

Data Sheet

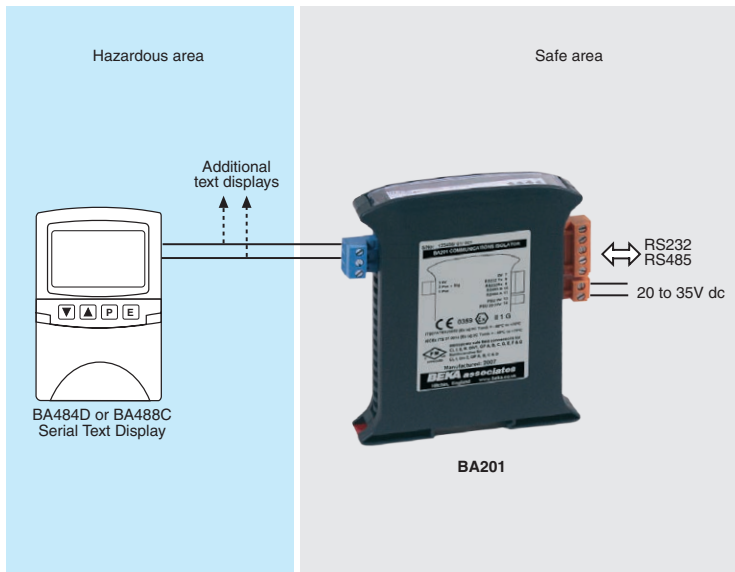
BA201



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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.

ATEX associated apparatus 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.

FM, cFM and IECEx approvals allow the BA201 communication isolator to be installed in the USA and Canada. International IECEx approval is already accepted in Australia, New Zealand and Singapore without the need for local certification. In countries that still require local intrinsic safety certification, this can often be quickly obtained based on the international IECEx test report and approval.

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.
- ◆ ATEX, FM, cFM and IECEx certification.
- ◆ DIN rail mounting
- ◆ 3 year guarantee

www.beka.co.uk/ba201



BEKA
associates

BEKA associates Ltd. Old Charlton Rd.
Hitchin, Hertfordshire, SG5 2DA, U.K.
Tel. (01462) 438301 Fax (01462) 453971
e-mail sales@beka.co.uk www.beka.co.uk

Reading Office

Cutbush Park, Danehill, Lower Earley,
Reading, Berkshire. RG6 4UT. UK.
Tel: +44 (0)118 9311188
Email: info@able.co.uk

Aberdeen Office

Unit 6 Airside Business Park, Kirkhill Industrial Estate,
Dyce, Aberdeen. AB21 0GT. UK.
Tel: +44 (0)1224 725999
Email: ab@able.co.uk

Internet: www.able.co.uk
e-procurement: www.247able.com
Registered in England No: 01851002
VAT No: GB 417 2481 61



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.

Intrinsic safety
Type Associated apparatus
Location Safe area

Europe ATEX
Standard EN60079-11:2007
Code Group II Category (1) G [Ex ia] IIC
Cert. No. ITS07ATEX25602
intrinsic safety parameters
Terminal 1 wrt Terminal 3
Uo = 21.2V
Io = 96mA
Po = 0.51W
Terminal 2 wrt Terminal 3
Uo = 13.7V
Io = 84mA
Po = 0.45W

USA FM
Standard 3610 Entity
Code IS Circuit CLI, II, III; Div 1;
GP A, B, C, D, E, & G.
File 3029711

Canada cFM
Standard CSA 22.2 No 157
Code IS Circuit CLI, II, III; Div 1;
GP A, B, C, D, E, & G.
File 3029711C

International IECEx
Standard IEC60079-11:2006
Code [Ex ia] IIC
Cert. No. IECEx ITS 07.0014

Environmental
Operating temp -20 to 60°C (ATEX & IECEx Certified for use between -40 and 70°C)
Storage temp -40 to 85°C
Humidity To 95% @ 40°C noncondensing
Enclosure Polycarbonate and ABS moulding IP20
EMC In accordance with EU Directive 2004/108/EC BS EN 61326:1998
Operates normally with conducted 3Vrms interference between 0.15kHz and 80MHz, or Radiated 10V/m interference between 80MHz and 1GHz.
CISPR 16-1/2 Class A
Emissions

Mechanical
Terminals Screw clamp for 0.5 to 1.5mm² 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.

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

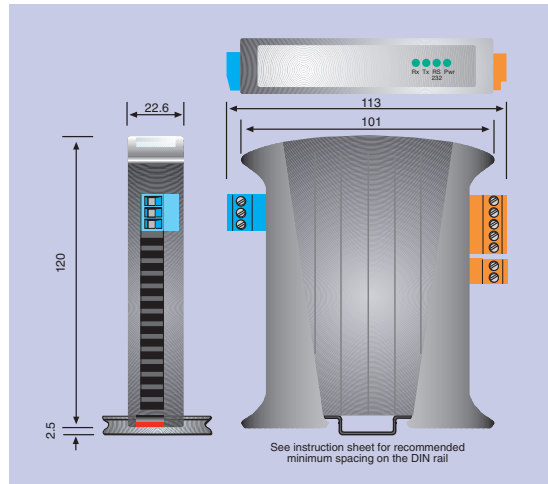
No. of Text Displays	Backlight brilliance
1	Full
2	Full
3	Reduced
4	Reduced

HOW TO ORDER

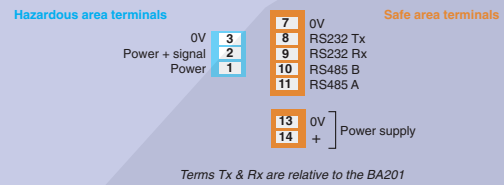
Model number Please specify
BA201

Accessories Please specify if required
Tag strip Legend

DIMENSIONS (mm)



TERMINAL CONNECTIONS



SYSTEM CONNECTIONS

