Ø16 mm panel mount LED indicators



MD-016-17.01

DISTINCTIVE FEATURES

Secret until lit polycarbonate decals or custom engraving 10 mm colored diffused epoxy lens or 10 mm water clear super bright LEDs

(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: $-40 \degree C$ to $+85 \degree C$ ($-40 \degree F$ to $+185 \degree F$)



GENERAL SPECIFICATIONS

- Max Reverse Voltage: 5 V
- Viewing Angle: 30-100° (dependant on model)
- Life Expectancy: 100,000 hours
- Torque: 75 cNm (dependent on option)
- Maximum panel thickness 11 mm

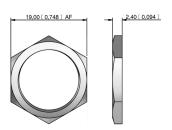


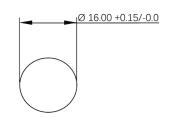
MATERIALS

• Plated brass bezel finished in bright chrome, black chrome 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				
HE Red	80 mcd	10 mcd	2.0 V			
Green	60 mcd	5 mcd	2.2 V 2.1 V			
Yellow	50 mcd	4 mcd				
Blue	540 mcd	100 mcd	3.3 V 3.3 V 2.2 V			
White	1,000 mcd	150 mcd				
Orange	80 mcd	200 mcd				
Bi-color (Typical) (Red/Green)	15/15 mcd	14/10 mcd	2.0 V/2.2 V			
Tri-color (Typical) (Red/Green/Yellow)	60/50/50 mcd	15/10/30 mcd	2.0 V/2.2 V/2.1 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	Forward Voltage				
HE Red	17,000 mcd	2000 mcd	2.2 V			
Green	11,000 mcd	680 mcd	3.5 V			
Yellow	4,000 mcd	350 mcd	2.3 V			
Blue	2,500 mcd	250 mcd	3.3 V			
White	4,400 mcd	250 mcd	3.3 V			
Orange	2,800 mcd	300 mcd	2.1 V			

HYPER BRIGHT LED INTENSITY

LED COMPONENT SPECIFICATIONS							
	Prominent and Recessed	Flush	Forward Voltage				
HE Red	2,800 mcd	800 mcd	2.0 V				
Green	2,200 mcd	250 mcd	3.2 V				
Yellow	1,300 mcd	250 mcd	2.0 V				
Orange	850 mcd	200 mcd	2.1 V				

- The operating voltage must not be exceeded by more that 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.

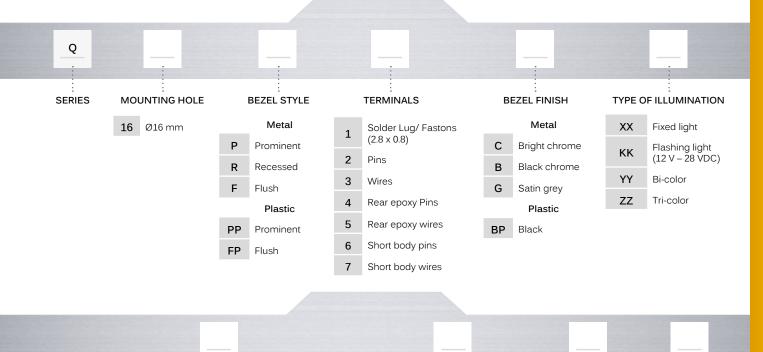
ADDITIONNAL INFORMATION ON LED COMPONENTS

- 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
- The tri-color led has red and green leds when both are connected yellow is produced

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BUILD YOUR PART NUMBER



ED COLOR				VOLTAGE	TAGE SEALING		CUSTOM OPTIONS					
R	Red	HG	Hyper bright green	SB	Super bright blue	02	no resistor*	(Blank)	Unsealed	See end of series		
G	Green		Hyper bright		Super bright	06	6 VDC	E	IP67	000 0114 01 001100		
Υ	Yellow	HY	yellow			SW	white	12	12 VDC			
В	Blue	но	Hyper bright	RG	Red/green	12A	12 VAC/DC					
W	White		orange Super bright	RY	Red/yellow	24	24 VDC					
0	Orange	SR	Red			GY	Green/yellow	24A	24 VAC/DC			
HR	Hyper bright Red	SG	Super bright green	RYG	Red/yellow/ green	28	28 VDC					
		SY	Super bright yellow			28A	28 VAC/DC					
		31			110	110 VAC	* please refer to the forward					
						220	220 VAC	voltage in electrical specifications				



ABOUT THIS SERIES

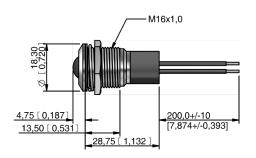
- Notice: please note that not all combinations of above numbers are available.
 - Gold faston terminal denotes anode (+), silver terminal denotes cathode (-)
 - Standard wire length is 200 mm, 22 AWG UL1007, red wire denotes anode (+), black wire denotes cathode (-) for other wire lengths consult APEM
 - \bullet Take care when soldering to the faston terminals (recommended solder temperature 300 $^{\circ}\text{C}$ 3 sec)
 - Short body pins and wires are only available up to 28 VDC
 - 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
- We recommend using hyperbright or superbright leds for use at 110 VAC and 220 VAC
- For leds with alternative voltages and for multi-voltage options please consult APEM

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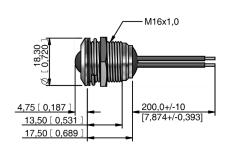
PROMINENT BEZEL



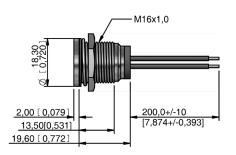
WIRES



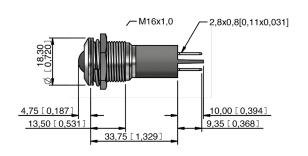
REAR EPOXY WIRES



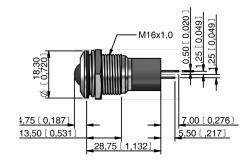
SHORT BODY WIRES



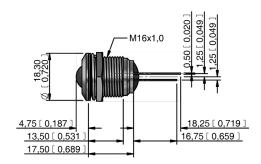
SOLDER LUG/FASTON



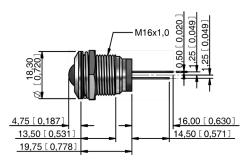
PINS



REAR EPOXY PINS



SHORT BODY PINS



APEN APEN

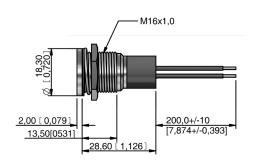
Q16 series

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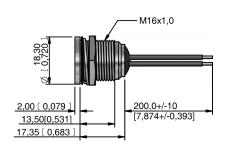
FLUSH BEZEL



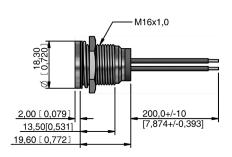
WIRES



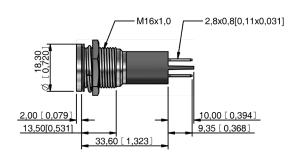
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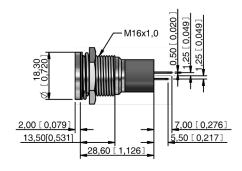
SHORT BODY WIRES



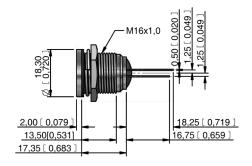
SOLDER LUG/FASTON



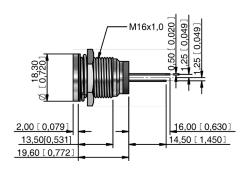
PINS



REAR EPOXY PINS



SHORT BODY PINS

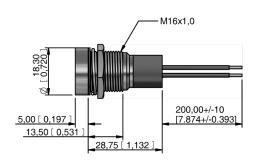


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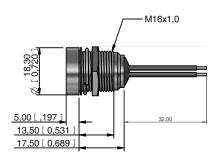
RECESSED BEZEL



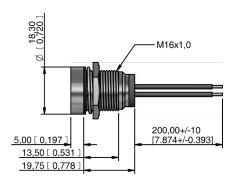
WIRES



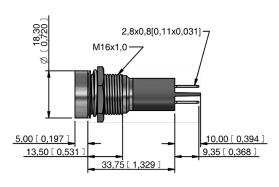
REAR EPOXY WIRES

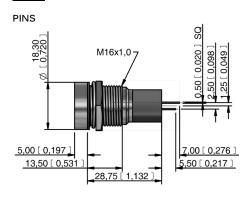


SHORT BODY WIRES



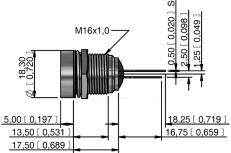
SOLDER LUG/FASTON



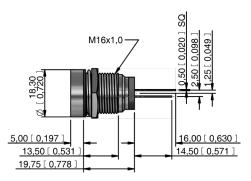




REAR EPOXY PINS



SHORT BODY PINS



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CUSTOM ENGRAVING

Some common codes are listed above, for your custom requirements please contact APEM. Unless specified standard engraving with white infill will be supplied. Suffix the part number with legend code:













High beam -0AJ

Low beam -097

Rear fog

Front fog -026

Windscreen wiper -021

Windscreen washer -022

Ventilator fan -023

<u>-</u>DQ-









Turn Signal -0AH

Side lights -098

Horn -041

Hazard warning -013

Heating -018

Brake test -0BU

Arrow -0K6







Oil can



Windscreen heating -020



Engine coil -0EL ABS -086



Seat belt



USB connection -0BU



Steam



ECU -0EU



Side step





Engine -040



Boot/Trunk Release -0BR









PEN

Q16 series

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SECRET UNTIL LIT POLYCARBONATE INSERTS

Some common codes are listed above, for your custom requirements please contact APEM. Please note Secret until lit inserts only available with flush metal bezel (Option F)
Suffix the part number with legend code:



(•••) CAB

CABLE LENGTH AND CONNECTOR



For custom cable length and connectors contact APEM.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for LED Panel Mount Indicators category:

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Other Similar products are found below:

607-3232-140F 821-0331-503 FL2870C8R FL2950WL7B FL2950WL8G FL589WL8R FL67C8R H8630FBBA3 NL177WL2A NL177WL3G NL276C2A NL2950BWL3G NL589WL2R NL67C2C NL67C3R C480AABG3 PB22BM41K PB22SIM40Y PB22SKRS31KC L32R-R2-2311 L3353-MWRG L39UR-R24-2111 L58D-G2-W L58D-Y2-W L59D-R12-W L59UD-R12-W L625DG L625DR LE177WL39007 LE2950BWL39018 LH1048BSWL3702 LH1048BWL3702 LH382A LH677G LHM628A FL276WL7R FL2950BWL7R FL2950WL8R FL2950WL8R-12 FL2951WL8G FL2951WL8R FL589C7R FL67WL8G MPC5BCW18.0 556-1605-808F 556-1705-809F 556-3008-839F 558-0201-818F 559-0001-813F