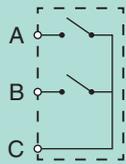


Zone 1, 2, 21, 22 or safe area

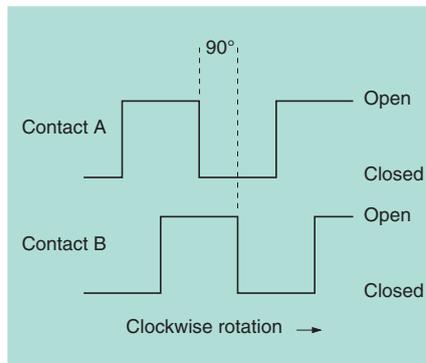


Instrument with quadrature input such as BA427E

The **BA490 encoder** is a robust panel mounting rotary control knob with a quadrature switch contact output, suitable for installation in hazardous or safe process areas. It is designed for easy adjustment by a gloved hand and may be directly connected to almost any instrument that accepts a three-wire quadrature input to provide a simple way of making adjustments from within the process area.

The encoder contains two single pole switches that open and close 90 degrees out of phase with each other as the control knob is rotated. This enables both the position and direction of rotation to be determined. If switch 'A' leads switch 'B', the knob is rotating in a clockwise direction, if 'B' leads 'A', the knob is rotating in a counter-clockwise direction.

A common application for the BA490 encoder is to provide rotary manual control of a BEKA BA427E or BA627E 4/20mA output Set Point Station. Normally the output current of these generators is controlled by the front panel ▼ and ▲ push buttons, but direct connection of the BA490 rotary encoder enables an operator to make adjustments via the conventional rotary control knob.



Compliance with *Simple Apparatus* requirements specified in Clause 5.5 of the international intrinsic safety standard IEC 60079-11:2023 allows the BA490 encoder to be installed in Zones 1, 2, 21 and 22 and to be directly connected to intrinsically safe apparatus located in the same hazardous area.

IP65 sealing of the control knob and the joint between the encoder and the panel prevents ingress when installed in a panel that will be hosed, washed or splashed. When environmental protection behind the panel is also required the BA599 rear sealing assembly accessory provides IP65 protection allowing the encoder to be fitted in a panel with an open back.



BA490

Rotary encoder

Robust control knob with quadrature output

General purpose

- ◆ Quadrature switch contact output.
- ◆ Robust construction
- ◆ *Simple Apparatus* allows installation in a hazardous area.
- ◆ IP65 front of panel protection.
- ◆ 22.5mm hole mounting.
- ◆ 3 year guarantee

www.beka.co.uk/ba490

BEKA

associates

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e-mail sales@beka.co.uk www.beka.co.uk

SPECIFICATION

Contacts

Rating	5V; 0.5mA
Current	10mA max (resistive load)

Output

Phase	Switch 'A' leads switch 'B' by 90° for clockwise rotation of the control knob.
Resolution	12 pulses per 360° rotation of the control knob.

Insulation

Voltage to conductive panel.	500V ac for 1 minute
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Intrinsic safety

Code	Complies with the requirements for <i>Simple Apparatus</i> specified in Clause 5.7 of IEC 60079-11.
Location	Zone 1, 2, 21 or 22

Environmental

Operating temp	-10 to 70°C
Storage temp	-40 to 85°C
Humidity	to 95% at 40°C noncondensing
Enclosure	Front IP65, rear IP20, see accessories for optional BA599 IP65 rear sealing assembly.
EMC	Complies with 2004/108/EC Electromagnetically benign.

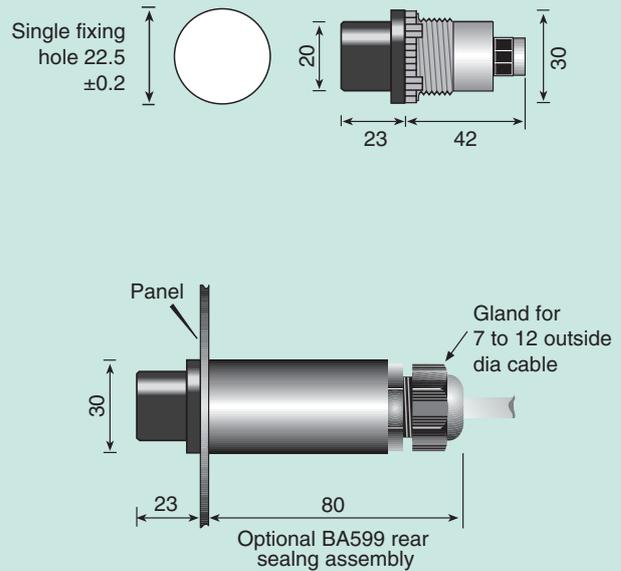
Mechanical

Terminals	Screw clamp for 0.14 to 1mm ² stranded cable.
Weight	50g

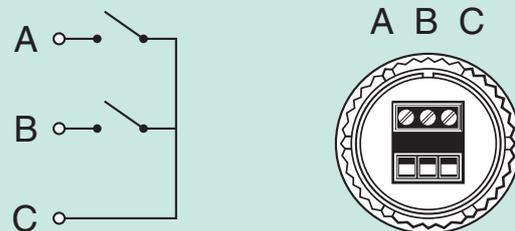
Accessories

BA599	Rear sealing assembly provides IP65 protection for the rear of the encoder. Supplied with gland for 7 to 12mm diameter cable.
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DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

Model number	Please specify BA490
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Accessories Rear sealing assembly	Please specify if required BA599
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