material] / [LED] / [LED Colour] / [LED Voltage] / [Switch Function] / [Poles] / [Terminations]

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)
⁵ Only available with single pole

Non rotating button available on request



CM51 30mm Vandalproof Pushbutton

30mm	35mm	38.4mm	IP65
		40.8mm	IP67

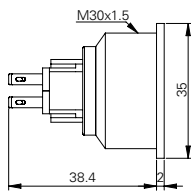
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

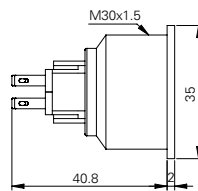
Product Dimensions

All dimensions in mm

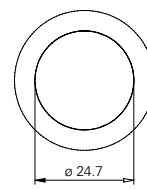
Momentary



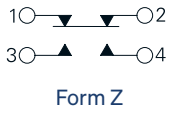
Maintained



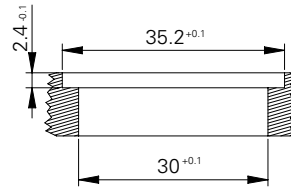
Front View



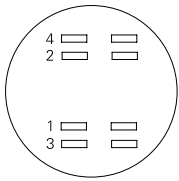
Circuit Diagram



Mounting Dimensions



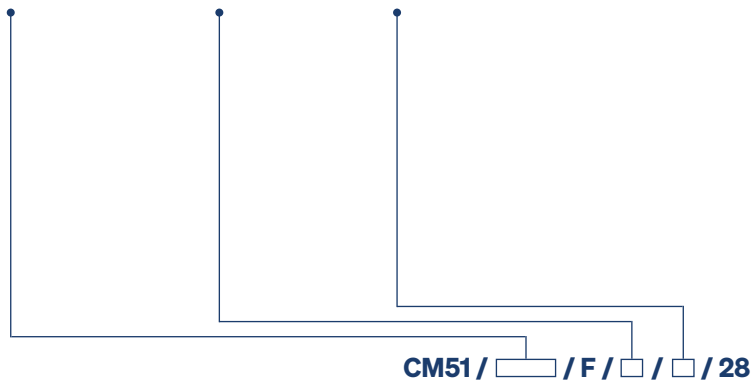
Contact Arrangement



Ordering Information



Material	Switch Function	Poles
V2: Stainless steel ¹	M: Momentary	S: Single
AS: Black aluminium	L: Maintained ²	D: Double







¹ 1.4301

² IP65 (EN60529)

Non rotating button available on request

CMI51 30mm Vandalproof Pushbutton

 30mm	 35mm	 38.4mm	IP65	LED
		 40.8mm	IP67	

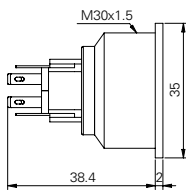
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529) maintained: IP65
Duty cycle	50,000 (min)
Operating force	5.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 10.0mm
Body & button material	See ordering information
Contact material	Gold plated

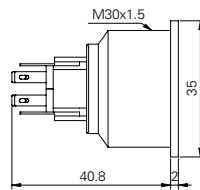
Product Dimensions

All dimensions in mm

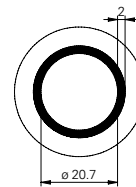
Momentary



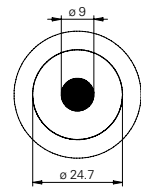
Maintained



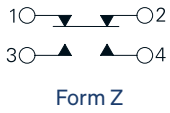
Front View (ring)



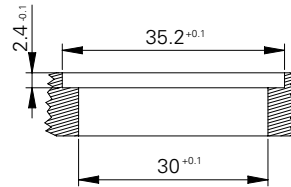
Front View (dot)



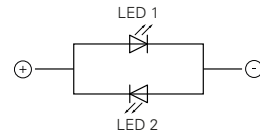
Circuit Diagram



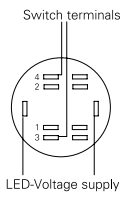
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



Material	LED	LED Colour	LED Voltage	Switch Function	Poles
V2: Stainless steel ¹ AS: Black aluminium	R: Ring D: Dot	GN: Green RD: Red YL: Yellow BL: Blue WH: White GR: Green/red ³ BR: Blue/red ³ GB: Green/blue ³	00: No resistor ⁴ 06: 6 volt 12: 12 volt 24: 24 volt	M: Momentary L: Maintained ²	S: Single D: Double

CMI51 / [] / F / [] / [] / [] / [] / 28

¹ 14301
² IP65 (EN60529)
³ 2 pins, colour change by swapping polarity
⁴ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

Non rotating button available on request



CM60 40mm Vandalproof Pushbutton

 40mm

 46mm

 41.1mm

IP65

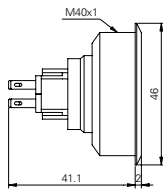
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	50,000 (min)
Operating force	Single pole: 5N, double pole: 7.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 5.0mm
Body & button material	Stainless steel 1.4301
Contact material	Silver Alloy

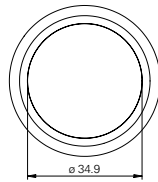
Product Dimensions

All dimensions in mm

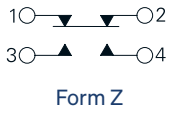
Side View



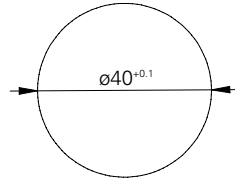
Front View



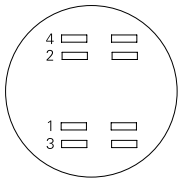
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information

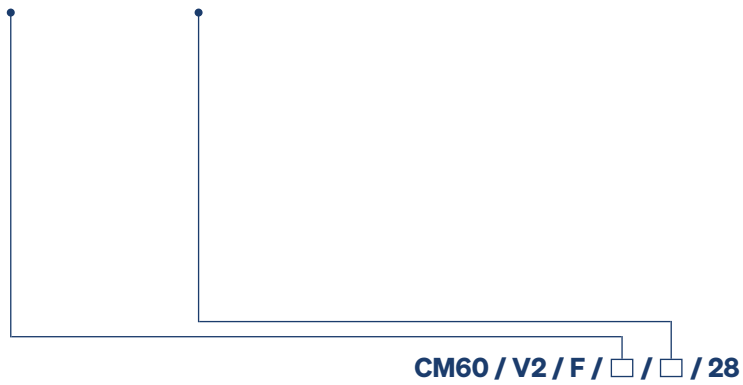


Switch Function

M: Momentary
L: Maintained

Poles

S: Single
D: Double



Non rotating button available on request



CM160 40mm Vandalproof Pushbutton

 40mm

 46mm

 41.1mm

IP65

LED

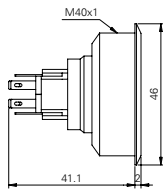
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	5A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-20°C to +55°C
Ingress protection	IP65 (EN 60529)
Duty cycle	50,000 (min)
Operating force	Single pole: 5N, double pole: 7.5N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 5.0mm
Body & button material	Stainless steel 1.4301
Contact material	Silver Alloy

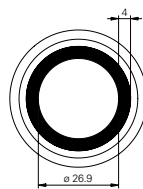
Product Dimensions

All dimensions in mm

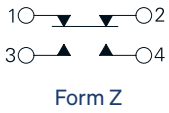
Side View



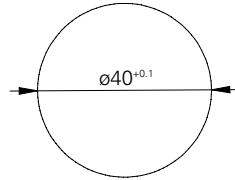
Front View (ring)



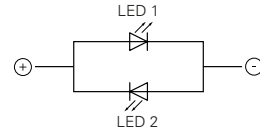
Circuit Diagram



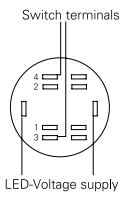
Mounting Dimensions



LED Circuit Diagram



Wiring Instructions



Ordering Information



LED Colour	LED Voltage	Switch Function	Poles
GN: Green	00: No resistor ²	M: Momentary	S: Single
RD: Red	06: 6 volt	L: Maintained	D: Double
YL: Yellow	12: 12 volt		
BL: Blue	24: 24 volt		
WH: White			
GR: Green/red ¹			
BR: Blue/red ¹			
GB: Green/blue ¹			

CMI60 / V2 / F / R / [] / [] / [] / 28

¹ 2 pins, colour change by swapping polarity
² Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

Non rotating button available on request



CM92 16mm Plastic Pushbutton



16mm



19.8mm



18.5mm

IP67

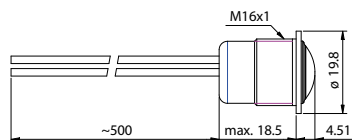
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	2A, 24VDC
LED voltage	-
Contact resistance	< 100mΩ
Insulation resistance	> 100MΩ
Operating temperature	-20°C to +65°C
Ingress protection	IP67 (EN 60529)
Duty cycle	10,000 (min)
Operating force	7N
Nut mounting torque	~ 0.8Nm
Panel thickness	1.0mm to 9.0mm
Body & button material	Nylon & PUR
Contact material	-

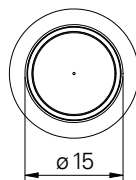
Product Dimensions

All dimensions in mm

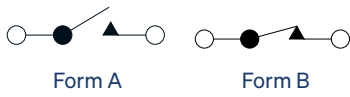
Side View



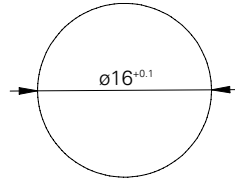
Front View



Circuit Diagram



Mounting Dimensions



Ordering Information

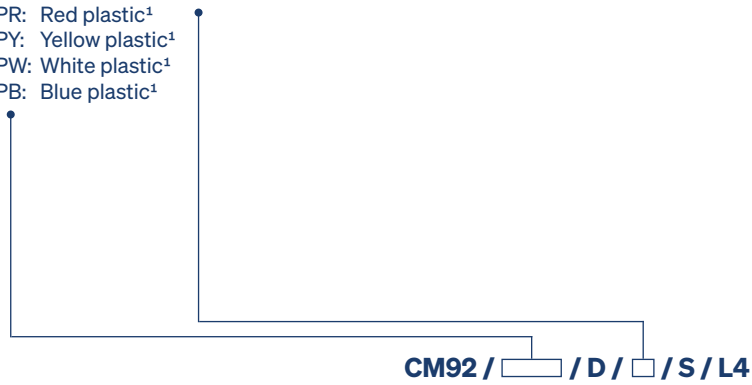


Material

- PK: Black plastic
- PG: Green plastic¹
- PR: Red plastic¹
- PY: Yellow plastic¹
- PW: White plastic¹
- PB: Blue plastic¹

Switch Function

- M: Momentary NO
- L: Momentary NC



¹ Code is only for button material. Housing is made of black plastic

CM90 22mm Plastic Pushbutton



22mm



25mm



37.3mm

IP65

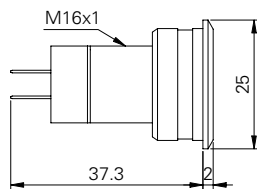
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	1A, 48VAC
LED voltage	-
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +85°C
Ingress protection	IP65 (EN 60529)
Duty cycle	50,000 (min)
Operating force	1-4N
Nut mounting torque	-
Panel thickness	0.5mm to 6.0mm
Body & button material	PC
Contact material	Silver plated

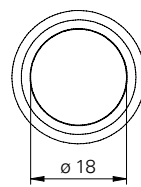
Product Dimensions

All dimensions in mm

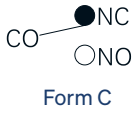
Side View



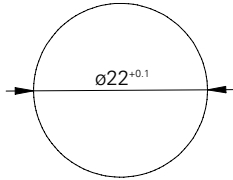
Front View



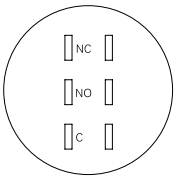
Circuit Diagram



Mounting Dimensions



Contact Arrangement



Ordering Information



Material

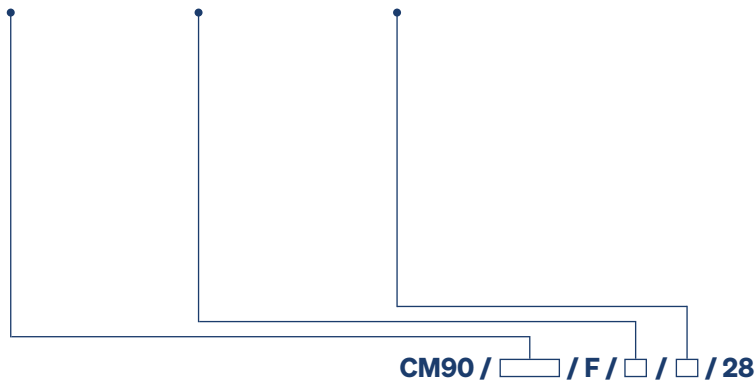
PK: Black plastic
PS: Silver plastic

Switch Function

M: Momentary
L: Maintained

Poles

S: Single
D: Double



CM190 22mm Plastic Pushbutton



22mm



25mm



38.5mm

IP65

LED

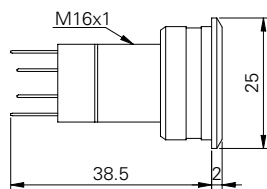
Specification

Termination	2.8×0.5mm fast connect terminals
Switching function	Momentary or maintained
Configuration of poles	Single or double
Maximum load	1A, 48VAC
LED voltage	See ordering information
Contact resistance	< 50mΩ
Insulation resistance	> 1000MΩ
Operating temperature	-25°C to +85°C
Ingress protection	IP65 (EN 60529)
Duty cycle	50,000 (min)
Operating force	1-4N
Nut mounting torque	-
Panel thickness	0.5mm to 6.0mm
Body & button material	PC
Contact material	Silver plated

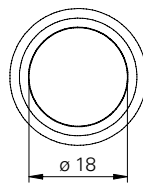
Product Dimensions

All dimensions in mm

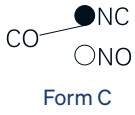
Side View



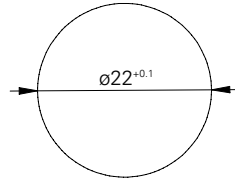
Front View (surface)



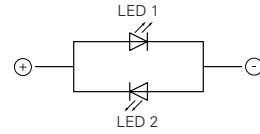
Circuit Diagram



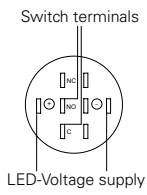
Mounting Dimensions



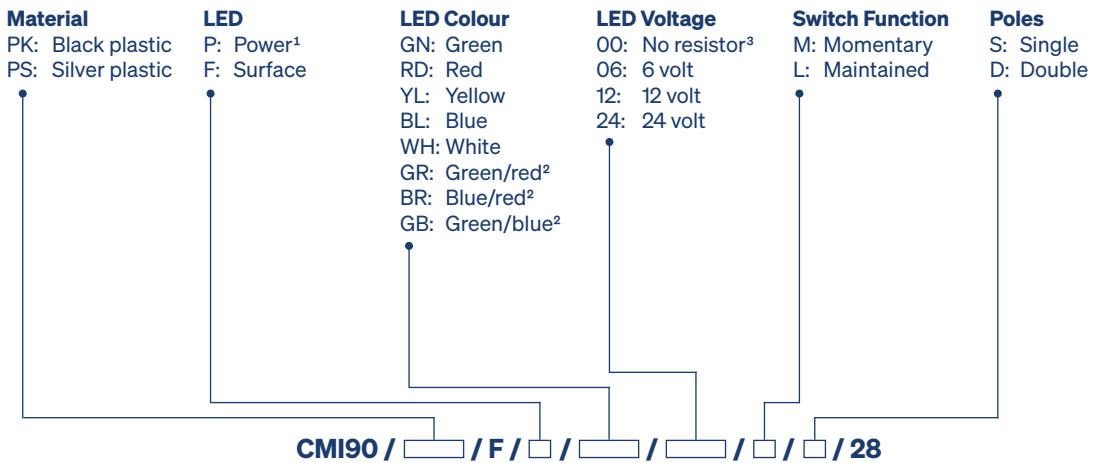
LED Circuit Diagram



Wiring Instructions



Ordering Information



¹ Only available with silver plastic
² 2 pins, colour change by swapping polarity
³ Red, yellow: 1.8V | Green, blue, white: 2.8V (15mA)

EPO3 16mm Piezo Switch

 16mm

 20mm

 10mm

IP68

IP69K

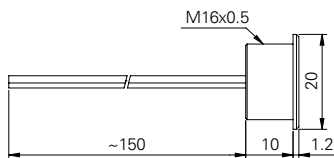
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC
LED voltage	-
Contact resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 3N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	See ordering information
Contact material	-

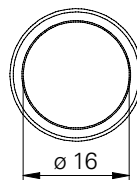
Product Dimensions

All dimensions in mm

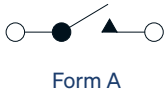
Finger Guided



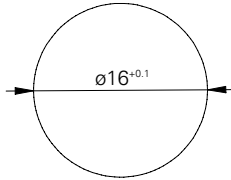
Front View



Circuit Diagram



Mounting Dimensions



Ordering Information

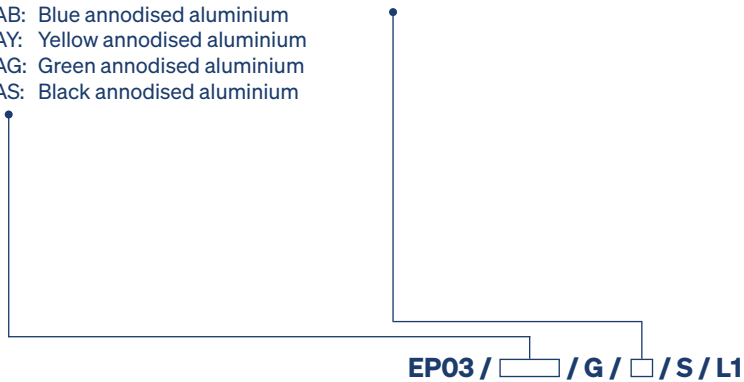


Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black anodised aluminium

Switch Function

- M: Momentary NO
- N: Momentary NC



EPIO3 16mm Illuminated Piezo Switch

 16mm

 20mm

 10mm

IP68

LED



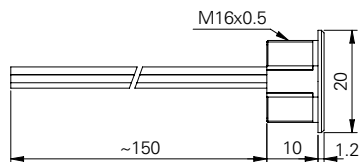
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC
LED voltage	Red & yellow: 1.9V, Green & blue: 3.4V, White: 3.6V (20mA)
Contact resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +50°C
Ingress protection	IP68 (EN 60529)
Duty cycle	1,000,000 (min)
Operating force	< 5N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	See ordering information
Contact material	-

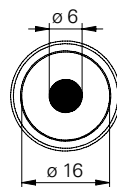
Product Dimensions

All dimensions in mm

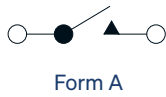
Finger Guided



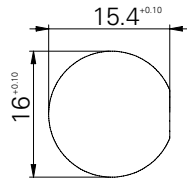
Front View



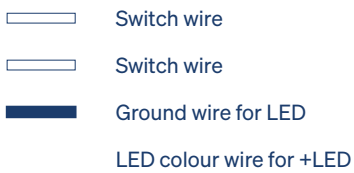
Circuit Diagram



Mounting Dimensions



Wiring Instructions



Ordering Information



Material

AN: Natural anodised aluminium
AR: Red anodised aluminium
AB: Blue anodised aluminium
AY: Yellow anodised aluminium
AG: Green anodised aluminium
AS: Black anodised aluminium

LED Colour

GN: Green
RD: Red
YL: Yellow
BL: Blue
WH: White
GR: Green/red
BR: Blue/red
GB: Green/blue
BW: Blue/white

EPI03 / / G / D / / 00 / M / S / L1

NKO3 16mm thiNKswitch™

 16mm

 20mm

 10mm

IP68

IP69K

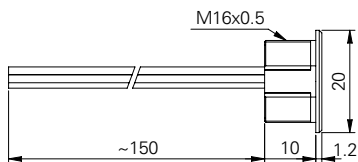
Specification

Termination	15cm flying leads
Switching function	Momentary or toggle
Configuration of poles	Single
Maximum load	2.5A, 8VDC to 24VDC
LED voltage	-
"On" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 5N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	See ordering information
Impulse time	0.5 sec (momentary)

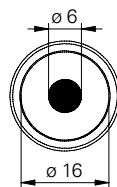
Product Dimensions

All dimensions in mm

Finger Guided

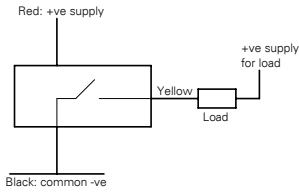


Front View

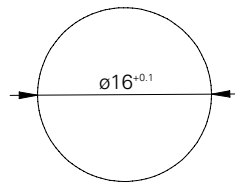


Circuit Diagram

Common ground (NMOS)

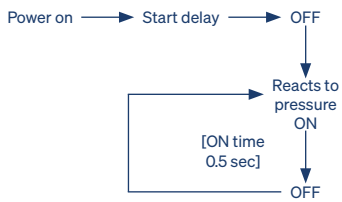


Mounting Dimensions

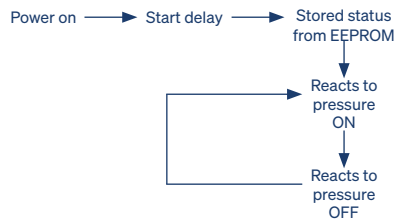


Timing Diagram

Momentary



Toggle



Ordering Information

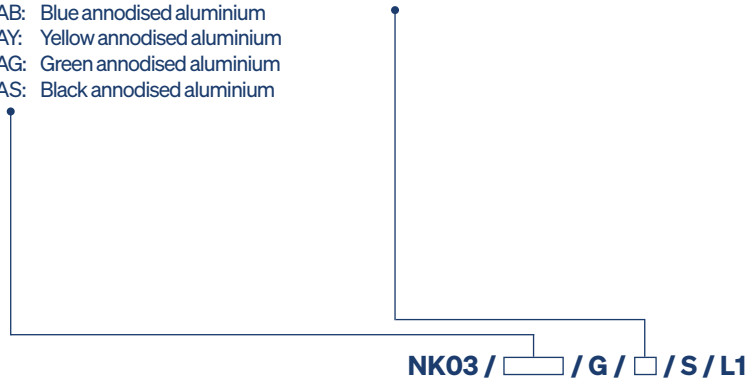


Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black anodised aluminium

Switch Function

- M: Momentary
- T: Toggle



EPO6 19mm Piezo Switch

 19mm

 21.5mm

 10mm

IP68

IP69K

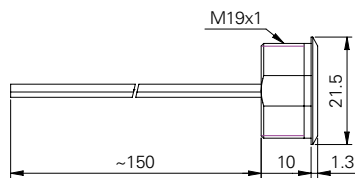
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC
LED voltage	-
"On" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 3N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	See ordering information
Impulse time	-

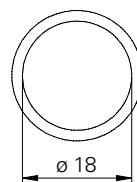
Product Dimensions

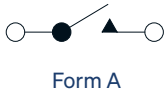
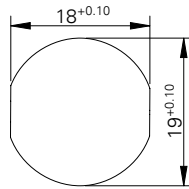
All dimensions in mm

Side View



Front View



Circuit Diagram**Mounting Dimensions****Ordering Information****Material**

V2: Stainless steel¹
 BC: Chrome plated brass

EP06 / / F / M / S / L1

¹ 14307

NKO2 19mm thiNKswitch™

 19mm

 21.5mm

 10mm

IP68

IP69K

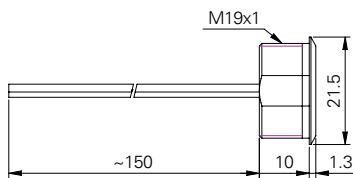
Specification

Termination	15cm flying leads
Switching function	Momentary or toggle
Configuration of poles	Single
Maximum load	2.5A, 8VDC to 24VDC
LED voltage	-
"On" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 3N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 4.0mm
Body & button material	See ordering information
Impulse time	0.5 sec (momentary)

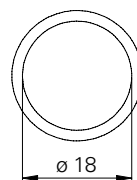
Product Dimensions

All dimensions in mm

Side View

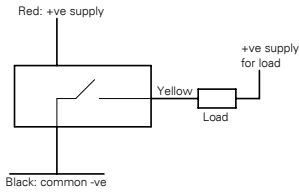


Front View

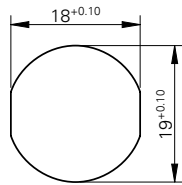


Circuit Diagram

Common ground (NMOS)

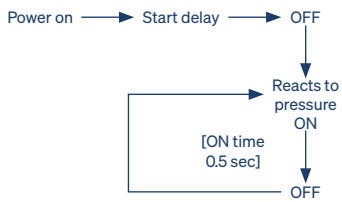


Mounting Dimensions

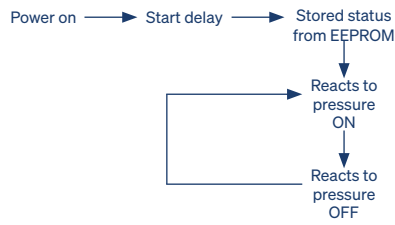


Timing Diagram

Momentary



Toggle



Ordering Information

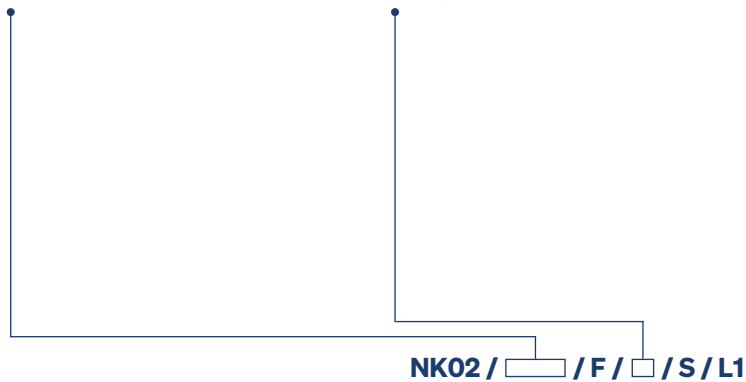


Material

V2: Stainless steel¹
 BC: Brass chrome

Switch Function

M: Momentary
 T: Toggle



¹ 14307

EP70 20mm Piezo Module

 20mm

 20mm

 9mm

IP68

IP69K

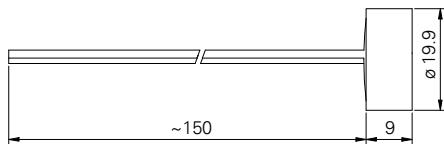
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC
LED voltage	-
"On" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 7N (depends on material and current)
Nut mounting torque	-
Panel thickness	Min. 3.0mm
Supported panel material	Plastics, metals, glas (for advanced users)
Body	POM black

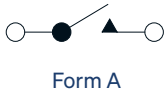
Product Dimensions

All dimensions in mm

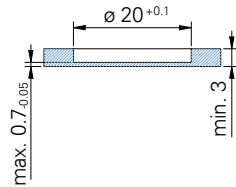
Side View



Circuit Diagram



Mounting Dimensions



Timing Instructions

The EP70 Piezo Module is glued into a recessed hole on the back of panel or housing by applying LOCTITE 435 or LOCTITE 480 on the centre pin and rim. Detailed instructions are available on request.

Ordering Information



Part Number
EP70/PK/F/M/S/L1

EP15 22mm Piezo Switch

 22mm	 26mm	 17.8mm	IP68	
	 25mm	 19.7mm	IP69K	

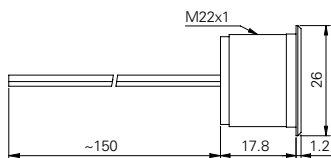
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC
LED voltage	-
"On" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 3N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 13.0mm
Body & button material	See ordering information
Impulse time	-

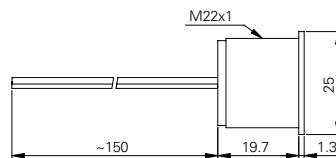
Product Dimensions

All dimensions in mm

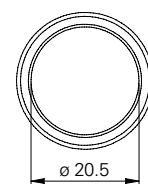
Finger Guided



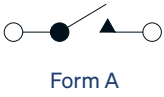
Flat



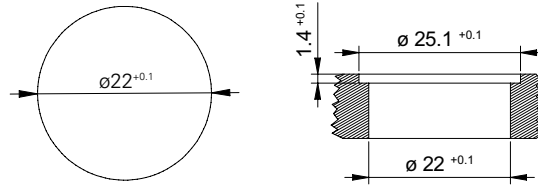
Front View (guided)



Circuit Diagram



Mounting Dimensions



Ordering Information

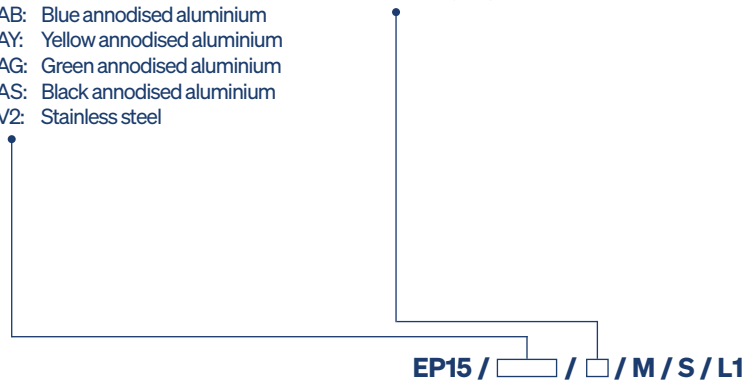


Material


- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black anodised aluminium
- V2: Stainless steel

Head Style

- F: Flat
- G: Finger guided



NK15 22mm thiNKswitch™

 22mm	 26mm	 17.8mm	IP68	
	 28mm	 19.7mm	IP69K	

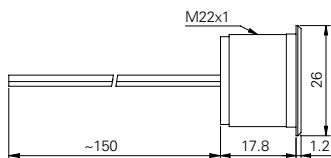
Specification

Termination	15cm flying leads
Switching function	Momentary or toggle
Configuration of poles	Single
Maximum load	2.5A, 8VDC to 24VDC
LED voltage	-
"On" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP66, IP68 (EN 60529); IP69K (DIN 4050)
Duty cycle	1,000,000 (min)
Operating force	< 3N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 13.0mm
Body & button material	See ordering information
Impulse time	0.5 sec (momentary)

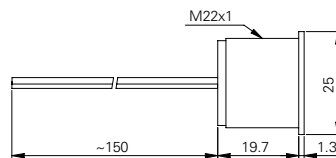
Product Dimensions

All dimensions in mm

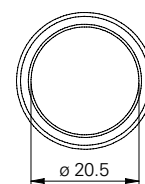
Finger Guided



Flat

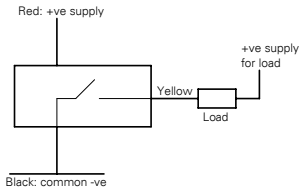


Front View (guided)

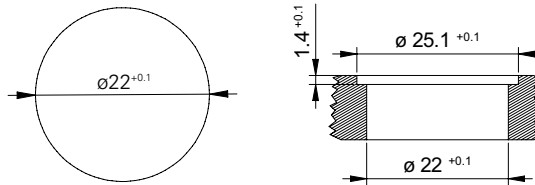


Circuit Diagram

Common ground (NMOS)

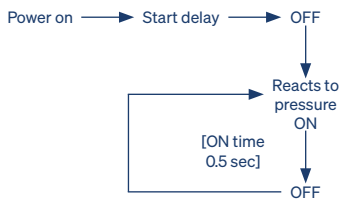


Mounting Dimensions

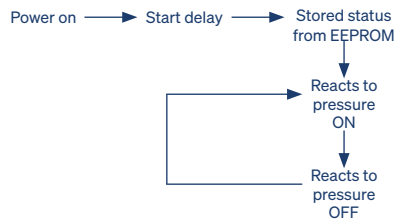


Timing Diagram

Momentary



Toggle



Ordering Information



Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black anodised aluminium
- BC: Chrome plated brass
- V2: Stainless steel¹

Head Style

- F: Flat
- G: Guided

Switch Function

- M: Momentary
- T: Toggle

NK15 / [Material] / [Head Style] / [Switch Function] / S / L1

¹ 14305

EPI16 22mm Illuminated Piezo Switch

 22mm	 26mm	 10.5mm	IP68	LED	
	 28mm	 14mm			

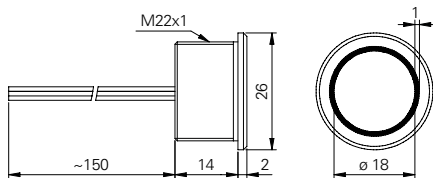
Specification

Termination	15cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC
LED voltage	See ordering information
Contact resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +50°C
Ingress protection	IP68 (EN 60529)
Duty cycle	1,000,000 (min)
Operating force	< 5N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 13.0mm
Body & button material	See ordering information
ESD resistance	15kV to front of switch

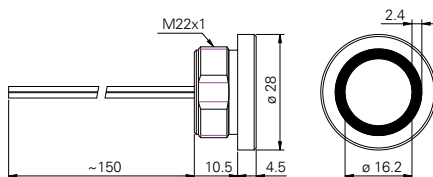
Product Dimensions

All dimensions in mm

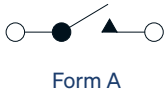
Flat



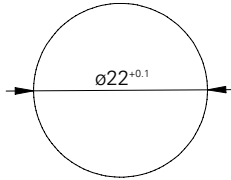
Raised



Circuit Diagram



Mounting Dimensions



Wiring Instructions

- Switch wire
- Switch wire
- Ground wire for LED
- LED colour wire for +LED

Ordering Information



Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black aluminium
- V2: Stainless steel¹
- V4: Stainless steel²
- V5: Stainless steel³

Head Style

- F: Flat
- R: Raised

LED Colour

- GN: Green
- RD: Red
- YL: Yellow
- BL: Blue
- WH: White
- GR: Green/red³
- BR: Blue/red³
- GB: Green/blue³
- BW: Blue/white
- 10: RGB^{4,6}

LED Voltage

- R1: 5-12 volt⁵
- R3: 12-24 volt⁶

EPI16 / / / R / / / M / S / L1

¹ 1.4305
² 1.4404
³ 1.4462
⁴ Only available with 12-24 volt (R3)
⁵ Only available with flat head
⁶ Only available with raised head

NKI16 22mm Illuminated thiNKswitch™

 22mm	 26mm	 10.5mm	IP68	LED	
		 14mm			

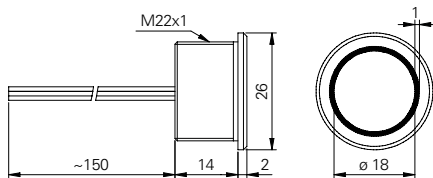
Specification

Termination	15cm flying leads
Switching function	Momentary or toggle
Configuration of poles	Single
Maximum load	2.5A, 8VDC to 24VDC
LED voltage	See ordering information
"ON" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +50°C
Ingress protection	IP68 (EN 60529)
Duty cycle	1,000,000 (min)
Operating force	< 5N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 13.0mm
Body & button material	See ordering information
ESD resistance	15kV to front of switch
Impulse time	0.5 sec (momentary)

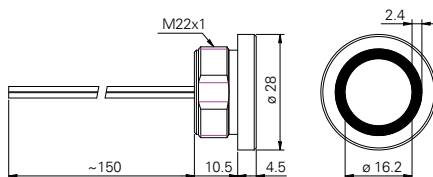
Product Dimensions

All dimensions in mm

Flat

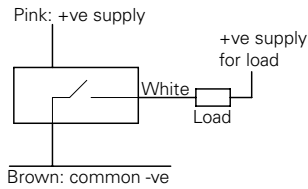


Raised

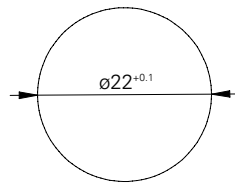


Circuit Diagram

Common ground (NMOS)



Mounting Dimensions



Wiring Instructions

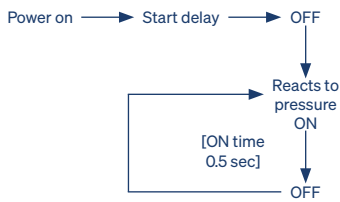
Switch: See circuit diagram

Ground wire for LED

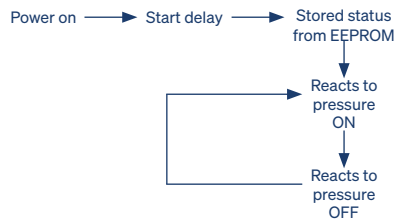
LED colour wire for +LED

Timing Diagram

Momentary



Toggle



Ordering Information



Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black aluminium
- V2: Stainless steel¹
- V4: Stainless steel²
- V5: Stainless steel³

Head Style

- F: Flat
- G: Raised

LED Colour

- GN: Green
- RD: Red
- YL: Yellow
- BL: Blue
- WH: White
- GR: Green/red
- BR: Blue/red
- GB: Green/blue
- BW: Blue/white

LED Voltage

- 00: No resistor⁴
- 05: 5 volt
- 12: 12 volt
- 24: 24 volt

Switch Function

- M: Momentary
- T: Toggle

NKI16 / [] / [] / R / [] / [] / S / L1

¹ 1.4305

² 1.4404

³ 1.4462

⁴ Red, yellow: 1.9V | Green, blue: 3.4V | White: 3.6V (20mA)



EPI50 30mm Illuminated Piezo Switch



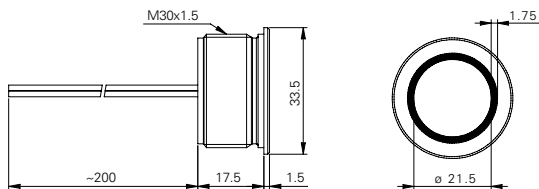
Specification

Termination	20cm flying leads
Switching function	Momentary
Configuration of poles	Single
Maximum load	100mA, 35VDC, 24VAC
LED voltage	24V AC/DC (20mA)
Contact resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +50°C
Ingress protection	IP68 (EN 60529)
Duty cycle	1,000,000 (min)
Operating force	< 5N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 13.0mm
Body & button material	See ordering information
ESD resistance	-

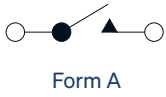
Product Dimensions

All dimensions in mm

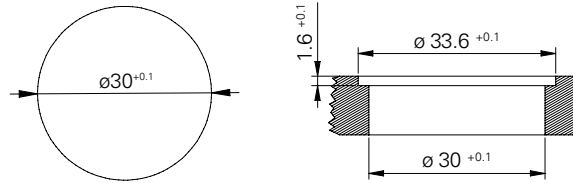
Flat



Circuit Diagram



Mounting Dimensions



Wiring Instructions

- Switch wire
- Switch wire
- Ground wire for LED
- LED colour wire for +LED

Ordering Information



Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black anodised aluminium
- V2: Stainless steel¹
- V4: Stainless steel²

LED Colour

- GN: Green
- RD: Red
- YL: Yellow
- BL: Blue
- WH: White
- GR: Green/red
- BR: Blue/red
- GB: Green/blue
- BW: Blue/white

EPI50 / / F / R / / 24 / M / S / L2

¹ 14305
² 14404



NKI50 30mm Illuminated thiNKswitch™



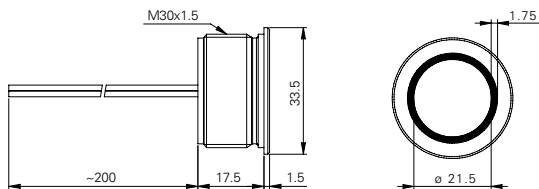
Specification

Termination	20cm flying leads
Switching function	Momentary or toggle
Configuration of poles	Single
Maximum load	2.5A, 8VDC to 24VDC
LED voltage	24 volt DC
"ON" resistance	100mΩ
Insulation resistance	> 10 ⁹ Ω
Operating temperature	-40°C to +50°C
Ingress protection	IP68 (EN 60529)
Duty cycle	1,000,000 (min)
Operating force	< 5N
Nut mounting torque	~ 2.5Nm
Panel thickness	0.5mm to 13.0mm
Body & button material	See ordering information
Impulse time	0.5 sec (momentary)

Product Dimensions

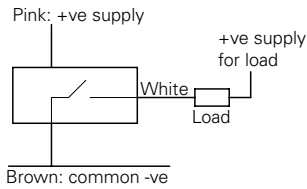
All dimensions in mm

Flat

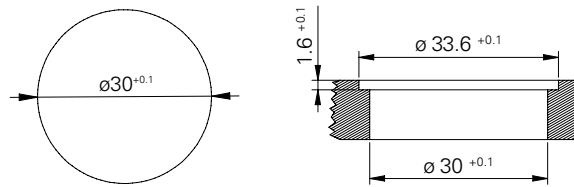


Circuit Diagram

Common ground (NMOS)

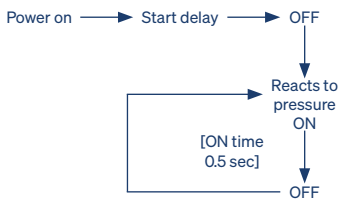


Mounting Dimensions

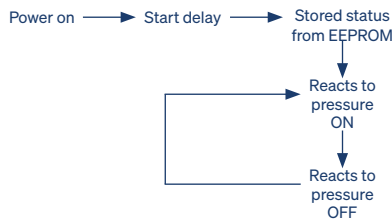


Timing Diagram

Momentary



Toggle



Wiring Instructions

- Switch: See circuit diagram
- Ground wire for LED
- LED colour wire for +LED

Ordering Information



Material

- AN: Natural anodised aluminium
- AR: Red anodised aluminium
- AB: Blue anodised aluminium
- AY: Yellow anodised aluminium
- AG: Green anodised aluminium
- AS: Black anodised aluminium
- V2: Stainless steel¹
- V4: Stainless steel²

LED Colour

- GN: Green
- RD: Red
- YL: Yellow
- BL: Blue
- WH: White
- GR: Green/red
- BR: Blue/red
- GB: Green/blue
- BW: Blue/white

Switch Function

- M: Momentary
- T: Toggle

NKI50 / / F / R / / 24 / / S / L1

¹ 14305

² 14404

CKI21 19mm Illuminated Capacitive Switch

 19mm

 22mm

 32mm

IP68

LED

IP69K

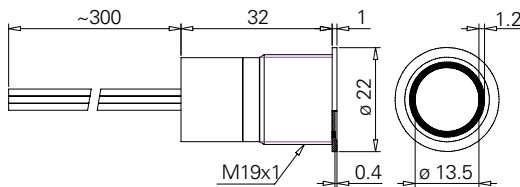
Specification

Termination	30cm flying leads
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	500mA, 24VDC
LED voltage	See ordering information
Contact resistance	200mΩ
Insulation resistance	600VDC 10MΩ
Operating temperature	-40°C to +85°C
Ingress protection	IP68 (EN 60529), IP69K (DIN 4050)
Duty cycle	50,000,000 (min)
Operating force	ON
Nut mounting torque	~ 0.8Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	Stainless steel 1.4301
Can be triggered by water	

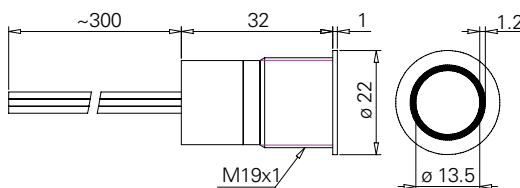
Product Dimensions

All dimensions in mm

Finger Guided

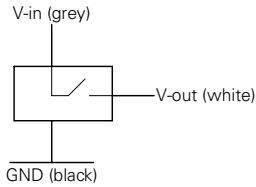


Flat

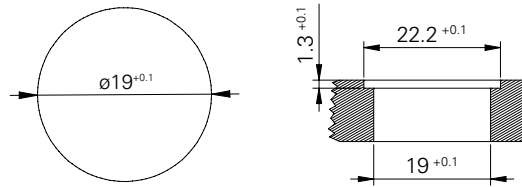


Circuit Diagram

Common plus (PMOS)



Mounting Dimensions



Wiring Instructions

Switch: See circuit diagram

- █ LED wire +²
- █ LED wire -²

For versions with 3 & 4 LED wires there is one wire per colour (+) and a black wire as common cathode^{4,5}

Ordering Information



Head Style

- F: Flat
- G: Finger guided

LED Colour

- GN: Green
- RD: Red
- YL: Yellow
- BL: Blue
- WH: White
- BG: Blue/green³
- BR: Blue/red³
- BW: Blue/white³
- RG: Red/green³
- RB: Red/blue³
- GB: Green/blue³
- GR: Green/red³
- WB: White/blue³
- NB: Off/blue
- NG: Off/green
- NR: Off/red
- NW: Off/white
- NY: Off/yellow
- O1: Green/red⁴
- O2: Green/blue⁴
- O3: Blue/red⁴
- O4: Blue/white⁴
- 11: RGB⁵

LED Voltage

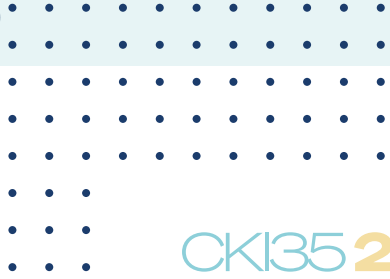
- 00: No resistor¹
- 05: 5 volt
- 12: 12 volt
- 24: 24 volt

Switch Function

- M: Momentary
- L: Maintained
- 1: Momentary switched LED³
- 2: Maintained switched LED³

CKI21 / V2 / [] / R / [] / [] / [] / S / L3

¹ Green, yellow: 1.8V | Red, blue, white: 2.8V (20mA)
² LED wires are only present by unswitched LED versions
³ First colour is active when the switch is not pressed.
 Second colour is active when switch is pressed.
⁴ 3 wires for LED connection (one per colour and common cathode (common anode available on request))
⁵ Red/green/blue, 4 wires for LED connection (one per colour and common cathode (common anode available on request))



CKI35 22mm Illuminated Capacitive Switch



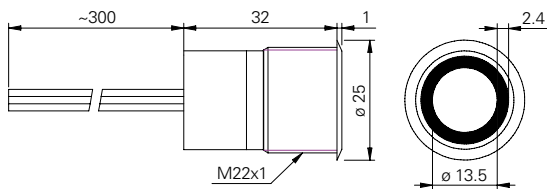
Specification

Termination	30cm flying leads
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	500mA, 24VDC
LED voltage	See ordering information
Contact resistance	200mΩ
Insulation resistance	600VDC 10MΩ
Operating temperature	-40°C to +85°C
Ingress protection	IP68 (EN 60529), IP69K (DIN 4050)
Duty cycle	50,000,000 (min)
Operating force	ON
Nut mounting torque	~ 0.8Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	Stainless steel 1.4301
Can be triggered by water	

Product Dimensions

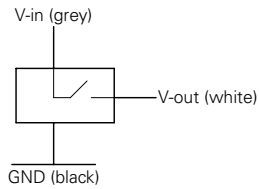
All dimensions in mm

Flat

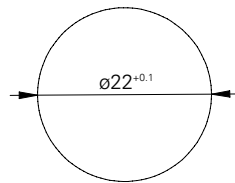


Circuit Diagram

Common plus (PMOS)



Mounting Dimensions



Wiring Instructions

Switch: See circuit diagram

█ LED wire +²

█ LED wire -²

For versions with 3 & 4 LED wires there is one wire per colour (+) and a black wire as common cathode^{4,5}

Ordering Information



LED Colour

GN: Green	WB: White/blue ³
RD: Red	NB: Off/blue
YL: Yellow	NG: Off/green
BL: Blue	NR: Off/red
WH: White	NW: Off/white
BG: Blue/green ³	NY: Off/yellow
BR: Blue/red ³	O1: Green/red ⁴
BW: Blue/white ³	O2: Green/blue ⁴
RG: Red/green ³	O3: Blue/red ⁴
RB: Red/blue ³	O4: Blue/white ⁴
GB: Green/blue ³	11: RGB ⁵
GR: Green/red ³	

LED Voltage

00: No resistor ¹
05: 5 volt
12: 12 volt
24: 24 volt

Switch Function

M: Momentary
L: Maintained
1: Momentary switched LED ³
2: Maintained switched LED ³

CKI35 / V2 / F / R / / / / S / L3

¹ Green, yellow: 1.8V | Red, blue, white: 2.8V (20mA)

² LED wires are only present by unswitched LED versions

³ First colour is active when the switch is not pressed.

Second colour is active when switch is pressed.

⁴ 3 wires for LED connection (one per colour and common cathode (common anode available on request))

⁵ Red/green/blue, 4 wires for LED connection (one per colour and common cathode (common anode available on request))

CKI36 22mm Illuminated Capacitive Switch

 22mm	 25mm	 32mm	IP68	LED	
			IP69K		

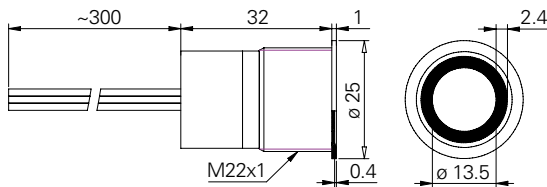
Specification

Termination	30cm flying leads
Switching function	Momentary or maintained
Configuration of poles	Single
Maximum load	500mA, 24VDC
LED voltage	See ordering information
Contact resistance	200mΩ
Insulation resistance	600VDC 10MΩ
Operating temperature	-40°C to +85°C
Ingress protection	IP68 (EN 60529), IP69K (DIN 4050)
Duty cycle	50,000,000 (min)
Operating force	ON
Nut mounting torque	~ 0.8Nm
Panel thickness	0.5mm to 8.0mm
Body & button material	Stainless steel 1.4301
Can be triggered by water	

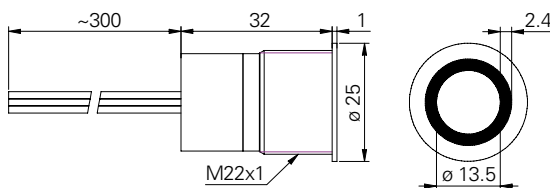
Product Dimensions

All dimensions in mm

Finger Guided

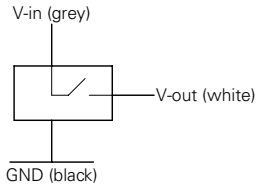


Flat

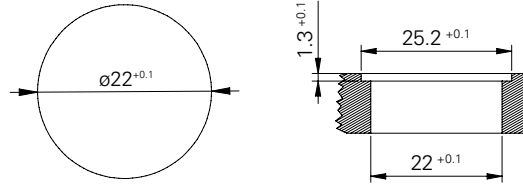


Circuit Diagram

Common plus (PMOS)



Mounting Dimensions



Wiring Instructions

Switch: See circuit diagram

- █ LED wire +²
- █ LED wire -²

For versions with 3 & 4 LED wires there is one wire per colour (+) and a black wire as common cathode^{4,5}

Ordering Information



Head Style	LED Colour	LED Voltage	Switch Function
F: Flat	GN: Green	00: No resistor ¹	M: Momentary
G: Finger guided	RD: Red	05: 5 volt	L: Maintained
	YL: Yellow	12: 12 volt	1: Momentary switched LED ³
	BL: Blue	24: 24 volt	2: Maintained switched LED ³
	WH: White		
	BG: Blue/green ³		
	BR: Blue/red ³		
	BW: Blue/white ³		
	RG: Red/green ³		
	RB: Red/blue ³		
	GB: Green/blue ³		
	GR: Green/red ³		
	WB: White/blue ³		
	NB: Off/blue		
	NG: Off/green		
	NR: Off/red		
	NW: Off/white		
	NY: Off/yellow		
	O1: Green/red ⁴		
	O2: Green/blue ⁴		
	O3: Blue/red ⁴		
	O4: Blue/white ⁴		
	11: RGB ⁵		

CKI36 / V2 / [] / R / [] / [] / [] / S / L3

¹ Green, yellow: 1.8V | Red, blue, white: 2.8V (20mA)
² LED wires are only present by unswitched LED versions
³ First colour is active when the switch is not pressed.
 Second colour is active when switch is pressed.
⁴ 3 wires for LED connection (one per colour and common cathode (common anode available on request))
⁵ Red/green/blue, 4 wires for LED connection (one per colour and common cathode (common anode available on request))



EPK10 3x4 Piezo Keypad

3x4	4.5mm	(IP68)	
	6.3mm		

Specification

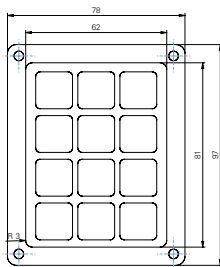
Termination	See ordering information
Switching function	Momentary
Configuration of poles	Single
Maximum load	200mA, 35VDC
Contact resistance ON	< 7.5Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP68 (EN 60529) with additional gasket
Duty cycle	1,000,000 (min)
Operating force	< 5N
Body material	See ordering information

Product Dimensions

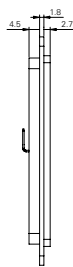
All dimensions in mm

Rear Panel Mount Vertical

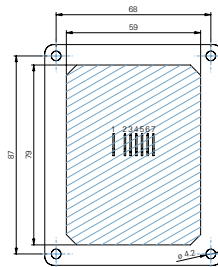
Front View



Side View

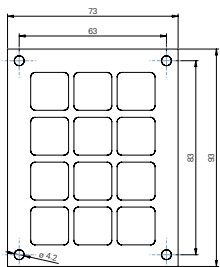


Rear View

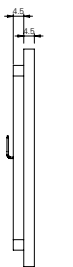


Front Panel Mount Vertical

Front View



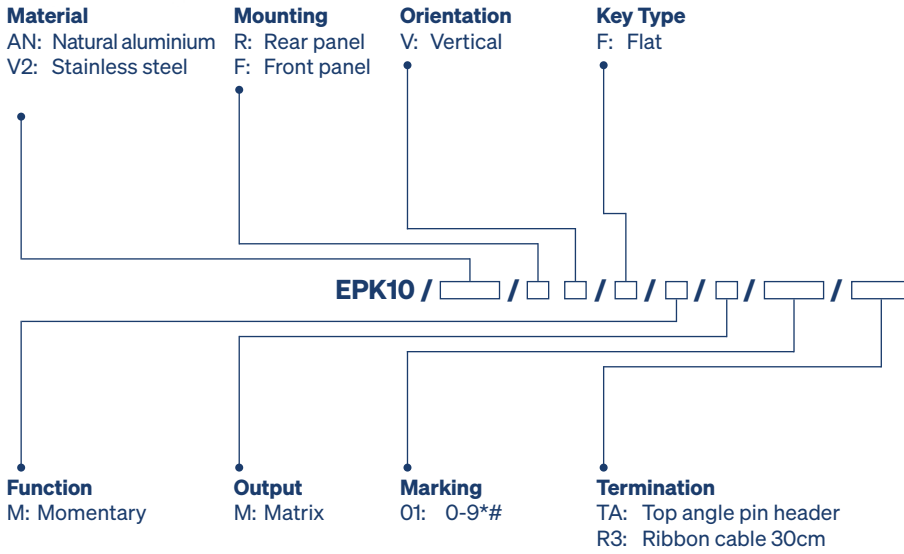
Side View



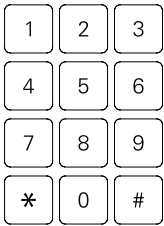
Pin Layout

		Pin number						
		1	2	3	4	5	6	7
Button	1	<input type="checkbox"/>				<input type="checkbox"/>		
	2	<input type="checkbox"/>					<input type="checkbox"/>	
	3	<input type="checkbox"/>						<input type="checkbox"/>
	4		<input type="checkbox"/>			<input type="checkbox"/>		
	5		<input type="checkbox"/>				<input type="checkbox"/>	
	6		<input type="checkbox"/>					<input type="checkbox"/>
	7			<input type="checkbox"/>		<input type="checkbox"/>		
	8			<input type="checkbox"/>			<input type="checkbox"/>	
	9			<input type="checkbox"/>				<input type="checkbox"/>
	*				<input type="checkbox"/>	<input type="checkbox"/>		
0				<input type="checkbox"/>		<input type="checkbox"/>		
#						<input type="checkbox"/>	<input type="checkbox"/>	

Ordering Information



Standard Marking Options



01: 0-9*#



EPK15 4x4 Piezo Keypad

4x4	4.5mm	(IP68)	
	6.3mm		

Specification

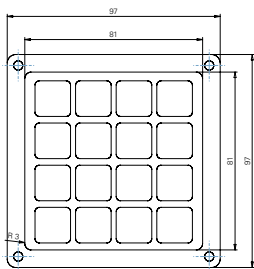
Termination	See ordering information
Switching function	Momentary
Configuration of poles	Single
Maximum load	200mA, 35VDC
Contact resistance ON	< 7.5Ω
Operating temperature	-40°C to +85°C
Ingress protection	IP69K (EN 4050) with additional gasket
Duty cycle	1,000,000 (min)
Operating force	< 5N
Body material	See ordering information

Product Dimensions

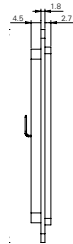
All dimensions in mm

Rear Panel Mount Vertical

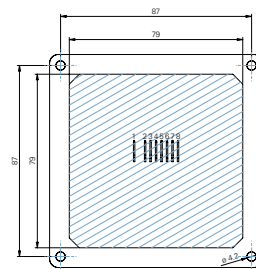
Front View



Side View

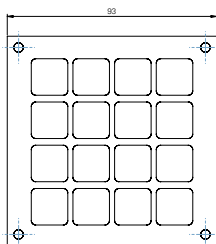


Rear View

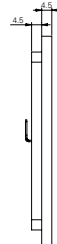


Front Panel Mount Vertical

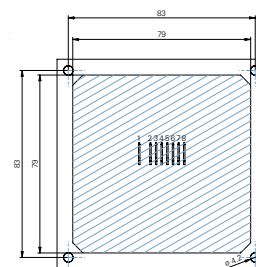
Front View



Side View



Rear View



Pin Layout

		Pin number							
		1	2	3	4	5	6	7	8
Button	1	<input type="checkbox"/>				<input type="checkbox"/>			
	2	<input type="checkbox"/>					<input type="checkbox"/>		
	3	<input type="checkbox"/>						<input type="checkbox"/>	
	A	<input type="checkbox"/>							<input type="checkbox"/>
	4	<input type="checkbox"/>				<input type="checkbox"/>			
	5	<input type="checkbox"/>					<input type="checkbox"/>		
	6	<input type="checkbox"/>						<input type="checkbox"/>	
	B	<input type="checkbox"/>							<input type="checkbox"/>
	7	<input type="checkbox"/>		<input type="checkbox"/>					
	8	<input type="checkbox"/>				<input type="checkbox"/>			
	9	<input type="checkbox"/>					<input type="checkbox"/>		
	C	<input type="checkbox"/>							<input type="checkbox"/>
	*			<input type="checkbox"/>	<input type="checkbox"/>				
	0			<input type="checkbox"/>		<input type="checkbox"/>			
	#			<input type="checkbox"/>			<input type="checkbox"/>		
	D			<input type="checkbox"/>					<input type="checkbox"/>

Ordering Information

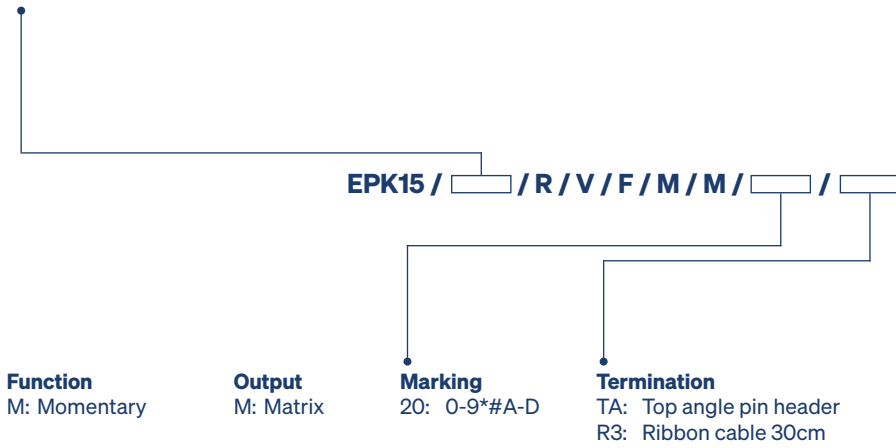


Material
AN: Natural aluminium
V2: Stainless steel

Mounting
R: Rear panel

Orientation
V: Vertical

Key Type
F: Flat



Standard Marking Options

1	2	3	A
4	5	6	B
7	8	9	C
*	0	#	D

20: 0-9*#A-D

148°



CIO4 8mm Vandalproof LED

 8mm  11mm  26mm  IP67

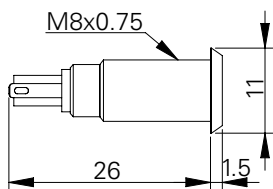
Specification

Termination	1.8x0.4mm fast connect terminals
LED voltage	See ordering information
Rated current	15mA
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Nut mounting torque	5Nm to 14Nm
Panel thickness	1.0mm to 10.0mm
Body material	See ordering information

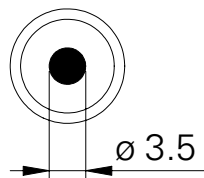
Product Dimensions

All dimensions in mm

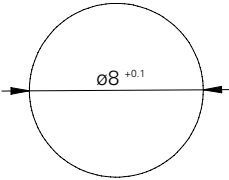
Side View



Front View



Mounting Dimensions



Ordering Information



Material

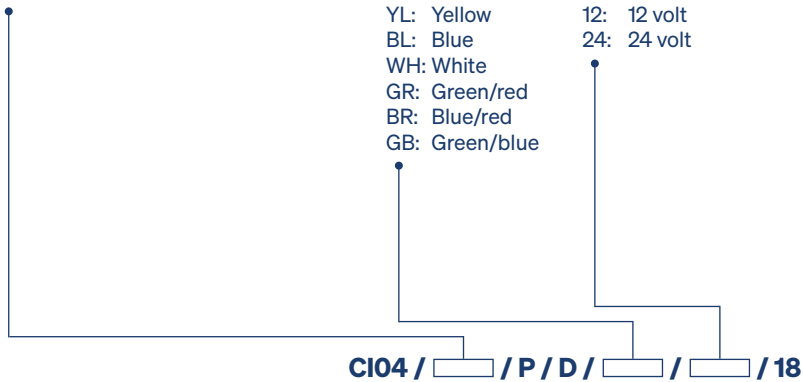
V2: Stainless steel¹
 BN: Nickel plated brass

LED Colour

GN: Green
 RD: Red
 YL: Yellow
 BL: Blue
 WH: White
 GR: Green/red
 BR: Blue/red
 GB: Green/blue

LED Voltage

00: No resistor²
 06: 6 volt
 12: 12 volt
 24: 24 volt



¹ 14301
² Green, yellow: 1.8V | Red, blue, white: 2.8V (20mA)

150°
 ••••••••••
 ••••••••••
 ••••••••••
 ••••••••••
 •••••
 •••••
 •••••

C105 8mm Vandalproof LED

8mm
∅ 9.5mm
39mm
IP67

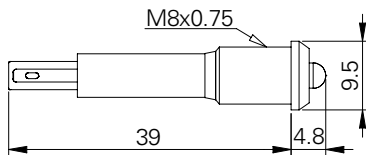
Specification

Termination	2.8×0.5mm fast connect terminals
LED voltage	See ordering information
Rated current	2mA to 20mA
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Nut mounting torque	5Nm to 14Nm
Panel thickness	1.0mm to 10.0mm
Body material	See ordering information

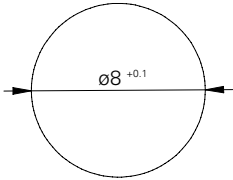
Product Dimensions

All dimensions in mm

Side View



Mounting Dimensions



Ordering Information

Material

V2: Stainless steel
 MB: Black plated brass
 BN: Nickel plated brass

LED Colour

GN: Green
 RD: Red
 YL: Yellow
 BL: Blue
 WH: White
 GR: Green/red
 BR: Blue/red
 GB: Green/blue

LED Voltage

06: 6 volt
 12: 12 volt
 24: 24 volt

CI05 / / D / D / / / 28



C108 12mm Vandalproof LED

 12mm

 15mm

 27.4mm

IP67

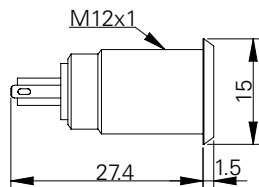
Specification

Termination	1.8×0.4mm fast connect terminals
LED voltage	See ordering information
Rated current	15mA
Operating temperature	-20°C to +55°C
Ingress protection	IP67 (EN 60529)
Nut mounting torque	5Nm to 14Nm
Panel thickness	1.0mm to 10.0mm
Body material	See ordering information

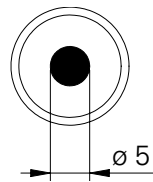
Product Dimensions

All dimensions in mm

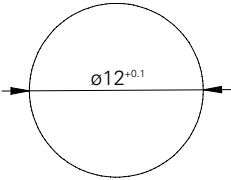
Side View



Front View



Mounting Dimensions



Ordering Information



Material

V2: Stainless steel¹
 BN: Nickel plated brass

LED Colour

GN: Green
 RD: Red
 YL: Yellow
 BL: Blue
 WH: White
 GR: Green/red
 BR: Blue/red
 GB: Green/blue

LED Voltage

00: No resistor²
 06: 6 volt
 12: 12 volt
 24: 24 volt

CI08 / / P / D / / / 18

¹ 14301

² Green, yellow: 1.8V | Red, blue, white: 2.8V (20mA)

MPI-VSG 14.5mm Electronic Ballast

↑ ↓ 14.5mm

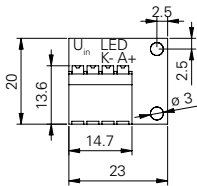
Specification

Termination	Spring loaded terminals
Input voltage	8-30VDC or 8-24VAC
Output	15-20mA
Protects the LED from excessive voltage	
Constant current source with transient protection	

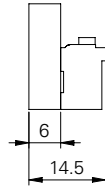
Product Dimensions

All dimensions in mm

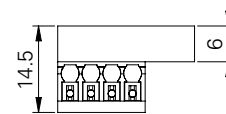
Front View



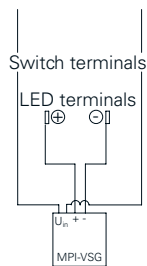
Side View



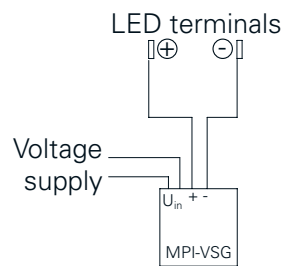
Top View



Connection Diagram for 4-Wire Systems



Connection Diagram for 2-Wire Systems



Ordering Information



Part Number
MPI-VSG

AC Wiring Accessories

Ordering Information



Switch Type	For Series	Poles	Terminations
I: Illuminated	15: CM15/16 &	S: Single	L1: 15cm leads ¹
N: Non-illuminated	15: CMI15/16	D: Double	L2: 20cm leads ¹
	25: CM25/26 &		L3: 30cm leads ¹
	25: CMI25/26		PC: PC pins
	30: CM30/31 &		SC: Solder contacts
	30: CMI30/31		
	35: CM35/36 &		
	35: CMI35/36		
	40: CM(I)40/41/45/		
	30: 46/50/51/60/61		

AC □ / □ / □ / □

¹ Only available for series (code) 35 & 40



Customized Products

Customized Switches



1. Printed lit symbols



2. Lasered lit symbols



3. Laser engraving



4. Custom colour



5. Surface illumination



6. Rear sealing



7. Printed symbols

Custom Development



1. Snap-in piezo switch



2. Custom piezo switch



3. Custom pushbutton



4. Underwater piezo panel



5. Door pushbutton



6. Chrome switch panel



7. Snap-in pushbutton



8. Pool piezo panel



Engelking Elektronik GmbH

Albstraße 16
D-78609 Tuningen

Tel.: +49 (0)7464 9865 0
Fax: +49 (0)7464 9865 71
E-Mail: info@engelking.de

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