
DA135 Series Intrinsically Safe LED Beacons

High intensity warning beacons for all hazardous areas

**ATEX Certified Ex II 1G,
EEx ia IIC T6**

Super-bright LED in five colours

Rugged IP65 corrosion resistant casing with separate terminal compartment

Can be used in any zone

Single, Dual or Triple flash

Dual colour option

Pipe or wall mounting

Can be linked to Sounder and Pushbutton to make a full alarm annunciator system

Fully isolated control inputs

The DA135 LED Beacon provides an ultra-bright LED flash to warn of abnormal events in any hazardous area.

ATEX certified to Ex II 1G for use in any zone. The ruggedised and encapsulated enclosure is sealed to IP65 to ensure reliable operation in harsh environments and is backed up with our 5 year warranty.

Available in five equally bright colours including white and blue, this Beacon is often used as a simple flashing warning signal but there are further unique display features that allow the user to show additional information. These include single, double and triple flash selection and a dual colour version.

Combined with our Intrinsically Safe Sounder and a pushbutton the unit can be configured as a full single point alarm annunciator.



General Specification

Install in Any Zone

The DA135 is ATEX certified for use in Zones 0, 1 and 2. It can be fitted directly to any reasonably flat surface or mounted onto a pipe using the optional mounting kit shown below. The unit can also be used in safe areas and special terminals are provided for this purpose which avoid any of the normal limitations to full brightness.

Enclosure and wiring, cable entries

The enclosure is made from conductive GRP which provides a rugged IP65 housing suitable for harsh environmental conditions. The unit is also fully encapsulated for even greater protection against corrosive atmospheres and impact damage. A separate terminal housing makes connection a simple matter through the four M20 cable entries. The unit is supplied as standard with a brass tapped plate and blanking plugs in all four entries.

Fully Protected

As the whole unit is fully encapsulated, the terminal board includes two fuses that protect the internal electronics from damage in the case of incorrect connection.

Choice of Five Super-bright Colours

One of five equally bright colours must be selected as shown in the ordering information. As all units are clear until illuminated the display colour is shown on the top certification label.

The standard unit has a single colour which can be controlled to flash at a

single, double or triple pulse by triggering different control inputs. This allows users to indicate a change in the process using the same unit

Dual Colour

As an option, the DA135 Beacon can be supplied with a two colour display where each colour can be triggered separately from the two control inputs. This is an ideal way of warning an operator of multiple site problems or to indicate that a problem is becoming more critical.

Control inputs are fully isolated and the inputs certified as equivalent to "simple apparatus".

Full Alarm Annunciator

RTK is a leading supplier of quality alarm products for the worldwide process and power industry. This IS Beacon has been developed with some of these unique annunciation features. Not only can the Beacon be linked to a Sounder, it can also latch in alarms and allow the operator to go through the normal Acknowledge and Reset functions.

The method of operation is consistent with our standard range of alarm annunciators and is user selectable for different functions.

Single Power Feed

An internal current limiting device, combined with the exceptionally high efficiency of LEDs, enables both the DA135 Beacon and a Sounder to be driven through a single barrier/isolator in IIC areas with consequent savings in hardware and plant cabling costs.



Re-alarm

Another user selectable feature is the re-alarm. This allows the Beacon to be acknowledged so the LED goes steady and the Sounder turns off but if the fault condition has not cleared within a programmable time delay (between 1 and 60 minutes) then the alarm will be re-triggered again. This feature is used to prevent critical faults being ignored for extended periods.

Control Inputs

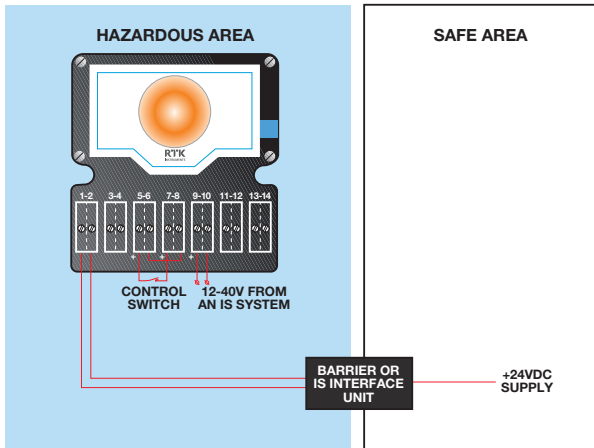
Both control inputs are fully isolated and certified as non-energy storing ($C_{eq}=0$, $L_{eq}=0$) and may be connected into any IS system without affecting the safety, provided the safety input parameters of the unit are not exceeded.

There are two ways of triggering these inputs, as illustrated in the application diagrams below. Firstly by simply linking a control switch/contact from the "control power" available on Terminals 5 and 6, or alternatively, using any 12-40V from an external IS source.

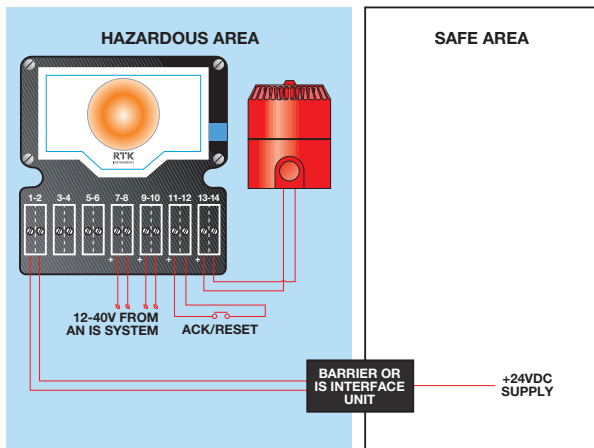


Typical Applications

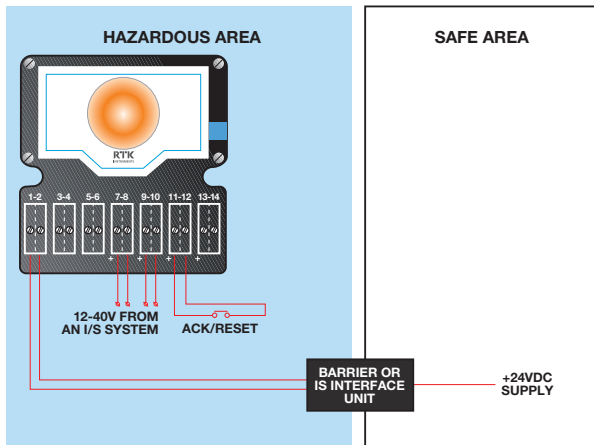
Stand alone system



DA135 connected as single point annunciator with sounder

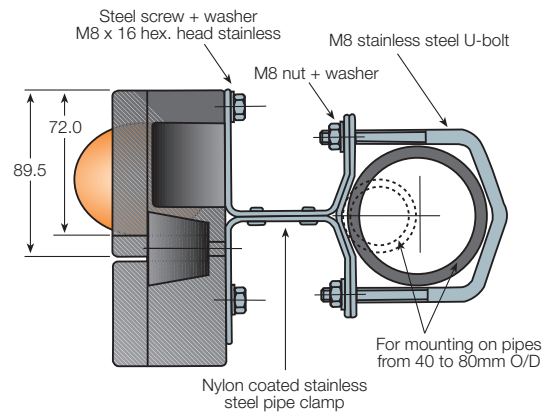


DA135 connected as single point annunciator without sounder

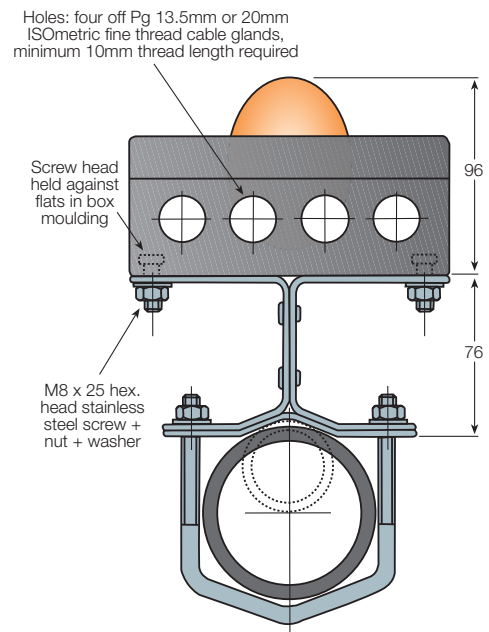


Mounting

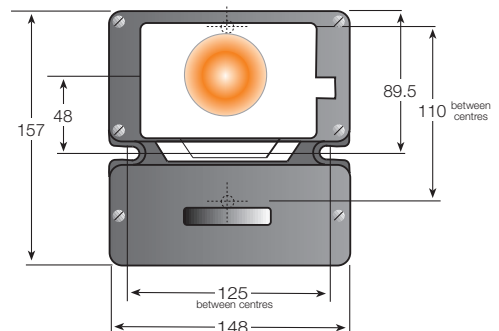
Horizontal pipe mounting



Vertical pipe mounting



Dimensions



Technical Specification

Certification

ATEX certified to EN50014:1997,
EN50020:2002 and EN50284:1999

Group II, Category 1G, EEx ia IIC T6
(Ta -20°C to +55°C)

Location

Zones 0, 1 or 2. Gas Group, IIC, IIB or
IIA, Temp Class up to T6

Certificate No.

Baseefa03ATEX0669

Safety Parameter for the supply

Ui = 28V

Ii = 110mA

Pi = 0.8W

The device can be powered from an
EEx ia IIC certified interface with output
parameters lower than those shown
above. Please see the EC Type
Certificate for all the safety parameters of
the other inputs and outputs.

Supply

For best results the supply voltage
should stay between these limits:
20-28VDC through IS Isolator
24-28VDC through Zener Barrier
12-28VDC in safe area
Current: typical 20mA without Sounder,
45mA with Sounder

Recommended Interfaces

Zener Barriers: MTL7728+ & MTL778AC
IS Isolators: MTL5025

Electrical Safety

Non-energy storing simple apparatus.
Will not store or generate more than 1.5V,
0.1A, 20mJ or 25mW when connected to
intrinsically safe equipment with a
maximum open circuit voltage of not
more than 28V.

Construction

GRP (glass reinforced plastic) casing to
IP65. Transparent acrylic dome for LED
housing.

Good resistance to hostile environments,
saline atmospheres and impact damage.

Output

Single or Dual colours available from
the following: white, red, amber, green
and blue.

Brightness typically 0.5J, all colours

Flash rate typically 1 Hz

Cable Entry

Four clearance holes for glands, internal
plate tapped to accept 13.5Pg DIN40330
or M20 Isometric fine thread cable
glands; shipped with blanking plugs.

Mounting

Direct mounting to walls or flat surfaces.
Or pipe/post mounting using PIP68 kit.

Connections

Rising clamp terminals suitable for
2.5mm² cable.

EMC Compliance

Immunity to EN61000-6-2:2001
Emissions to EN61000-6-4:2001

Environment

Operating Temperature: -20 to 55°C
Storage Temperature: -20 to 80°C
Humidity: 0-95% RH, non condensing

Protection

IP65

Weight

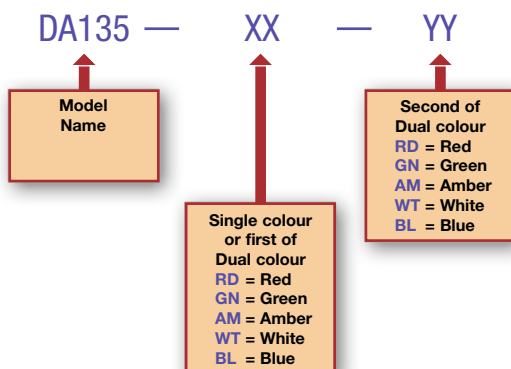
1.9kg

Accessories

Pipe Mounting Kit PIP68

TAG plate

Order Code



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



RTK Instruments Limited
St James Business Park,
Knaresborough, North Yorkshire,
England. HG5 8PJ

A member of the MTL Instruments Group plc

Telephone: +44 (0)1423 580500
Facsimile: +44 (0)1423 580501
Web: www.rtkinstruments.com
Email: enquiry@rtkinstruments.com