

The **BA3401 Pageant Digital Input module** has eight contact input channels, each certified as a separate intrinsically safe circuit. The module is intended for use with isolated mechanical switches or isolated sensors with an open collector output. For 2-wire NAMUR proximity detector inputs the BA3402 Pageant plug-in module should be used.

**This input module enables** up to eight contact signals such as limit switches, alarm contact or push buttons to be easily connected to a Pageant Operator Panel where they can be displayed and used for PLC inputs.

**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 BA3401 module may be fitted on-site to an Operator Panel which has already been installed and commissioned.

**Each input** may be connected to any isolated switch contact or to a sensor with an isolated open collector output located in Zone 0, 1, 2, 20, 21 or 22.

Although each input is a separate intrinsically safe circuit, each input is not individually isolated and therefore the switch or sensor and associated wiring should have 500V isolation from other circuits and from earth.

**Rugged operator controls** for a Pageant display system, such as Start and Stop buttons can be provided by connecting an industrial push button to a BA3401 input.

**A quadrature input** from a plant position sensor 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.

# BA3401

## Pageant Digital Input Module

### 8 x Contact

*Each intrinsically safe input may be connected to a contact in any gas or dust hazardous area*

- ◆ Eight contact or open collector 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

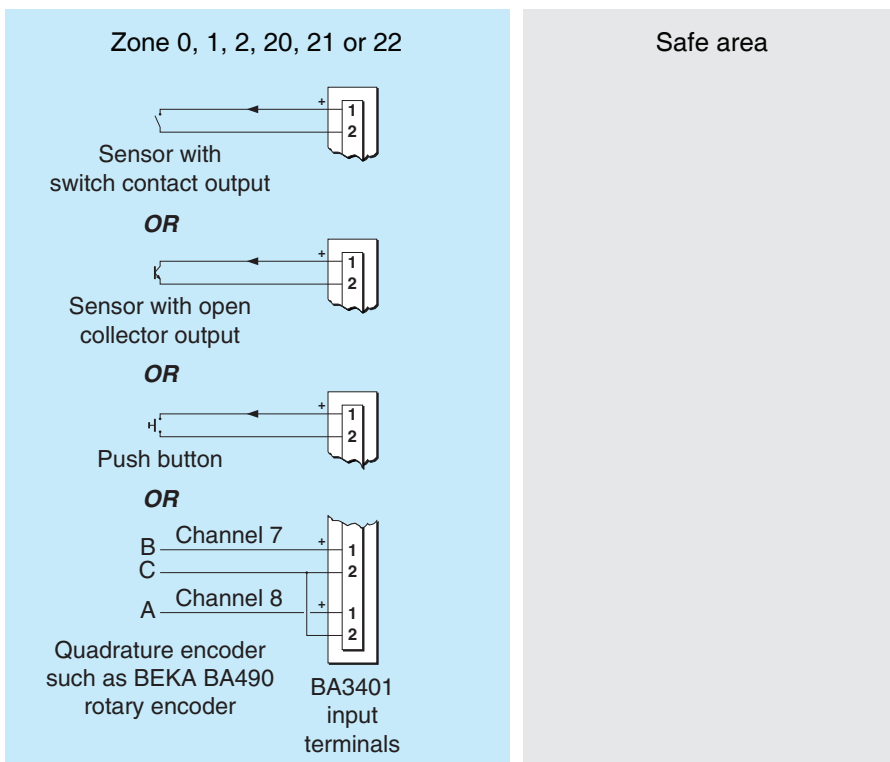
[www.beka.co.uk/ba3401](http://www.beka.co.uk/ba3401)



# BEKA

## associates

BEKA associates Ltd. Old Charlton Rd.  
Hitchin, Hertfordshire, SG5 2DA, U.K.  
Tel. (01462) 438301 e-mail [sales@beka.co.uk](mailto:sales@beka.co.uk)  
website: [www.beka.co.uk](http://www.beka.co.uk)



Alternative sensor inputs

## SPECIFICATION

**Power supply** From Pageant Operator Panel via CPU module

Module consumption 4% of available power

### Input - Channels 1 to 8

For 8 contact or open collector sensors

Switching threshold

Closed < 25kΩ

Open >35kΩ

Sensing voltage 3.3V

Sensing Current 33μA

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 input A + B cycle. 1kHz max. Internal counter polled 10 times per second by the BA3101 Operator Panel.

Input frequency

### Intrinsic safety

#### International IECEx

Code Ex ia IIC T4 Ga  
Ex ia IIIC T135°C Da  
-40°C ≤ Ta ≤ +65°C

Safety parameters for each input channel

Ui 0

Uo 4.94V

Io 0

Po 0

Ci 1.1nF

Li 4μH

Co 100μF 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 T135°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

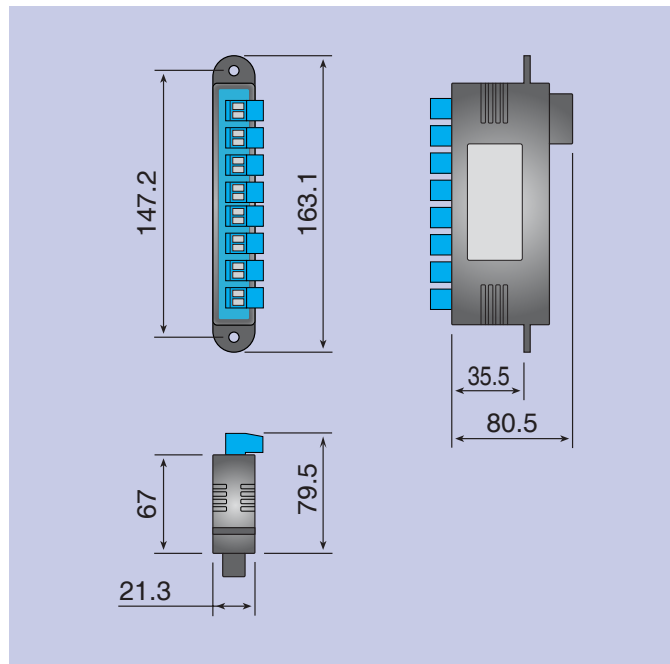
EMC Complies with UK & European Directives

### Mechanical

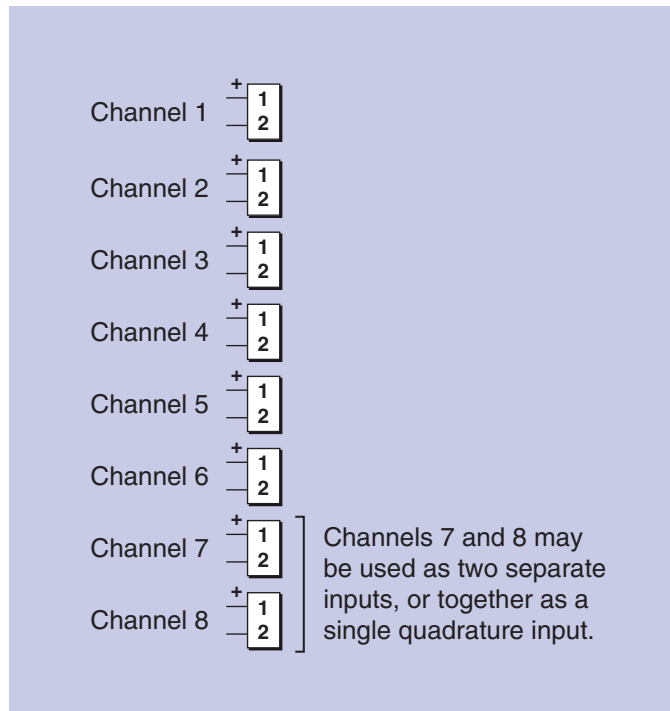
Terminals Screw clamp for 0.5 to 1.5mm<sup>2</sup> cable with blue removable terminal block for each channel.

Weight 0.15kg

## 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

Model number

**Please specify**

BA3401