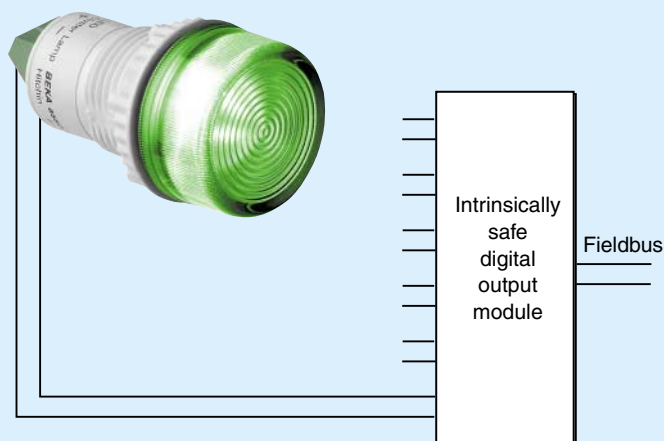


Hazardous area



**BA390S low current cluster lamps** provide reliable cost-effective visual status indication in all hazardous areas. Lamps have a typical life of ten years and, depending upon colour, contain two or three high efficiency light emitting diodes mounted behind a coloured diffuser to produce a uniform output.

**Optimised for high brightness at low current** BA390S lamps may be powered from almost any intrinsically safe output. Their high efficiency enables them to provide a useful output with an input current of only a few milliamps. For example, a BA390S lamp may be powered from one output of an intrinsically safe multiple digital output fieldbus module. These have several separate 4mA outputs, thus a number of BA390S cluster lamps may be powered and controlled by one module.

**ATEX and FM intrinsic safety** certification allows BA390S cluster lamps to be installed in all gas hazardous areas in both Europe and the USA.

**Five well defined colours** - red, amber, green, blue and white comply with the indicator light colour requirements specified in IEC204-1, allowing all plant conditions to be annunciated.

**IP66 sealing** of the lens and the joint between the lamp and the panel makes

the BA390S ideal for installations in areas that will be hosed, washed or splashed. When environmental protection behind the panel is also required, an optional rear sealing assembly is available.

**Mounting** is via a single industry standard 22.5mm diameter hole. The lamp housing, fixing nut and terminals have a maximum diameter of 30mm which permits a very high packing density on the panel.

**To aid identification** from the rear of the panel, the model number and suffix which identifies the colour are marked on the lamp body close to the terminals.

**The lamp function** can be shown on an optional legend plate secured between the lamp and the panel. Plates can be supplied blank or typeset with up to two rows of ten alphanumeric characters.

**Reliability is ensured** by an ISO9001 approved quality control system supported by a three year guarantee.

**Intrinsically safe cluster lamps** for use with conventional Zener barriers and galvanic isolators are also available, please refer to the BA390 datasheet. For safe area applications please refer to the BA590 datasheet.

# BA390S

## Low Current LED Cluster Lamp

*Intrinsically safe for use  
in all gas hazardous areas*

- ◆ Intrinsically safe ATEX & FM certification
- ◆ Red, amber, green, blue & white models
- ◆ Guaranteed operation at 4mA
- ◆ Operates from fieldbus and remote I/O modules
- ◆ IP66 front
- ◆ 3 year guarantee



# BEKA

## associates

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## SPECIFICATION

### Power supply

Current	4mA for specified performance. Current must be defined by external resistor or current limit. See Application Guide AG390 for typical outputs at other currents.
Max	22mA
Voltage	
Operating	8V typical, 8.7V max
Reverse	60V max

### Output at 4mA

Lamp colour	Typical at 150mm
Red	60 lux
Amber	38 lux
Green	42 lux
Blue	46 lux
White	56 lux

### Intrinsic safety

Europe ATEX	
Standard	EN50020:1994
Code	Group II Category 1G EEx ia IIC T4

Certificate number BAS01ATEX1062X

Installation May be powered from any EEx ia IIC certified source whose output parameters do not exceed:

U <sub>o</sub>	30V dc
P <sub>o</sub>	1.3W at 40°C ambient
P <sub>o</sub>	1.2W at 60°C ambient

Gas group IIA, IIB or IIC  
Location Zone 0, 1 or 2

### USA FM

Standard	3610 Entity
Code	CL I: Div 1: GP A, B, C, & D: T4 @ 60°C
File	3022662
Standard	3611 Nonincendive
Code	CL I: Div 2: GP A, B, C, & D: T4 @ 60°C
File	3022662

### Environmental

Operating temperature	-20 to 60°C
Storage temperature	-40 to 85°C
Relative humidity	5 to 95% non condensing
Operating life	100,000 hours typical
Enclosure	Front IP66 Rear IP20 - see accessories for optional IP65 rear sealing assembly.
EMC	In accordance with EU Directive 89/336/EEC, full report available.
Immunity	No degradation of brightness for 10V/m field strength
Emissions	Electromagnetically benign

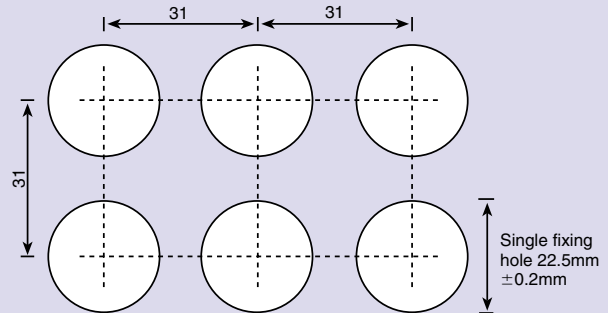
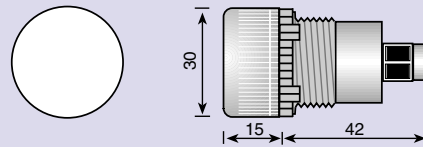
### Mechanical

Terminals	Screw clamp for 1.5mm <sup>2</sup>
Lens material	Polycarbonate
Body material	Nylon 6
Weight	18g

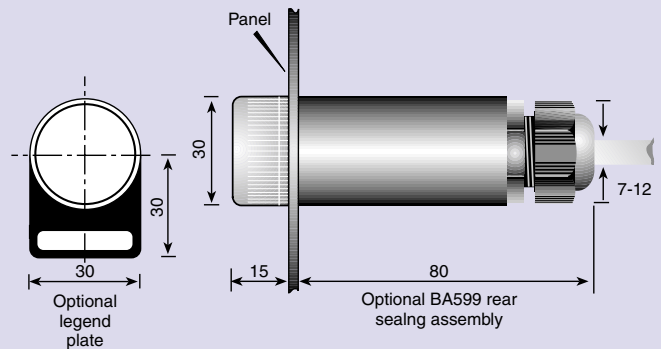
### Accessories

Legend plate	Will accommodate up to two rows of ten alphanumeric characters.
Rear sealing assembly	BA599 provides IP65 protection for terminals and rear of the lamp. Supplied with gland for 7 to 12mm diameter cable.

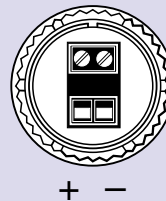
## DIMENSIONS (mm)



Fixing centres for maximum packing density. Special tool may be required to tighten fixing nuts when minimum spacing is used.



## TERMINAL CONNECTIONS



## HOW TO ORDER

### Lamp colour

Red  
Amber  
Green  
Blue  
White

### Please specify

BA390RS  
BA390AS  
BA390GS  
BA390BS  
BA390WS

### Accessories

Legend plate  
Rear sealing assembly

### Please specify if required

Legend  
BA599 provides IP65 protection for terminals and rear of the lamp. Supplied with gland for 7 to 12mm diameter cable.

### Example

Model number & colour  
Legend plate

BA390AS  
Run