

# RTK DA180

## MTL giant LED cluster

### Description

The RTK DA180 range of MTL giant LED clusters provides extremely clear indication of process conditions for use in both safe and hazardous area. The 66mm diameter lens not only provides clear indication from a distance but is also visible from the side. Available in a choice of six colours (red, green, yellow, amber, blue and white), the DA180 is a perfect choice for many visual warning tasks.

All colours are matched for equal brightness and all are current limited to 20mA with an integral regulator. The standard LED cluster can also be supplied pre-installed in a stainless steel or polycarbonate box ready for immediate mounting on-site.

### Installation

In hazardous areas the LED lamps must be powered through suitable intrinsically safe isolators or barriers. In hazardous areas it is possible to combine LEDs from a single IS interface, two for IIC interfaces and four with a IIB interface.

To illuminate the lamp, connect X1 to positive and X2 to negative. If these are connected incorrectly the lamp will not illuminate but will not be damaged in any way, simply reverse the two connections.

### Mounting the clusters

Mounting details are shown in figure 1 and 2. Clusters can be mounted in any instrumentation panel with a thickness up to 5mm.

- Punch or drill an appropriate diameter hole in the panel for each cluster. To prevent rotation and to ensure IP rating is not compromised add a notch detailed below.

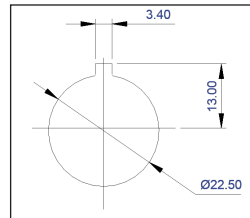


Figure 1 - DA180 cut-out details

- Ensuring the gasket goes between the DA180 and the panel, and the notch lines up with the cut out locate the plastic locking ring over the base and lock into place by twisting nut until tight.

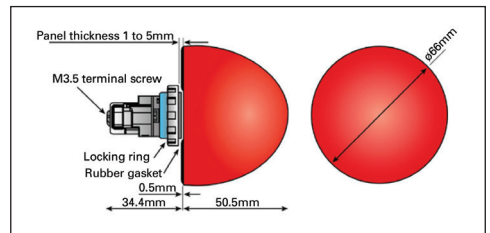


Figure 2 - Mounting details

## Hazardous area use

The LED lamps must be powered through suitable intrinsically safe isolators or barriers. Up to two LED lamps can be driven from a single IIC interface. The LED lamp must be protected to IP20 minimum once installed.

## Specification

### HAZARDOUS AREA USE

#### Certification

ATEX certified to to EN60079-0:2006 and EN60079-11:2007

Group II, Category 2G

Ⓔ II 2G Ex ia IIC T4 (Ta-20°C to 60°C)

#### Location

Zones 1 and 2, Gas Groups IIC, IIB and IIA, Temp Class up to T4

#### Certificate number

KEMA07ATEX0204X

#### Safety Parameters

Only for connection to certified intrinsically safe circuits with the following maximum values:

$U_i = P_i/I_i$  for a supply circuit with non-linear current limiting

$U_i = 4P_i/I_i$  for a supply circuit with linear current limiting

$P_i = 1W$

$I_i = 2A$ ,

$C_i = 0nF$   $L_i = 0mH$

#### Supply

With suitable certified interface 18-35VDC, current 20mA

#### Recommended Interfaces

Zener Barriers: MTL7728P+

IS Isolators: MTL5521

#### Environment

Operating temperature: -20°C to +60°C

Storage temperature: -20°C to +80°C

Humidity: 0-95% RH, non-condensing

#### Compliance

Immunity to EN61000-6-2:2005

Emissions to EN6100-6-4:2007

## Safe area use

A power source of 14-26VDC is applied to the LED lamp in order to illuminate the LED lamp.

### SAFE AREA USE

#### Power supply requirements

Direct connection: 14-26VDC

Current consumption: 20mA maximum per lamp

#### Environment

Operating temperature: -20°C to +60°C

Storage temperature: -20°C to +80°C

Humidity: 0-95% RH, non-condensing

### GENERAL

#### High Reliability

All LED Lamps are designed to provide a minimum of 100,000 hours service life (continuous illumination at 40°C ambient temperature)

#### Colours

The DA180 range of giant LED clusters are available in six super-bright colours. Colours are red, orange, yellow, green, blue and white

#### Construction

Lens- polycarbonate

#### Protection

IP65 when panel mounted, IP20 from the rear

#### Connections

Screw terminals for cable 0.5–2.5 mm<sup>2</sup>

#### Mounting

22.5mm diameter hole

85mm apart

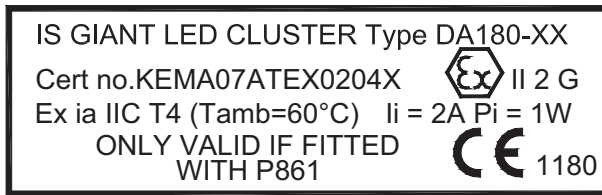
### Special conditions for safe use

#### DA180 range of giant LED clusters

When more than one giant LED cluster from the DA180 range is mounted on an enclosure or the enclosure also contains other circuits, the enclosure shall provide a degree of ingress protection in accordance with EN60529 suitable for the applicable environmental conditions and in compliance with EN60079-0 and EN60079-11.

### Labelling

The certification label can be found on the body of the DA180 housing.



The unit also has a serial number label which will be attached to the underside of the dome.

*Due to our policy of continuous product development, we reserve the right to amend these specifications without notice.*

### Declaration of Conformity

A printed version of the Declaration of Conformity has been provided separately within the original shipment of goods. However, you can find a copy of the latest version at

<http://www.mtl-inst.com/certificates>

## AUSTRALIA

MTL Instruments Pty Ltd  
10 Kent Road, Mascot,  
New South Wales, 2020, Australia  
Tel: + 61 1300 308 374 Fax: + 61 1300 308 463  
E-mail: mtl-sales@eaton.com

## BeNeLux

MTL Instruments BV  
Ambacht 6, 5301 KW Zaltbommel  
The Netherlands  
Tel: +31 (0)418 570290 Fax: +31 (0)418 541044  
E-mail: mtl.benelux@eaton.com

## CHINA

Cooper Electric (Shanghai) Co. Ltd  
955 Shengli Road, Heqing Industrial Park  
Pudong New Area, Shanghai 201201  
Tel: + 86 2128993817 Fax: + 86 2128993992  
E-mail: mtl-cn@eaton.com

## FRANCE

MTL Instruments srl,  
7 rue des Rosières, 69410 Champagne au Mont d'Or  
France  
Tel: + 33 (0) 4 37 46 16 53 Fax: + 33 (0) 4 37 46 17 20  
E-mail: mtfrance@eaton.com

## GERMANY

MTL Instruments GmbH,  
Heinrich-Hartz-Str. 12, 50170 Kerpen, Germany  
Tel: + 49 (0)22 73 98 12-0 Fax: + 49 (0)22 73 98 12-2 00  
E-mail: csc Kerpen@eaton.com

## INDIA

MTL India,  
No.36, Nehru Street, Off Old Mahabalipuram Road  
Sholinganallur, Chennai- 600 119, India  
Tel: + 91 (0) 44 24501660 / 24501857 Fax: + 91 (0) 44 24501463  
E-mail: mtlindiasales@eaton.com

## ITALY

MTL Italia srl,  
Via San Bovio, 3, 20090 Segrate, Milano, Italy  
Tel: +39 (0)2 959501 Fax: +39 (0)2 95950759  
E-mail: chmninfo@eaton.com

## JAPAN

Cooper Crouse-Hinds Japan KK,  
MT Building 3F 2-7-5 Shiba Daimon, Minato-ku,  
Tokyo, Japan 105-0012  
Tel: + 81 (0)3 6430 3128 Fax: + 81 (0)3 6430 3129  
E-mail: mt-jp@eaton.com

## NORWAY

Norex AS  
Norex 7c, Postboks 147,  
N-1378 Nesbru, Norway  
Tel: +47 66 77 43 80 Fax: +47 66 84 55 33  
E-mail: info@norex.no

## RUSSIA

Cooper Industries Russia LLC  
Elektrozavodskaya Str 33  
Building 4  
Moscow 107076, Russia  
Tel: +47 (495) 981 3770 Fax: +7 (495) 981 3771  
E-mail: mtrussia@eaton.com

## SINGAPORE

Cooper Crouse-Hinds Pte Ltd  
No 2 Serangoon North Avenue 5, #06-01 Fu Yu Building  
Singapore 554911  
Tel: +65 6 645 9864 / 5 Fax: +65 6 487 7997  
E-mail: sales.mtlsing@eaton.com

## SOUTH KOREA

Cooper Crouse-Hinds Korea  
7F Parkland Building 237-11 Nhyun-dong Gangnam-gu,  
Seoul 135-546, South Korea.  
Tel: +82 6380 4805 Fax: +82 6380 4839  
E-mail: mtl-korea@eaton.com

## UNITED ARAB EMIRATES

Cooper Industries/Eaton Corporation  
Office 205/206, 2nd Floor S.J Towers, off. Old Airport Road,  
Abu Dhabi, United Arab Emirates  
Tel: +971 2 44 66 840 Fax: +971 2 44 66 841  
E-mail: mtgulf@eaton.com

## UNITED KINGDOM

Eaton Electric Ltd,  
Great Marlings, Butterfield, Luton  
Beds LU2 8DL  
Tel: +44 (0)1582 723633 Fax: +44 (0)1582 422283  
E-mail: mtlenquiry@eaton.com

## AMERICAS

Cooper Crouse-Hinds MTL Inc.  
3413 N. Sam Houston Parkway W,  
Suite 200, Houston TX 77066, USA  
Tel: +1 281-571-8065 Fax: +1 281-571-8069  
E-mail: mtl-us-info@eaton.com

## EUROPE (EMEA):

+44 (0)1582 723633  
mtlenquiry@eaton.com

## THE AMERICAS:

+1 800 835 7075  
mtl-us-info@eaton.com

## ASIA-PACIFIC:

+65 6645 9864 / 6645 9865  
sales.mtlsing@eaton.com

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.