



The BA3402 Pageant Digital Input Module has eight 2-wire NAMUR compliant proximity detector inputs, each certified as a separate intrinsically safe circuit. The module is also intended for use with isolated mechanical switches or isolated sensors with an open collector output located in a high noise environment. For most contact and open collector inputs the simpler lower cost plug-in BA3401 Pageant module should also be considered.

Separate apparatus certification for the module allows it to be safely plugged into any one of the seven slots on a Pageant BA3101 Operator Display without the need for additional certification or approval. If requirements change, a BA3402 module may be fitted on-site to an Operator Panel which has already been installed and commissioned.

Each input may be connected to and will power most NAMUR compliant intrinsically safe proximity detectors located in Zone 0, 1, 2, 20, 21 or 22. Intrinsically safe sensors with an isolated open collector output and switch contacts may also be connected. Although each input is a separate intrinsically safe circuit, inputs are not individually isolated and therefore the proximity detector, switch or sensor and associated wiring should have 500V isolation from other circuits and from earth.

A quadrature input from a plant position sensor with NAMUR compliant outputs or from a BEKA panel mounting BA490 rotary encoder can be decoded by combining channels 7 and 8. This enables plant positions to be input to the Pageant Operator Panel system, or variables such as plant set-points to be easily adjusted by an operator.

BA3402

Pageant Digital Input Module

8 x Proximity Detector

Each intrinsically safe input may be connected to a 2-wire proximity detector in any gas or dust hazardous area

- ◆ Eight NAMUR 2-wire proximity detector inputs.
- ◆ Two inputs can decode a quadrature signal.
- ◆ Module plugs into a Pageant BA3101 Ex ia intrinsically safe Operator Display.
- ◆ Each Ex ia input is a separate intrinsically safe circuit.
- ◆ IECEx, ATEX & UKEX Ex ia certification
- ◆ 3 year guarantee

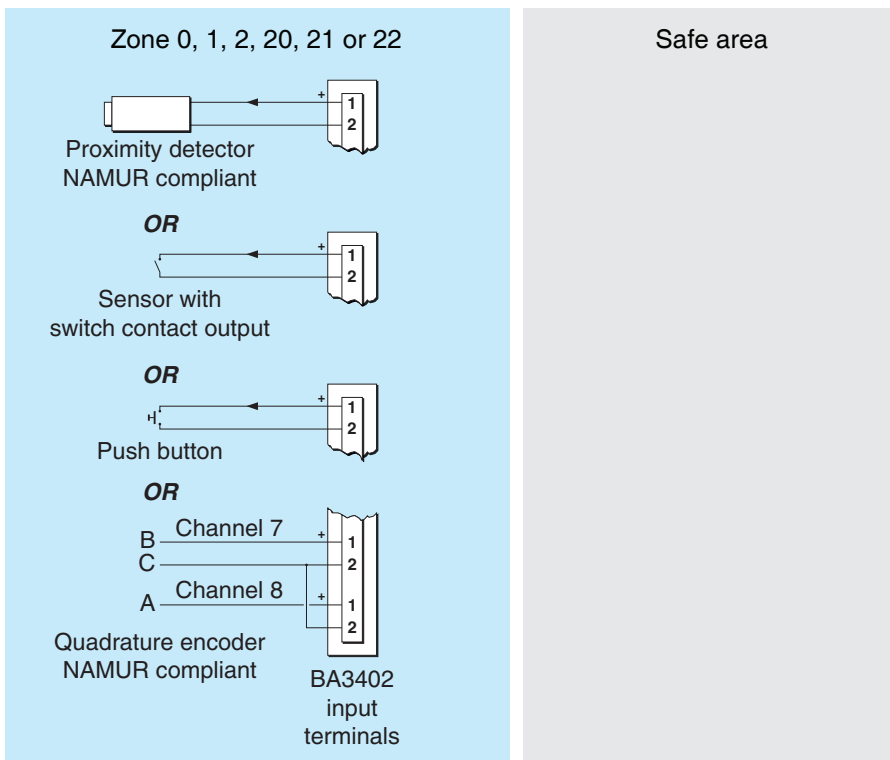
www.beka.co.uk/ba3402



BEKA

associates

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Alternative sensor inputs

SPECIFICATION

Power supply From Pageant Operator Panel via CPU module

Module consumption 40% of available power

Input - Channels 1 to 8

For 8 NAMUR proximity sensors or contacts

Switching threshold **Lower** **Upper**

Proximity detector 1.2mA 2.1mA

Contact 2.6kΩ 5.5kΩ

Sensing voltage 8.2V

Input frequency 10Hz max. Inputs polled 10 times per second by the BA3101 Operator Panel.

For quadrature input Combining channels 7 & 8 provides one quadrature input which produces 4 incrementing or decrementing internal counter pulses for each A + B cycle.

Input frequency 1kHz max. Counter polled 10 times per second by the BA3101 Operator Panel.

Intrinsic safety

International IECEx

Code Ex ia IIC T4 Ga
Ex ia IIIC T195°C Da
-40°C ≤ Ta ≤ +65°C

Safety parameters for each input channel

Ui 0

Uo 8.8V

Io 7.4mA

Po 16mW

Ci 1.1nF

Li 4μH

Co 5.5μF
Lo 556mH } For gas Group IIC

Cert. No. [IECEX 21.0004X](#)

Europe ATEX and UKEX

Code Group II Category 1GD
Ex ia IIC T4 Ga
Ex ia IIIC T195°C Da
-40°C ≤ Ta ≤ +65°C

Safety parameters for each input as IECEx

Cert. Nos. [CML 21ATEX2110X](#)
[CML 21UKEX2111X](#)

Environmental

Operating temp -40 to +65°C

Storage temp -40 to +85°C

Enclosure IP20

Material Noryl UL94V-1 flame class rating

Humidity To 95% at 40°C non- condensing

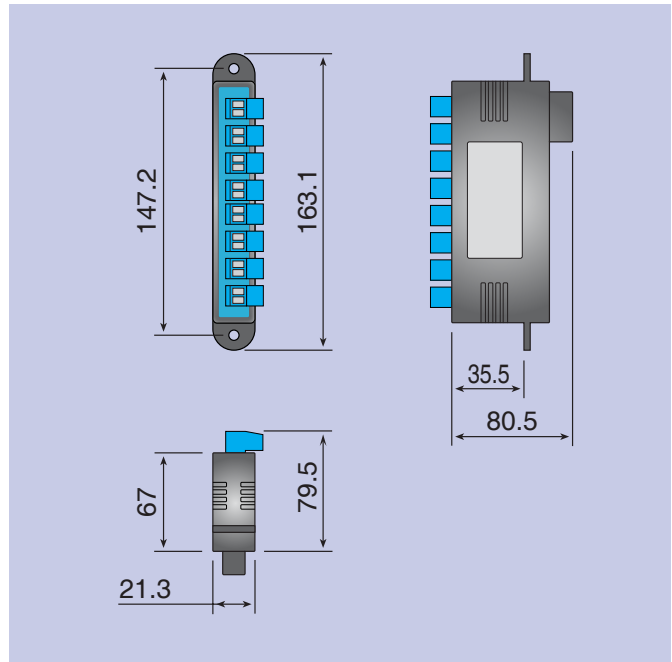
EMC Complies with UK & European Directives.

Mechanical

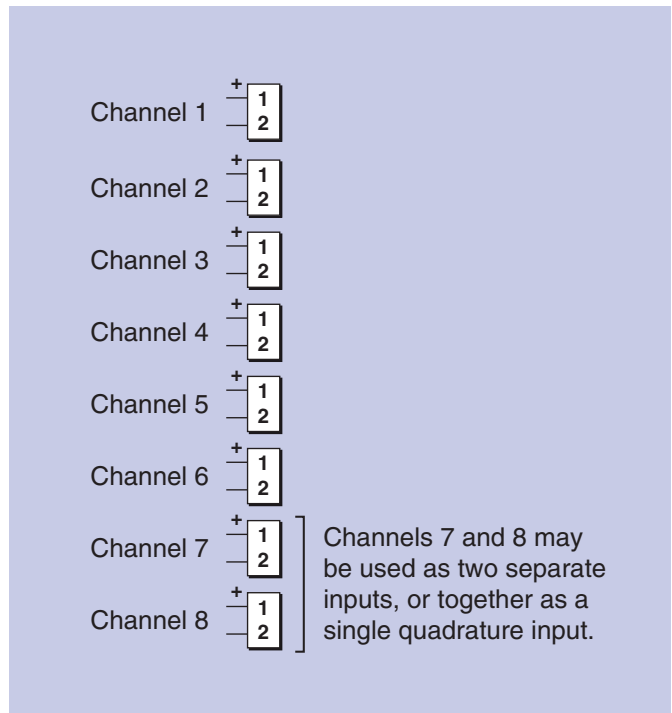
Terminals Screw clamp for 0.5 to 1.5mm² cable with blue removable terminal block for each channel.

Weight 0.2kg

DIMENSIONS (mm)



TERMINAL CONNECTIONS



Reliability is ensured by component conformal coating, protection from incorrect connection and radio frequency interference. The module has been subjected to extensive vibration and thermal testing and is supported by a three year guarantee.

HOW TO ORDER

Please specify

Model number BA3402