

Q12 series

Ø12 mm panel mount LED indicators



DISTINCTIVE FEATURES

8 mm colored diffused epoxy lens or 8 mm water clear super bright LEDs

2VDC - 220VAC

(2.8 x 0.8) solder lug/faston terminals, pins or (200 mm long) wire terminations



ENVIRONMENTAL SPECIFICATIONS

- IP67 sealing option (EN60529)
- Operating & Storage Temperature Range:
Rear plastic body: -30 °C to +65° C (-22 °F to +149 °F)
Rear epoxy body: -40 °C to +85° C (-40 °F to +185 °F)



GENERAL SPECIFICATIONS

- Max Reverse Voltage: 5 V
- Viewing Angle: 30–100° (dependant on model)
- Life Expectancy: 100,000 hours
- Torque: 75 cNm
- Maximum panel thickness 7 mm
- Insulation resistance : 4,000 MΩ at 500 VDC

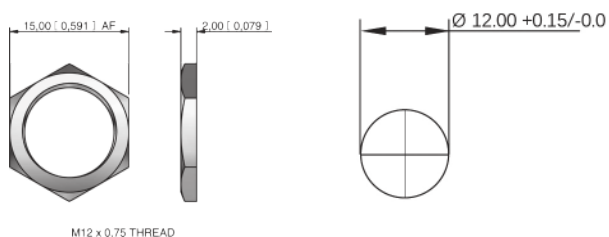


MATERIALS

- Plated brass bezel finished in bright chrome, black or satin grey and moulded polycarbonate rear body



MOUNTING



The company reserves the right to change specifications without notice.

All LED characteristics are dependent upon environmental conditions. Therefore published data should be considered nominal and subject to variations.



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ELECTRICAL SPECIFICATIONS

STANDARD LED INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	350 mcd	N/A	2.0 V
Green	60 mcd	N/A	2.2 V
Yellow	50 mcd	N/A	2.1 V
Blue	800 mcd	330 mcd	3.3 V (Flush : 3.1 V)
White	1,200 mcd	1.560 mcd	3.3 V (Flush : 3.1 V)
Orange	100 mcd	N/A	2.2 V
Bi-color (Typical) (Red/Green)	20/10 mcd	N/A	2.0 V/2.2 V
Tri-color (Typical) (Red/Green/Yellow)	80/50 mcd	N/A	2.5 V/2.5 V

Bi-color - The color is changed by reversing the polarity of the supply voltage.
Tri-color - The indicator has red and green LEDs, when both connected yellow is produced.

SUPER BRIGHT LED INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	3,000 mcd	N/A	2.2 V
Green	8,000 mcd	N/A	3.3 V
Yellow	1,100 mcd	N/A	2.0 V
Blue	1,500 mcd	N/A	3.3 V
White	1,200 mcd	N/A	3.3 V
Orange	2,000 mcd	N/A	2.2 V

HYPER BRIGHT LED INTENSITY

LED COMPONENT SPECIFICATIONS			
	Prominent and Recessed	Flush	Forward Voltage
HE Red	1,900 mcd	1,120 mcd	2.2 V
Green	3,500 mcd	1,560 mcd	3.3 V
Yellow	1,600 mcd	1,120 mcd	2.0 V
Orange	4,300 mcd	1,120 mcd	2.2 V

- The operating voltage must not be exceeded by more than 10% as this will result in reduced life expectancy
- Luminous intensity is measured at 20 mA on a discrete led unless otherwise stated.
- Luminous intensities and color shades of white LEDs may vary within a batch.
- Luminous intensity will be reduced with lower operating current.

Voltage	Operating Voltage	Operating Current
	(Min to Max)	(Typical All Types)
02 (No Resistor)	1.8 to 3.3 VDC	20 mA max
6 VDC	5.4 to 6.6 VDC	20 mA
12 VDC	10.8 to 13.2 VDC	20 mA
24 VDC	21.6 to 26.4 VDC	20 mA
28 VDC	25.2 to 30.8 VDC	20 mA
110 VAC	99 to 121 VAC	6 mA
220 VAC	207 to 235 VAC	3 mA

* Customer to supply resistor for desired operating current.

ADDITIONAL INFORMATION ON LED COMPONENTS

- Recommended usage:
 - Standard: Homogenous light output that is good for indoor applications.
 - Hyper Bright: Homogenous light output that is good for outside viewing and is daylight visible.
 - Super Bright: A water clear LED that is good for long distance viewing and is daylight visible.

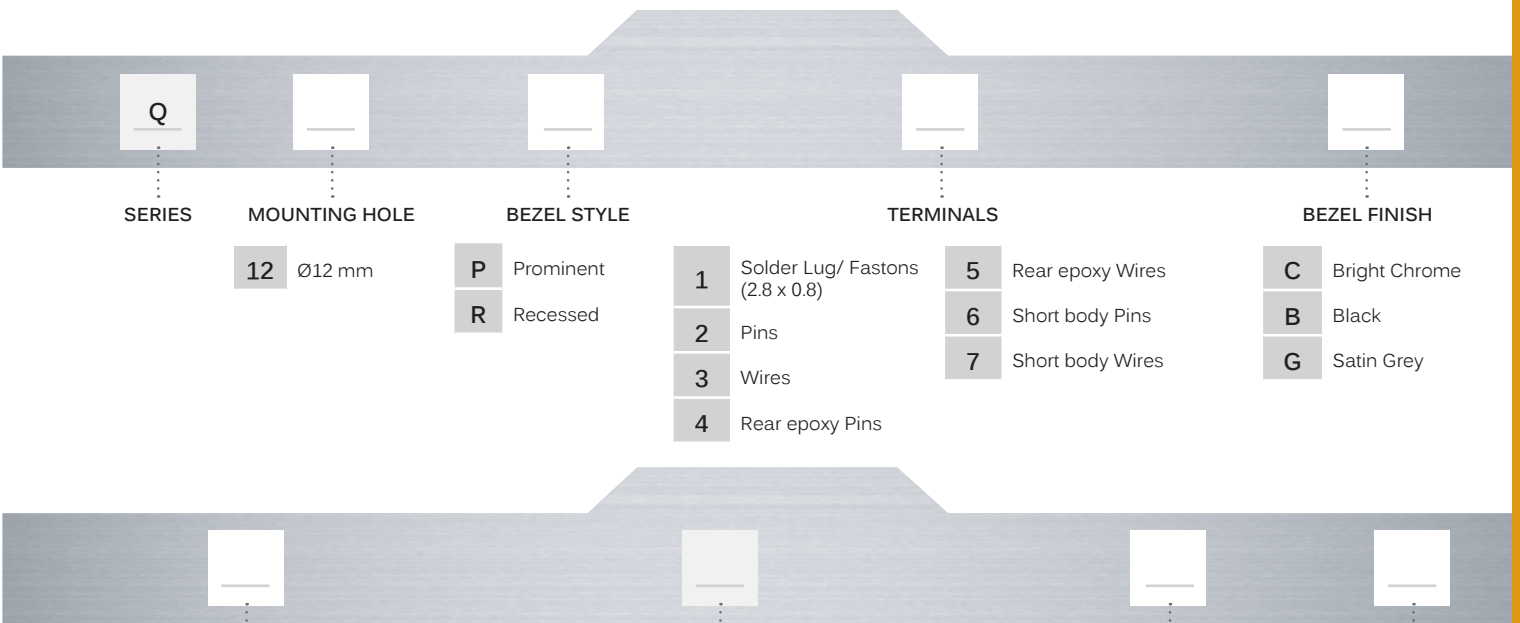
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BUILD YOUR PART NUMBER

PROMINENT AND RECESSED BEZEL



SERIES

12 Ø12 mm

BEZEL STYLE

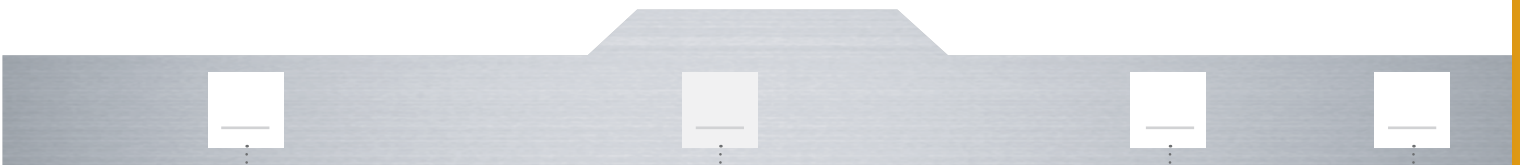
P Prominent
R Recessed

TERMINALS

1 Solder Lug/ Fastons (2.8 x 0.8)
2 Pins
3 Wires
4 Rear epoxy Pins
5 Rear epoxy Wires
6 Short body Pins
7 Short body Wires

BEZEL FINISH

C Bright Chrome
B Black
G Satin Grey



TYPE OF ILLUMINATION

XX Fixed Light
KK Flashing Light (12 V – 28 VDC)
YY Bi-color
ZZ Tri-color

R Red
G Green
Y Yellow
B Blue
W White
O Orange
HR Hyper Bright Red

LED COLOR

HG Hyper Bright Green
HY Hyper Bright Yellow
HO Hyper Bright Orange
SR Super Bright Red
SG Super Bright Green
SY Super Bright Yellow
SB Super Bright Blue
SW Super Bright White
SO Super Bright Orange
RG Red/Green
RY Red/Yellow
GY Green/Yellow
RYG Red/Yellow/Green

VOLTAGE

02 no resistor*
06 6 VDC
12 12 VDC
12A 12 VAC/DC
24 24 VDC
24A 24 VAC/DC
28 28 VDC
28A 28 VAC/DC
110 110 VAC
220 220 VAC

SEALING

(Blank) Unsealed
E IP67

* please refer to the forward voltage in electrical specifications



ABOUT THIS SERIES



Notice: please note that not all combinations of above numbers are available.

- Gold faston terminal denotes anode (+), silver terminal denotes cathode (-)
- Standard and Bi-Colour are provided in Standard wire length is 200mm, 24AWG UL1061, Red wire denotes anode (+), Black wire denotes cathode (-) for other lengths consult APEM.
- Bi-color leds, by connecting the gold faston (+) one color is produced, by reversing the supply voltage another color is produced – bi-colors are available up to 28 VDC
- Take care when soldering to the faston terminals (recommended solder temperature 300 °C - 3 sec)
- Max voltage for pins and wires is 28 V
- Tri-color are not available with terminal option 1 and behind panel epoxy sealed with pins to option 4 and wires to option 5.

- 110 VAC and 220 VAC, only available with terminal options 1, 3 and 5
- We recommend using Hyperbright or Superbright LEDs for use at 110 VAC and 220 VAC
- The Tri-color LED has red and green LEDs when both are connected yellow is produced
- Standard tri-color faston terminals are two anodes (+) and one cathode (-)
- Tri-color wires are one red (+) and one green (+) anode and one black (-) cathode
- Tri-color pins are center (-) cathode, shortest (+) anode pin green, longest (+) anode pin red

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BUILD YOUR PART NUMBER

FLUSH BEZEL

Q

SERIES

MOUNTING HOLE

12 Ø12 mm

BEZEL STYLE

F Flush

TERMINALS

1 Solder Lug/ Fastons
(2.8 x 0.8)
4 Rear epoxy Pins
5 Rear epoxy Wires

BEZEL FINISH

C Bright Chrome
B Black
G Satin Grey

TYPE OF ILLUMINATION

XX Fixed Light

LED COLOR

HR Red
HG Green
HY Yellow
B Blue
W White
HO Orange

VOLTAGE

02 no resistor*
06 6 VDC
12 12 VDC
12A 12 VAC/DC
24 24 VDC
24A 24 VAC/DC
28 28 VDC
28A 28 VAC/DC
110 110 VAC
220 220 VAC

SEALING

(Blank) Unsealed
E IP67



ABOUT THIS SERIES



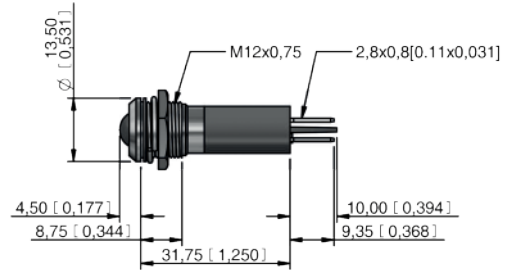
Notice: please note that not all combinations of above numbers are available.

- Gold faston terminal denotes anode (+), silver terminal denotes cathode (-)
- Standard wire length is 200 mm, 24 AWG UL1061, red wire denotes anode (+), black wire denotes cathode (-) for other wire lengths consult APEM
- For leds with alternative voltages please consult Apem
- Take care when soldering to the faston terminals (recommended solder temperature 300 °C - 3 sec)
- Body options 2 and 6 are only available without integral resistor (02).
- 110VAC and 220VAC only available with solder lug/Faston terminals

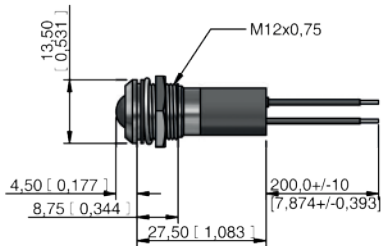
PROMINENT BEZEL



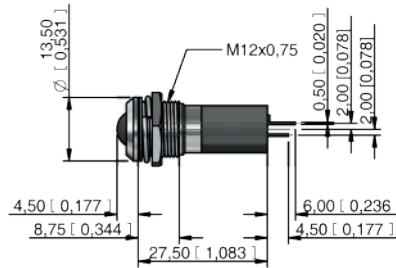
SOLDER LUG/FASTON



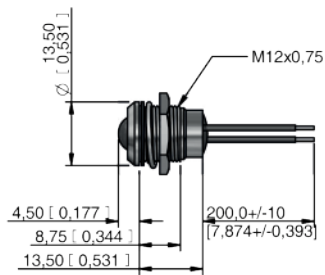
WIRES



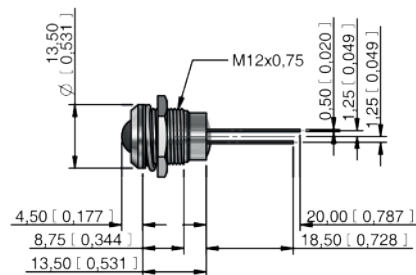
PINS



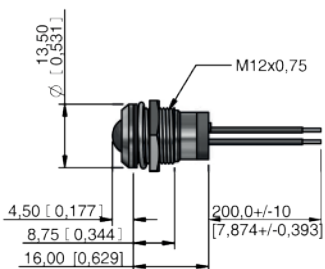
REAR EPOXY WIRES



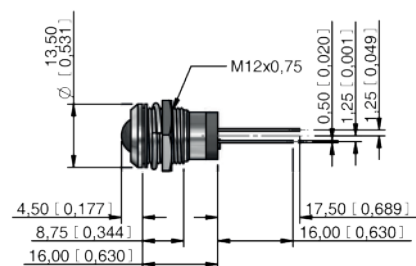
REAR EPOXY PINS



SHORT BODY WIRES



SHORT BODY PINS



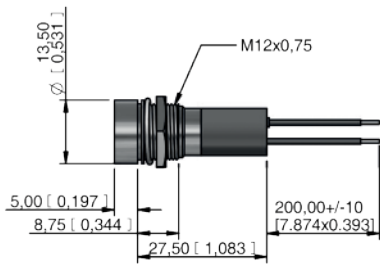
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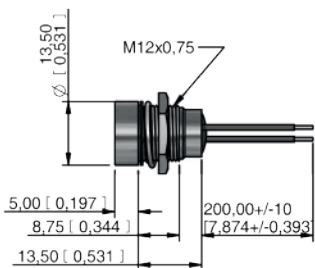
RECESSED BEZEL



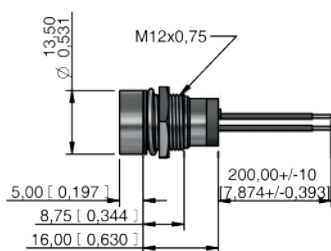
WIRES



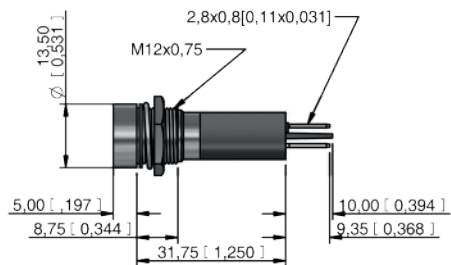
REAR EPOXY WIRES



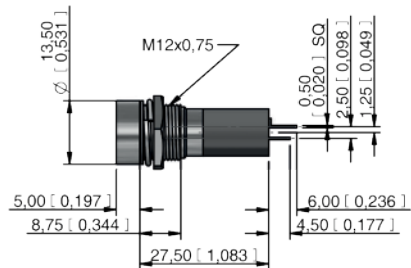
SHORT BODY WIRES



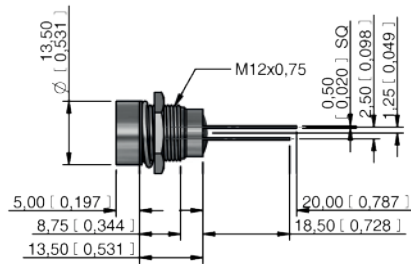
SOLDER LUG/FASTON



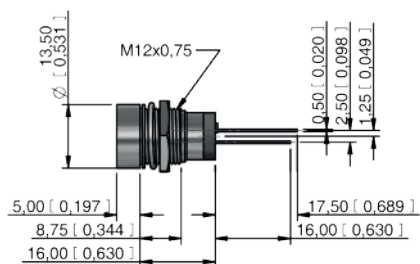
PINS



REAR EPOXY PINS



SHORT BODY PINS



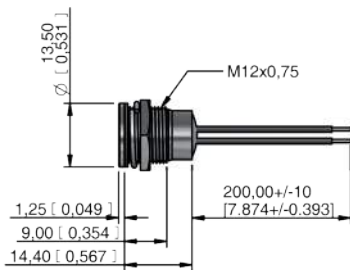
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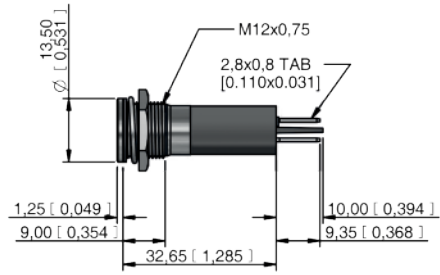
FLUSH BEZEL



REAR EPOXY WIRES



SOLDER LUG/FASTON



REAR EPOXY PINS

