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.

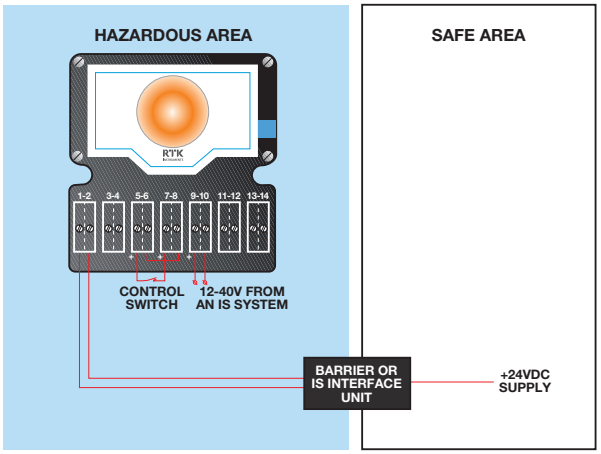
Re-alarm
Another user selectable feature is the re-alarm. This allows the Beacon to be acknowledged so the LED goes steady and the Sounder turns off but if the fault condition has not cleared within a programmable time delay (between 1 and 60 minutes) then the alarm will be re-triggered again. This feature 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 (Ceq=0, Leq=0) and may be connected into any IS system without affecting the safety, provided the safety input parameters of the unit are not exceeded.

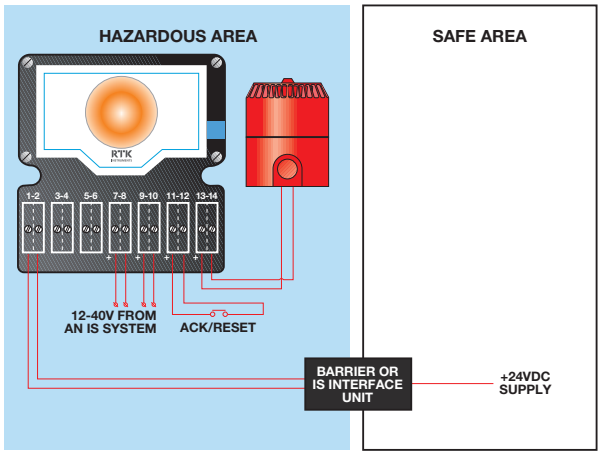
There are two ways of triggering these inputs, as illustrated in the application diagrams below. Firstly by simply linking a control switch/contact from the “control power” available on Terminals 5 and 6, or alternatively, using any 12-40V from an external IS source.

Typical Applications

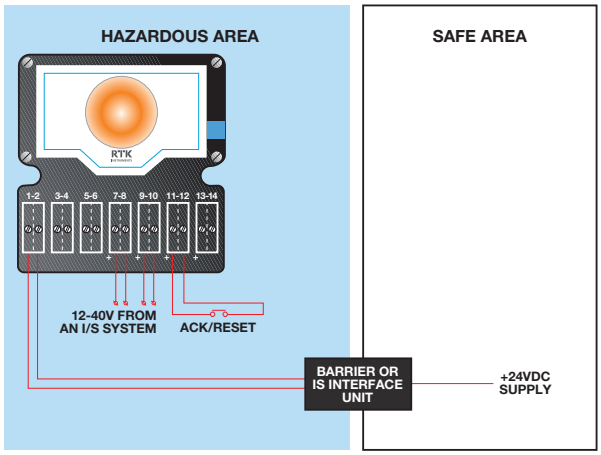
Stand alone system



DA135 connected as single point annunciator with sounder

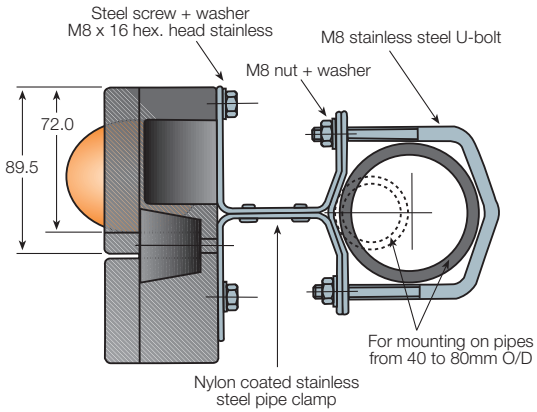


DA135 connected as single point annunciator without sounder

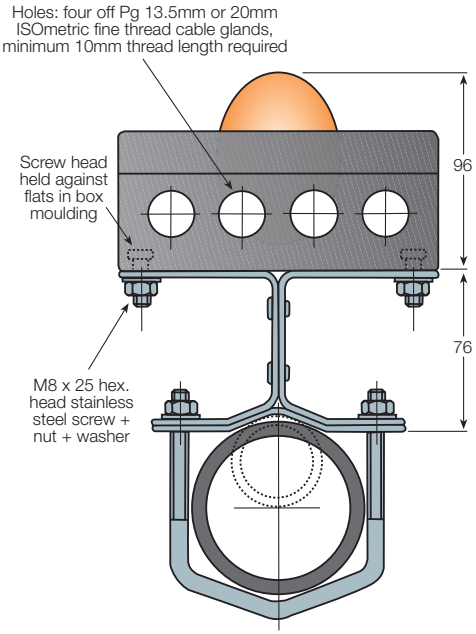


Mounting

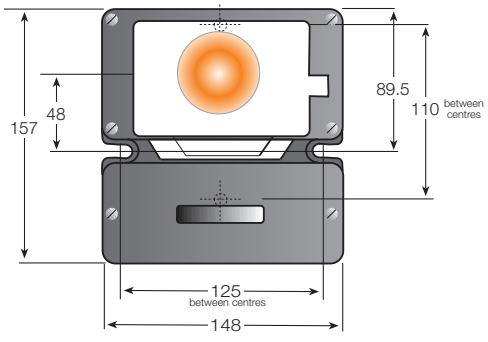
Horizontal pipe mounting



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 –20ºC to +55ºC)

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

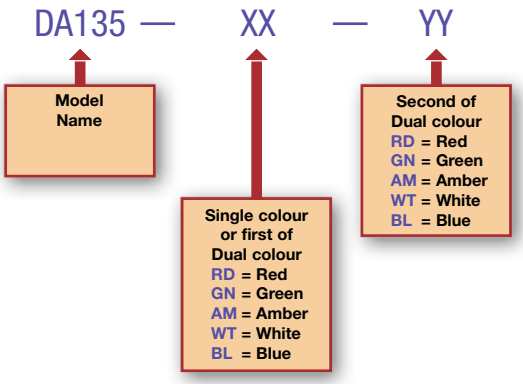
Environment
Operating Temperature: -20 to 55ºC
Storage Temperature: -20 to 80ºC
Humidity: 0-95% RH, non condensing

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.

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