

APEM COMPONENTS LIMITED



A P E M

Designed and manufactured in the UK

Q-Series Panel Mount LED Indicators

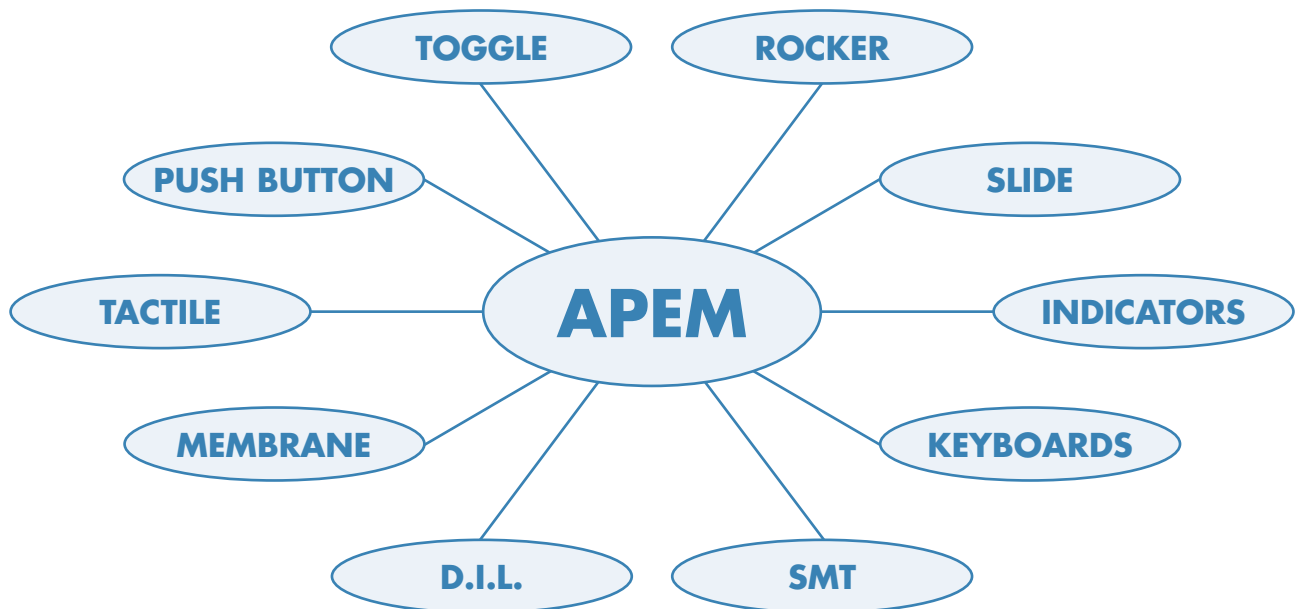


Q-SERIES PANEL MOUNT LED INDICATORS

Apem Components, the renowned switch manufacturer, have complemented their extensive range of products with the **NEW Q-series panel mount LED indicators**.

Designed and manufactured in the UK, the range comprises three different cut-outs: 6mm, 8mm and 14mm, three different bezel styles: prominent, recessed and flush, three different bezel finishes: bright chrome, black chrome and satin grey and three termination styles: 2.0/2.8mm push-on, pins and 200mm long wires. All ranges will be available with five LED colour options: red, green, yellow, blue and white as well as optional bicolour, tricolour and flashing LEDs.

The indicators are available with integral resistors to permit direct connection to 12V, 24V, 110V and 220V. The indicators also have the option of panel sealing to IP67.



Q-SERIES PANEL MOUNT LED INDICATORS



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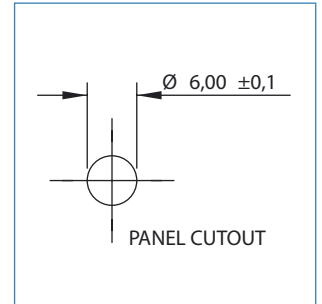
Q-SERIES

6mmØ Panel Mounting LED Indicator

Distinctive Features and Specifications

- 6mm panel mounting LED indicator
- 3mm coloured diffused epoxy lens or 3mm water clear high intensity LEDs
- Bright chrome, black chrome or satin grey bezel finishes
- Prominent, recessed and flush bezel styles
- 2V – 24VDC
- (2.0 x 0.5) terminals, pins or (200mm long) wire terminations
- IP67 sealing option
- Supplied with fixing nut and spring washer

NB: UL approval applied for.



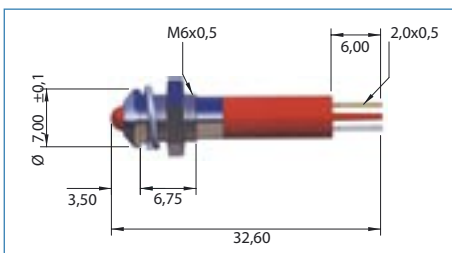
TECHNICAL SPECIFICATIONS

Switch Voltage	Operating Voltage V _{op}	Operating Current I _{op}
	(Min to Max)	(Typical) All Types
2VDC (No resistors)	1.8 to 2.5VDC	20mA
12VDC	10.8 to 13.2VDC	20mA
24VDC	21.6 to 26.4VDC	20mA
Intensity (Typical) at I_{op}		
Standard		
	Prominent and Recessed (all voltages)	Cylindrical (all voltages)
HE Red	40mcd	10mcd
Green	40mcd	8mcd
Yellow	30mcd	8mcd
Blue	65mcd	8mcd
White	100mcd	15mcd
Bicolour (Typically) (Red/Green)	20/15mcd	10/8mcd
The colour is changed by reversing the polarity of the supply voltage.		
Super Bright		
	Prominent and Recessed (all voltages)	Cylindrical (all voltages)
HE Red	3,500mcd	Consult Apem
Green	2,000mcd	Consult Apem
Yellow	900mcd	Consult Apem
Blue	550mcd	Consult Apem
White	600mcd	Consult Apem
Luminous intensity will be reduced with lower operating current.		
Max Reverse Voltage: 5V		
Viewing Angle: 100°		
Life Expectancy: 100,000 hours		
Operating Temperature Range: -40°C to +85°C		

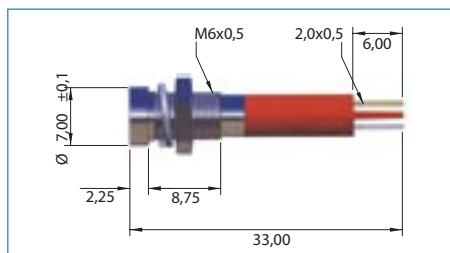
6mmØ Panel Mounting LED Indicator



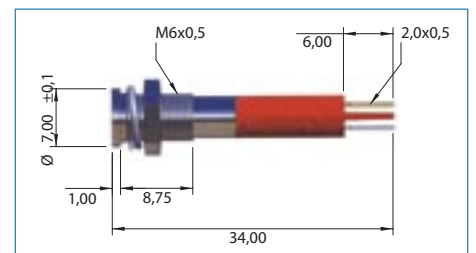
PROMINENT



RECESSED



FLUSH



6MM ORDERING OVERVIEW

Q											
Mounting Hole	Bezel Style	Terminals	Bezel Finish	Type of Illumination	LED Colour	Voltage	Sealing				
Ø = Ø 6mm	P = Prominent R = Recessed F = Flush	1 = Solder Lug/ Faston (2.0 x 0.5) 2 = Pins 3 = Wires	C = Bright Chrome B = Black Chrome G = Satin Grey	XX = Fixed Light KK = Flashing Light YY = Bicolour	R = Red G = Green Y = Yellow B = Blue W = White SR = Super Bright Red SG = Super Bright Green SY = Super Bright Yellow SB = Super Bright Blue SW = Super Bright White RG = Red/Green RY = Red/Yellow GY = Green/Yellow	O2 = 2VDC 12 = 12VDC 12A = 12VAC/DC 24 = 24VDC 24A = 24VAC/DC	(Blank) = Unsealed E = IP67				

- Gold faston terminal denotes Anode (+), silver faston terminal denotes Cathode (-)
- Wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-)
- For LEDs with alternative voltages consult APEM

- Gold faston terminal denotes Anode (+), silver faston terminal denotes Cathode (-)
- Wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-)
- For LEDs with alternative voltages consult APEM
- Bicolour LEDs, by connecting the gold faston (+) one colour is produced, by reversing the supply voltage another colour is produced
- Take care when soldering to the faston terminals

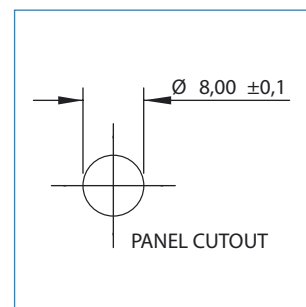
Q-SERIES

8mmØ Panel Mounting LED Indicator

Distinctive Features and Specifications

- 8mm panel mounting LED indicator
- 5mm coloured diffused epoxy lens or 5mm water clear high intensity LEDs
- Bright chrome, black chrome or satin grey bezel finishes
- Prominent, recessed and flush bezel styles
- 2VDC – 220VAC
- (2.8 x 0.8) terminals, pins or (200mm long) wire terminations
- IP67 sealing option
- Supplied with fixing nut and spring washer

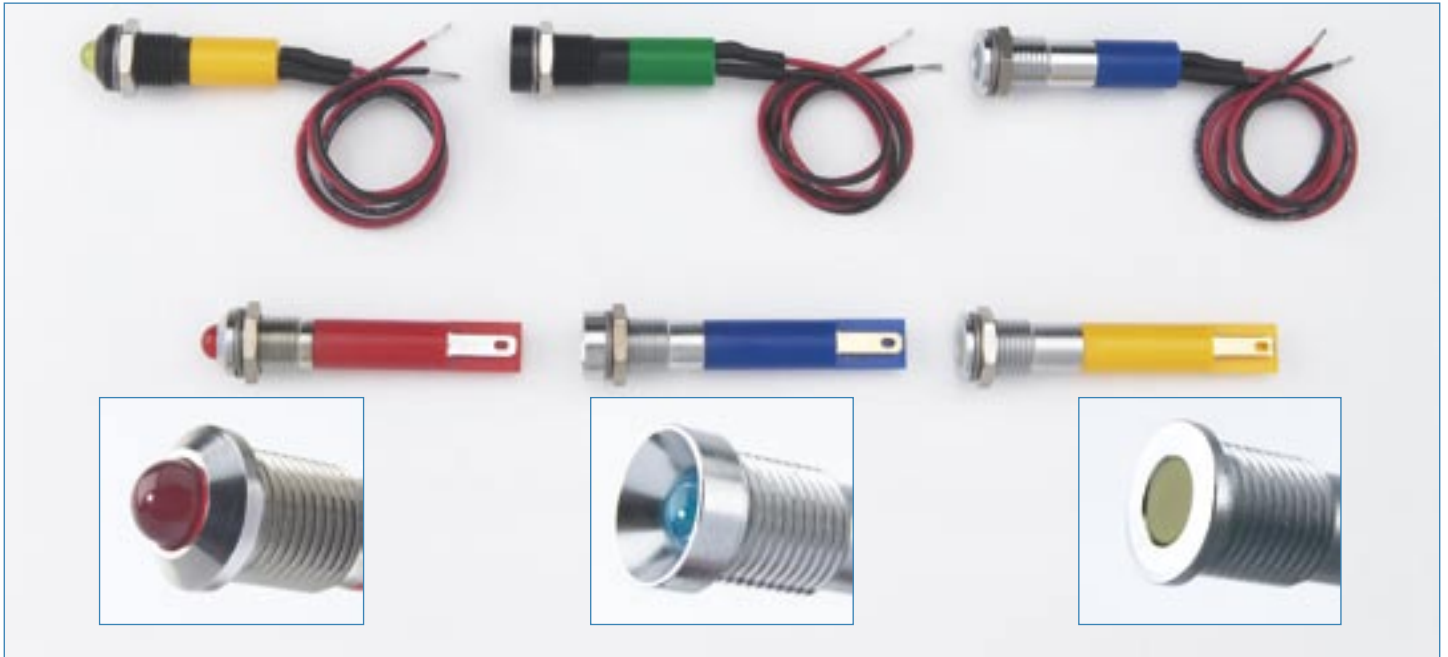
NB: UL approval applied for.



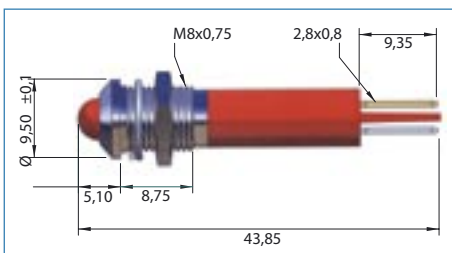
TECHNICAL SPECIFICATIONS

Switch Voltage	Operating Voltage V _{op}	Operating Current I _{op}
	(Min to Max)	(Typical) All Types
2VDC (No resistors)	1.8 to 2.5VDC	20mA
12VDC	10.8 to 13.2VDC	20mA
24VDC	21.6 to 26.4VDC	20mA
110VAC	99 to 121VDC	6mA
230VAC	207 to 253VDC	3mA
Intensity (nom) at I_{op}		
Standard		
	Prominent and Recessed (all voltages)	Cylindrical (all voltages)
HE Red	50mcd	10mcd
Green	40mcd	8mcd
Yellow	40mcd	6mcd
Blue	90mcd	4mcd
White	150mcd	25mcd
Bicolour (Typically) (Red/Green)	20/10mcd	10/8mcd
Tricolour (Typically) (Red/Green/Yellow)	20/10/10mcd	10/8/6mcd
Bicolour – The colour is changed by reversing the polarity of the supply voltage.		
Tricolour – The tricolour indicator has red and green LEDs, when both connected yellow is produced.		
Super Bright		
	Prominent and Recessed (all voltages)	Cylindrical (all voltages)
HE Red	10,000mcd	Consult Apem
Green	4,500mcd	Consult Apem
Yellow	2,100mcd	Consult Apem
Blue	1,400mcd	Consult Apem
White	2,000mcd	Consult Apem
Luminous intensity will be reduced with lower operating current.		
Max Reverse Voltage: 5V		
Viewing Angle: 100°		
Life Expectancy: 100,000 hours		
Operating Temperature Range: -40°C to +85°C		

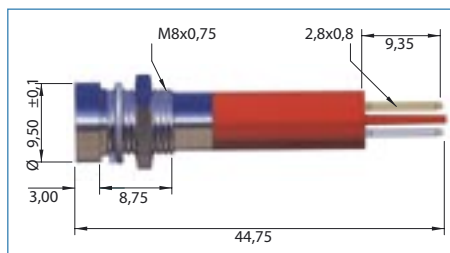
8mmØ Panel Mounting LED Indicator



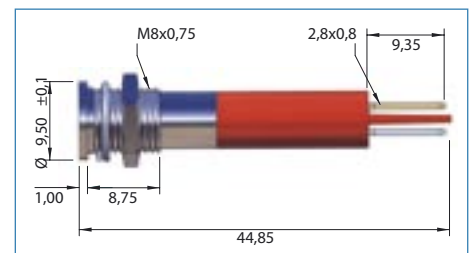
PROMINENT



RECESSED



FLUSH



8MM ORDERING OVERVIEW

Q										
	Mounting Hole	Bezel Style	Terminals	Bezel Finish	Type of Illumination	LED Colour	Voltage	Sealing		
	8 = Ø 8mm	P = Prominent R = Recessed F = Flush	1 = Solder Lug/ Faston (2.8 x 0.5) 2 = Pins 3 = Wires	C = Bright Chrome B = Black Chrome G = Satin Grey	XX = Fixed Light KK = Flashing Light YY = Bicolour ZZ = Tricolour	R = Red G = Green Y = Yellow B = Blue W = White SR = Super Bright Red SG = Super Bright Green SY = Super Bright Yellow SB = Super Bright Blue SW = Super Bright White RG = Red/Green RY = Red/Yellow GY = Green/Yellow RYG = Red/Yellow/Green	O2 = 2VDC 12 = 12VDC 12A = 12VAC/DC 24 = 24VDC 24A = 24VAC/DC 110 = 110VAC 220 = 220VAC	(Blank) = Unsealed E = IP67		

- Gold faston terminal denotes Anode (+), silver faston terminal denotes Cathode (-)
- Wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-)
- For LEDs with alternative voltages consult APEM
- Bicolour LEDs, by connecting the gold faston (+) one colour is produced, by reversing the supply voltage another colour is produced
- The tricolour LED has red and green LEDs, when both are connected yellow is produced

- Gold faston terminal denotes Anode (+), silver faston terminal denotes Cathode (-)
- Wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-)
- For LEDs with alternative voltages consult APEM
- Bicolour LEDs, by connecting the gold faston (+) one colour is produced, by reversing the supply voltage another colour is produced
- The tricolour LED has red and green LEDs, when both are connected yellow is produced
- Take care when soldering to the faston terminals

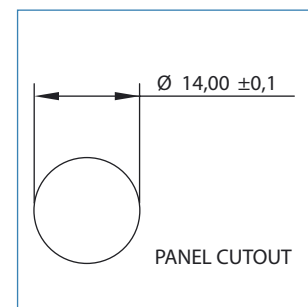
Q-SERIES

14mmØ Panel Mounting LED Indicator

Distinctive Features and Specifications

- 14mm panel mounting LED indicator
- 10mm coloured diffused epoxy lens or 10mm water clear high intensity LEDs
- Bright chrome, black chrome or satin grey bezel finishes
- Prominent, bezel style
- 2VDC – 220VAC
- (2.8 x 0.8) terminals, or (200mm long) wire terminations
- IP67 sealing option
- Supplied with fixing nut and spring washer

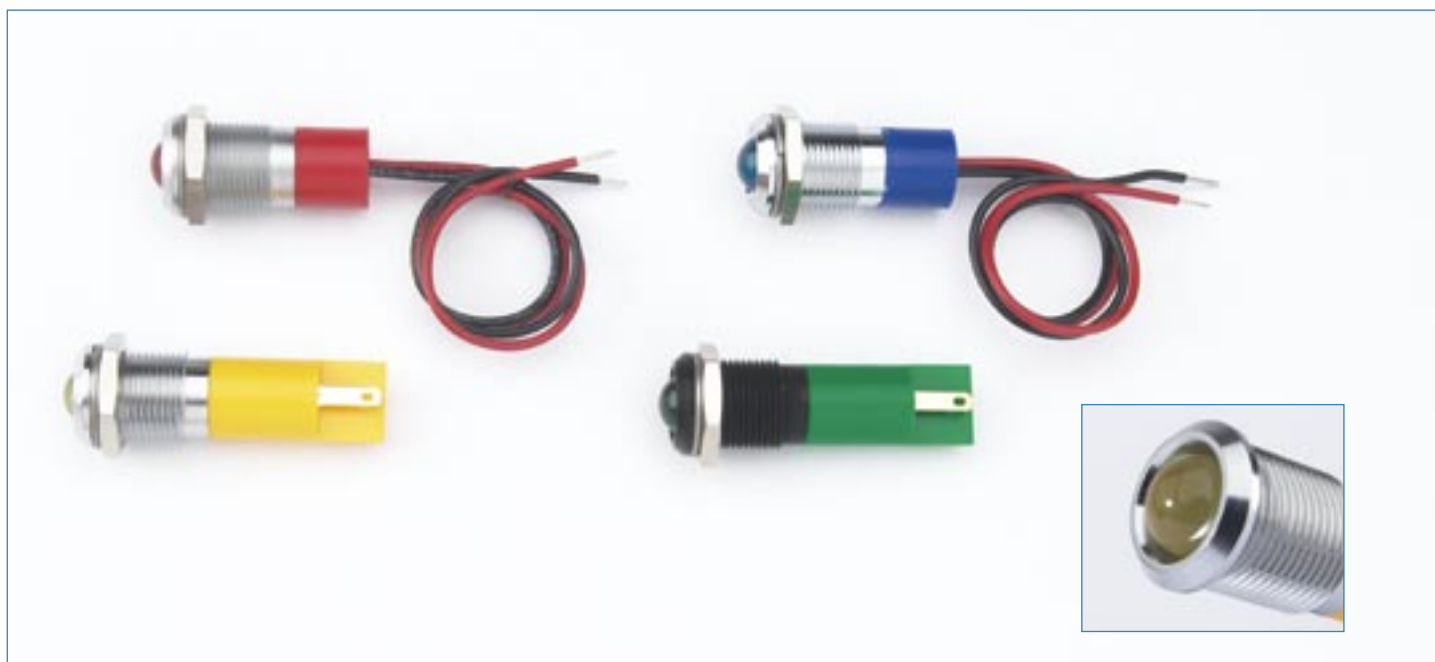
NB: UL approval applied for.



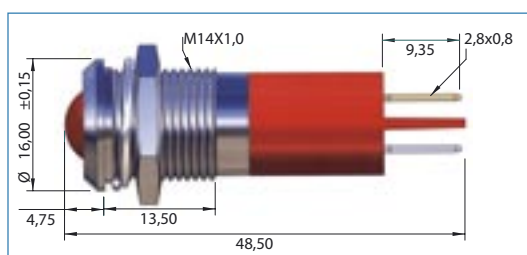
TECHNICAL SPECIFICATIONS

Switch Voltage	Operating Voltage V _{op}	Operating Current I _{op}
(Min to Max)	(Typical) All Types	
2VDC (No resistors)	1.8 to 2.5VDC	20mA
12VDC	10.8 to 13.2VDC	20mA
24VDC	21.6 to 26.4VDC	20mA
110VAC	99 to 121VAC	6mA
230VAC	207 to 253VAC	3mA
Intensity (Typical) at I _{op}		
Standard		
Prominent (all voltages)		
HE Red	80mcd	
Green	40mcd	
Yellow	30mcd	
Blue	280mcd	
White	350mcd	
Bicolour (Typically) (Red/Green)	80/50mcd	
Tricolour (Typically) (Red/Green/Yellow)	80/50/50mcd	
Bicolour – The colour is changed by reversing the polarity of the supply voltage.		
Tricolour – The tricolour indicator has red and green LEDs, when both connected yellow is produced.		
Super Bright		
Prominent (all voltages)		
HE Red	7,500mcd	
Green	4,100mcd	
Yellow	2,500mcd	
Blue	1,300mcd	
White	1,900mcd	
Luminous intensity will be reduced with lower operating current.		
Max Reverse Voltage: 5V		
Viewing Angle: 100°		
Life Expectancy: 100,000 hours		
Operating Temperature Range: -40°C to +85°C		

14mmØ Panel Mounting LED Indicator



PROMINENT



14MM ORDERING OVERVIEW

Q										
Mounting Hole	Bezel Style	Terminals	Bezel Finish	Type of Illumination	LED Colour	Voltage	Sealing			
14 = Ø 14mm	P = Prominent	1 = Solder Lug/ Faston (2.8 x 0.5)	C = Bright Chrome B = Black Chrome G = Satin Grey	XX = Fixed Light KK = Flashing Light YY = Bicolour ZZ = Tricolour	R = Red G = Green Y = Yellow B = Blue W = White SR = Super Bright Red SG = Super Bright Green SY = Super Bright Yellow SB = Super Bright Blue SW = Super Bright White RG = Red/Green RY = Red/Yellow GY = Green/Yellow RYG = Red/Yellow/Green	02 = 2VDC 12 = 12VDC 12A = 12VAC/DC 24 = 24VDC 24A = 24VAC/DC 110 = 110VAC 220 = 220VAC	(Blank) = Unsealed E = IP67			

- Gold faston terminal denotes Anode (+), silver faston terminal denotes Cathode (-)
- Wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-)
- For LEDs with alternative voltages consult APEM
- Bicolour LEDs, by connecting the gold faston (+) one colour is produced, by reversing the supply voltage another colour is produced
- The tricolour LED has red and green LEDs, when both are connected yellow is produced

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- Wire length is 200mm, red wire denotes Anode (+), black wire denotes Cathode (-)
- For LEDs with alternative voltages consult APEM
- Bicolour LEDs, by connecting the gold faston (+) one colour is produced, by reversing the supply voltage another colour is produced
- The tricolour LED has red and green LEDs, when both are connected yellow is produced
- Take care when soldering to the faston terminals

OTHER APEM INDICATORS



AO1 Series = Ø16mm round, square and rectangular screw in indicators. Filament, LED and neon bulb illumination. Various coloured lens. IP65 sealed.

AO2 Series = Ø22mm, Ø30mm, 21.5 x 29.5mm round, square and rectangular screw in indicators. Filament, LED and neon bulb illumination. Various coloured lens. IP65 sealed.

AO3 Series = Ø22mm or Ø30mm round screw in indicators. Filament, LED and neon bulb illumination. Various coloured lens. IP65 sealed.

A1 Series = Ø22mm round flush mounting indicator. Filament, LED and neon bulb illumination. Aluminium screens and bezel. IP65 sealed.

A9 Series = Ø30mm round indicator. Filament, LED and neon bulb illumination. Metal bezel. Various coloured mushroom lens. IP65 sealed.

AV Series = Ø19mm round flush mounting indicator. Robust stainless steel bezel.



EL Series = Ø6mm, Ø8mm and Ø10mm round snap in or screw in indicators. Filament, neon and fluorescent illumination.

109 Series = 13 x 19mm snap in indicators. Filament, neon and fluorescent illumination.

1809 Series = 27.2 x 12.2mm snap in indicators. Filament, neon and fluorescent illumination.



RT Series = Ø8mm, Ø12mm and Ø14mm round snap in plastic LED indicators.





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