
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 colors

Rugged IP65 corrosion resistant casing with separate terminal compartment

Can be used in any zone

Single, Dual or Triple flash

Dual color 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 colors 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 color 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 Colors

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

The standard unit has a single color 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 Color

As an option, the DA135 Beacon can be supplied with a two color display where each color 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

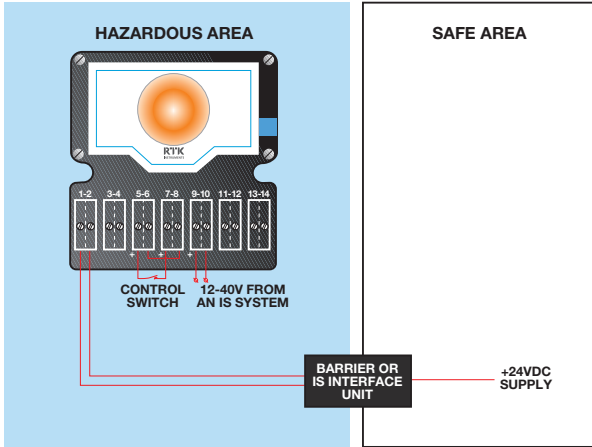
Both control inputs are fully isolated and certified as non-energy storing ($C_{eq}=0$, $L_{eq}=0$) and may be connected into any IS system without affecting the safety, provided the safety input parameters of the unit are not exceeded.

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.

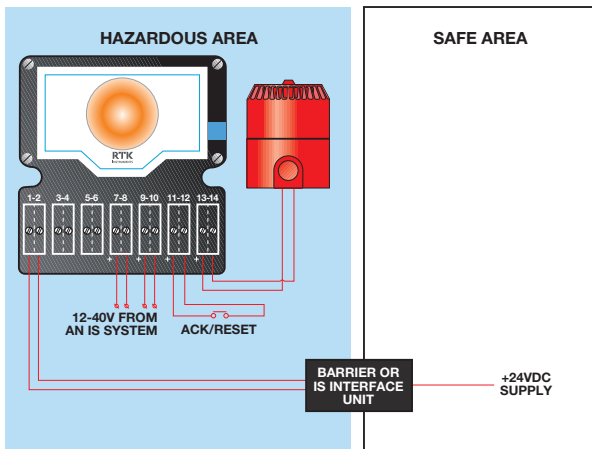


Typical Applications

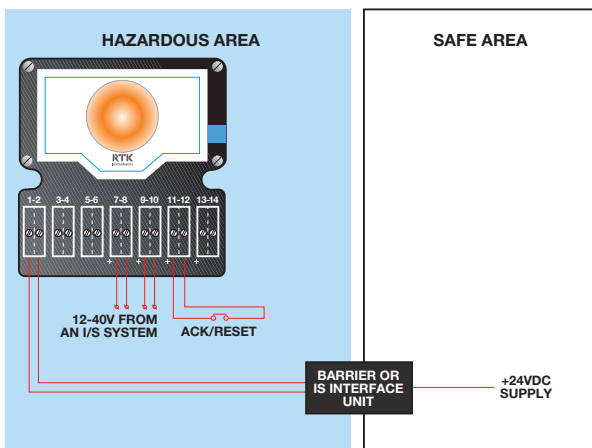
Stand alone system



DA135 connected as single point annunciator with sounder

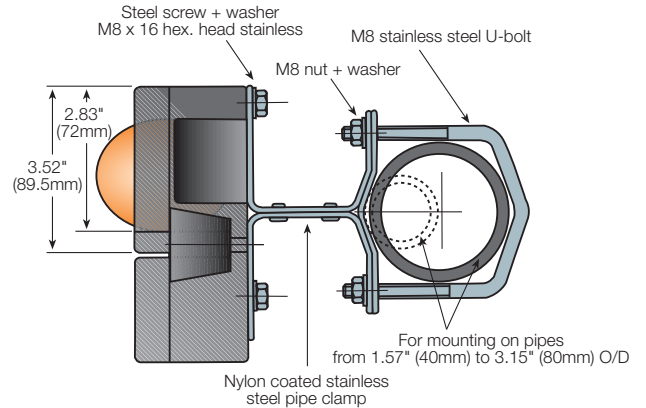


DA135 connected as single point annunciator without sounder

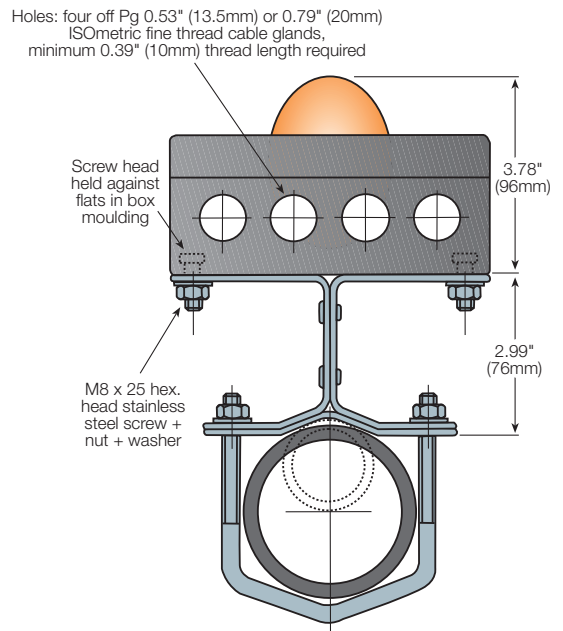


Mounting

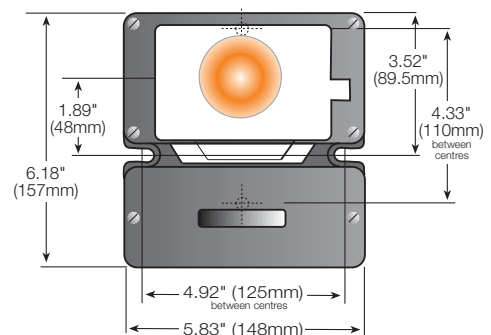
Horizontal pipe mounting



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 -4°F to +131°F (-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+ and
MTL7778AC
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 colors available from the following: white, red, amber, green and blue.
Brightness typically 0.5J, all colors
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 12 AWG (2.5mm²) wire.

EMC Compliance

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

Environment

Operating Temperature:
-4 to 131°F (-20 to 55°C)
Storage Temperature:
-4 to 176°F (-20 to 80°C)
Humidity: 0-95% RH, non condensing

Protection

IP65

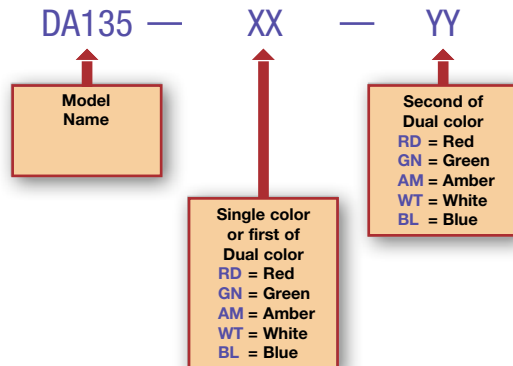
Weight

4.19lb (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.



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