

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14,
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 e-mail: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex CM 20 2TT, UK
 Phone: +44 1279 635533
 Fax: +44 1279 635262
 e-mail: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 8 Technology Boulevard
 Canastota, NY 13032, USA
 Phone: 315-697-JUMO
 1-800-554-JUMO
 Fax: 315-697-5867
 e-mail: info@jumo.us
 Internet: www.jumo.us



Supply isolator for Ex transmitters with 2-wire connection, HART[®] capable

Type KFD 2/HART

Ex II (1) GD [EEx ia] IIC ($T_{\text{amb}} = -20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$)

General application

The unit is used for the intrinsically safe supply and the electrical isolation of the output signal of transmitters with Ex protection.

The supply isolator provides an intrinsically safe supply of 16.5 V DC. The intrinsically safe output signal of the supply isolator is electrically isolated through the isolating transformer. This means that it can be connected to instruments that do not have an intrinsically safe input and are located outside the hazardous (Ex) area.

The supply isolator is suitable for providing power to the following instruments, e.g.:

- JUMO dTRANS p02 (Data Sheet 40.4385);
- JUMO dTRANS p02 DELTA (Data Sheet 40.4382);
- JUMO dTRANS p33 (Data Sheet 40.4753);
- JUMO dTRANS T01 HART / Ex (Data Sheet 70.7010).



Order example

Supply isolator for Ex transmitters with 2-wire connection

Type KFD 2/HART
 Sales No. 40/00389710

Ranges

Supply unit

Approval

Ex II (1) GD [EEx ia] IIC ($T_{\text{amb}} = -20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$)

Input

EEx ia IIC

Supply voltage

20 – 35 V DC

Ripple

within the supply voltage tolerance

Power consumption

1.7 W approx.

Supply for external transmitter

Intrinsically safe circuit

16.5 V approx. at 20 mA

Maximum values:

max. voltage $U_0 = 25.2$ V DC
 max. current $I_K = 93$ mA
 max. power $P_{\text{max}} = 0.587$ W

Permissible capacitance at connection to pressure transmitter

with Group Ex II C, $C_{\text{max.}} = 107$ nF
 with Group Ex II B, $C_{\text{max.}} = 820$ nF
 with Group Ex II A, $C_{\text{max.}} = 2.9$ μF

Permissible inductance at connection to pressure transmitter

with Group Ex II C, $L_{\text{max.}} = 4.2$ mH
 with Group Ex II B, $L_{\text{max.}} = 17.3$ mH
 with Group Ex II A, $L_{\text{max.}} = 35.2$ mH

Isolating transformer

Input

4 – 20 mA
 intrinsically safe circuit

Output

4 – 20 mA
 Ripple: 10 $\mu\text{A}_{\text{p-p}}$

Transformer ratio

1:1

Burden resistance

at the isolating transformer output
 $R_B = 1$ k Ω max.

Total error at 20°C

$\leq \pm 10$ μA incl. non-linearity and burden variation

Permissible ambient temperature

-20 to $+60^{\circ}\text{C}$

Ambient temperature error

$\leq \pm 0.4$ μA per $^{\circ}\text{C}$

Permissible storage temperature

-40 to $+90^{\circ}\text{C}$

Case mounting

snapped on to 35mm standard rail to EN 60 715 A.1, or screwed on by 2 screws at 90mm spacing on pull-out lugs

Protection

EN 60 529 IP20

Electrical isolation

Input/ output: to EN 50 020
 Input/ mains supply: to EN 50 020
 Output/ mains supply: available

Weight

150g approx.

Electromagnetic compatibility

EN 61 326, EN 50 081-2, NAMUR NE21

Note on mounting

The instrument must be mounted outside the area with an explosion hazard.

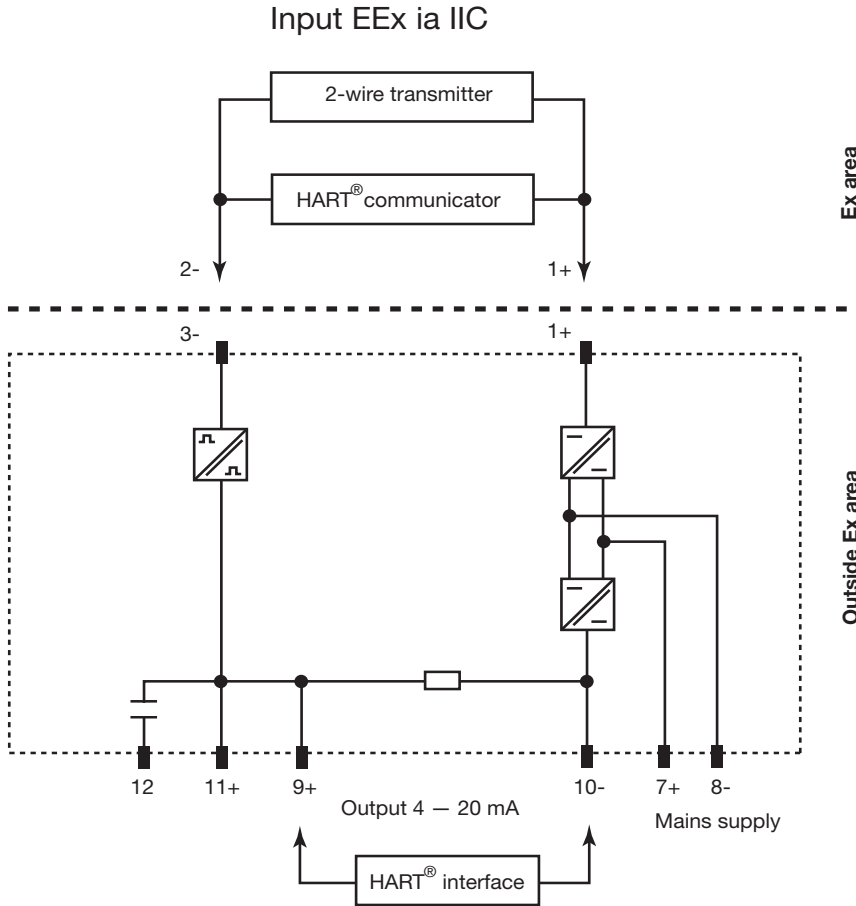
JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14,
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 e-mail: mail@jumo.net
 Internet: www.jumo.net

JUMO Instrument Co. Ltd.
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex CM 20 2TT, UK
 Phone: +44 1279 635533
 Fax: +44 1279 635262
 e-mail: sales@jumo.co.uk
 Internet: www.jumo.co.uk

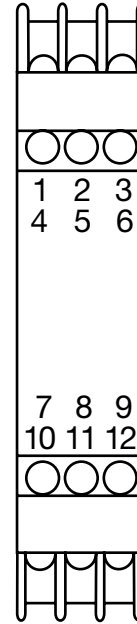
JUMO Process Control, Inc.
 8 Technology Boulevard
 Canastota, NY 13032, USA
 Phone: 315-697-JUMO
 1-800-554-JUMO
 Fax: 315-697-5867
 e-mail: info@jumo.us
 Internet: www.jumo.us



Block diagram

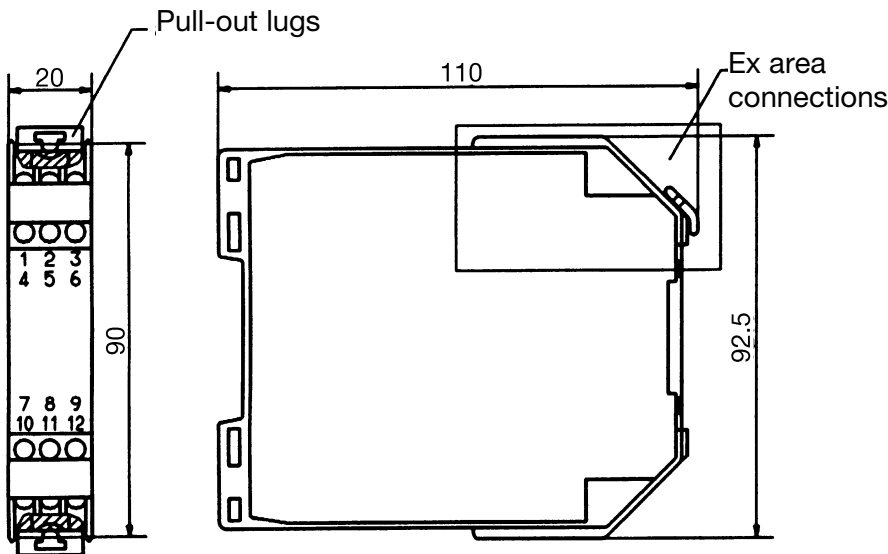


Electrical connection



	Connection	Terminals
	Supply	20 – 35 V DC to EN 50 020 7 + 8 -
	Signal input Supply for external pressure transmitter	4 – 20 mA intrinsically safe 16.5 V DC at 20mA 1 + 3 -
	Signal output	4 – 20 mA 9 + 10 -

Dimensions



Modular terminal box in Makrolon, flammability class to UL 94: V-0.
 Can be snapped on to 35mm standard rail to EN 60 715 A.1, or screwed on by 2 screws at 90mm spacing through pull-out lugs.