

The BA201 communications isolator is a dedicated interface for connecting intrinsically safe BEKA Serial Text Displays to a safe area computer system. The isolator provides intrinsically safe galvanic isolation between the safe and hazardous areas, plus conversion of the RS232 or RS485 safe area serial data to the dedicated communications signalling required by BEKA Serial Text Displays.

The isolator also powers the Serial Text Displays and depending upon the wiring configuration, up to four displays may be connected to each BA201. To prevent earth loops both communications ports are functionally isolated from the BA201 power supply terminals allowing an earthed or floating supply to be used.

No configuration is required it is only necessary to connect to the required RS232 or RS485 safe area port, the isolator will automatically function at any of the serial text display communication rates between 300 and 19.2k baud. The RS485 driver turn-around is automatic and optimised for the baud rate

in use. Four green LEDs on the top of the isolator indicate status. One LED shows that the device is powered; the others indicate when the RS232 port is being used and when the isolator is transmitting to, or receiving from the serial text display.

The enclosure, which is moulded in ABS and polycarbonate, is DIN rail mounting and only 22.6mm wide making it compatible with many proprietary galvanic isolators and Zener barriers. To simplify installation and commissioning the terminals are colour coded and removable.

International certification permits the BA201 isolator, when mounted in a safe area, to power and communicate with up to four BEKA intrinsically safe serial text displays mounted in a hazardous area. Either BA484D field mounting or BA488C panel mounting models text displays may be used, or a mixture of both models may be connected to one BA201 communications isolator.

BA201

Communications isolator

Interface for BEKA intrinsically safe Serial Text Displays

- ◆ Powers and communicates with BA484D & BA488C serial text displays.
- ◆ RS232 and RS485 safe area port.
- ◆ IECEx, ATEX & UKEX Ex ia associated apparatus certification.
- ◆ DIN rail mounting
- ◆ 3 year guarantee

www.beka.co.uk/ba201



BEKA

associates

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SPECIFICATION

Power supply

Voltage	20 - 35V dc
Current	100mA typical at 24V powering two Text Displays in a three wire system.

Safe area communication

Port	RS232 or RS485
	Unused port should not be connected.

Certification

Intrinsic safety associated apparatus

Location	Safe area
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International IECEx

Standards	IEC 60079-0:and IEC 60079-11
Code	[Ex ia Ga] IIC
Cert. No.	IECEx ITS 07.0014

Europe ATEX and UKEX

Code	[Ex ia Ga] IIC
Cert. No.s	ITS07ATEX25602 and ITS21UKEX0086

USA FM & Canada cFM

Standard	3610 & CSA 22.2 No 157 Entity
Code	Intrinsically safe associated apparatus for connection to: CL I, II, III; Div 1 GP A, B, C, D, E, F & G AEx ia IIC Ta 60°C

Location	In accordance with Control Drawing CI201-12 BA201 may be located in safe (unclassified) area or in Div 2 / Zone 2
Nonincendive Files	See certificates for details 3029711 and 3029711C

Environmental

Operating temp	-20 to 60°C (Certified for use between -40 & 70°C)
Storage temp	-40 to 85°C
Humidity	To 95% @ 40°C noncondensing
Enclosure	Polycarbonate and ABS moulding IP20
EMC	Complies with EU and UK Directives

Mechanical

Terminals	Screw clamp for 0.5 to 1.5mm ² cable. Removable terminal blocks.
Colour	Hazardous area wiring blue
Mounting	35mm 'top hat' DIN rail
Weight	0.15kg

Accessories

Tag number	Thermally printed strip on top of instrument.
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NUMBER OF TEXT DISPLAYS

The BA201 can power and communicate with multiple BA484D or BA488C Serial Text Displays, the maximum number depends upon the wiring configuration.

Two-wire connection

No. of Text Displays	Backlight brilliance
1	Full
2	Reduced

Three-wire connection

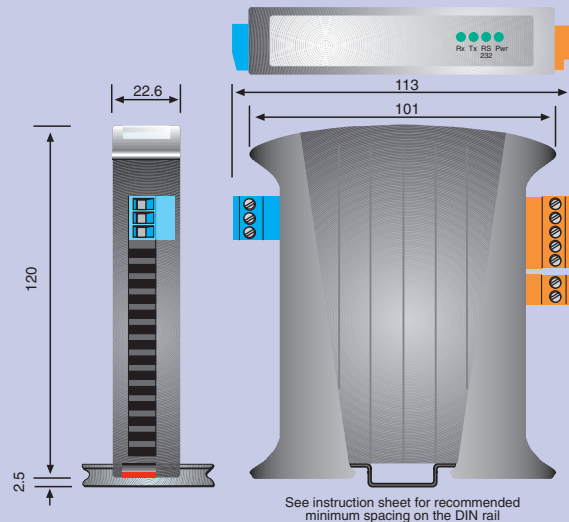
No. of Text Displays	Backlight brilliance
1	Full
2	Full
3	Reduced
4	Reduced

HOW TO ORDER

Model number	Please specify BA201
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Accessories	Please specify if required Legend
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DIMENSIONS (mm)



TERMINAL CONNECTIONS

Hazardous area terminals

0V	3
Power + signal	2
Power	1

7	0V
8	RS232 Tx
9	RS232 Rx
10	RS485 B
11	RS485 A

Safe area terminals

13	0V
14	+

Terms Tx & Rx are relative to the BA201

SYSTEM CONNECTIONS

