

# MTL661, MTL662 & MTL663 ZONE 0 INDICATORS

IS, loop powered + backlight 'B' option

The MTL66x range offers a variety of field and panel mounting IS indicators to display the current flowing in a 4–20mA loop. The small voltage drop of <1V allows the loop powered display to be installed in almost any 4–20mA loop.

Configuration is carried out using the front panel switches (which can be password protected). Range units, upper and lower limits, decimal point positioning and number of digits displayed are all configured via the front panel.

## SPECIFICATION

### Unit location

Zone 0, IIC, T4 hazardous area  
Div 1, Group A, hazardous location

### Display

5½ digits - 26mm height (process value)  
Eleven 8mm digits (process units & current)

### Voltage requirements under all conditions

<1V, loop powered

### Ambient Temperature

Operating: -20°C to +70°C  
Storage: -40°C to +80°C

### Humidity

5-99%RH

### Input range

4-20mA

### Over-range

200mA maximum without damage

### Display Range

-99999 to 199999 (Configurable)  
Number of digits after decimal point configurable

### Zero and span

Setting: anywhere in range

### Scale direction

Normal or reverse: software selected.

### Out of range indication

"---- RANGE ERROR" displayed between 3.5 - 3.75mA  
"99999 RANGE ERROR" displayed at current >22mA

### Operating modes

Linear or square root extraction is software selectable.

### Accuracy at 20°C

± 0.01mA

### Effects of temperature on accuracy

Zero: ± 0.0025% of span /°C  
Span: ± 0.01% of span /°C

### Ripple rejection

<0.01mA error with 1mA peak to peak ripple at 50Hz

### Electrical safety

The input circuit of the indicator is designed such that it does not influence the intrinsically safe circuit to which it is connected. (In the USA the application is covered by the entity concept.)  
Input circuit (terminals 4 & 5) in type of explosion protection intrinsically safe EEx ia IIC, with the following parameters:  
U<sub>i</sub>=30V, I<sub>i</sub>=200mA, P<sub>i</sub>=1.2W, C<sub>i</sub>=0nF, L<sub>i</sub>=0mH only for connection to a certified intrinsically safe circuit not exceeding these values.

### Backlight (see Accessories for IS interfaces)

Separately powered backlight from an IS power source  
(U<sub>o</sub> = 28V, I<sub>o</sub> = 200mA, P<sub>o</sub> = 0.96W max.)

### Dimensions

See final page



Aluminium & GRP models



ABS model

## APPROVALS

Country	Europe (ATEX)	International (IECEx)
Authority	KEMA	KEMA
Standards	EN 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007 EN 61241-0:2006 EN 61241-11:2006	IEC 60079-0:2004 IEC 60079-11:2006 IEC 60079-26:2006 IEC 61241-0:2004 IEC 61241-11:2005
Certificate /file no.	KEMA 03ATEX1194X	IECEx KEM 08.0008X
Approved for	Ex II 1 G Ex ia IIC T4 Ex II 1 D Ex iaD 20 IP65/67 T 100°C Tamb = -25°C to +70°C	Ga Ex ia IIC T4 Ex iaD 20 IP65/ 67 T 100°C Tamb = -25°C to +70°C

(The maximum temperature of the enclosure, T 100°C, is referred to an ambient temperature of 70°C and is applicable to a maximum dust layer thickness of 5mm.)

## ORDERING INFORMATION

When ordering a MTL661, MTL662 or MTL663 for Zone 0, use one of the following order codes to uniquely specify your requirement.

Order code	Type	Backlight	Case material	Weight gms*	Case style
MTL661	Field	No	Aluminium	825	A
MTL661B	Field	Yes	Aluminium	825	A
MTL661-ABS	Field	No	ABS	375	C
MTL662	Panel	No	Aluminium	425	B
MTL662B	Panel	Yes	Aluminium	425	B
MTL663	Field	No	GRP	500	A
MTL663B	Field	Yes	GRP	500	A

\* nominal

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



EUROPE (EMEA): +44 (0)1582 723633  
enquiry@mtl-inst.com

THE AMERICAS: +1 800 835 7075  
csinfo@mtl-inst.com

ASIA-PACIFIC: +65 6 487 7887  
sales@mtlsing.com.sg

EPS660 RevD 140510