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Signal Converters
Isolation Amplifiers

6mm Series

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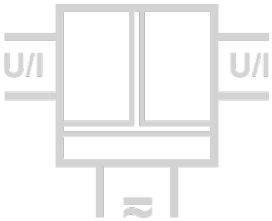
Bipolar Isolation Amplifier DB 64000

Isolation and Conversion of Bipolar and Unipolar Industrial Standard Signals



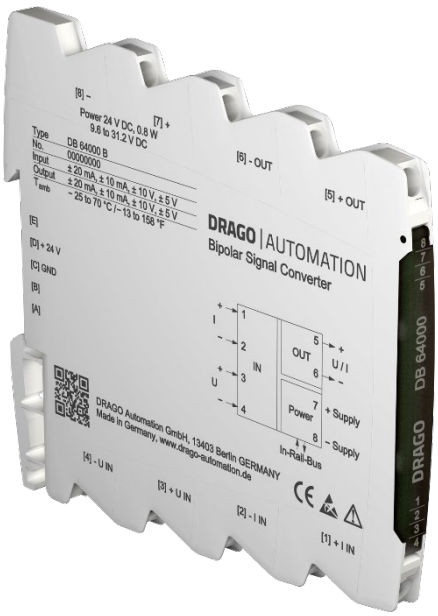
The Bipolar Isolation Amplifier DB 64000 is used for isolation and conversion of bipolar and unipolar industrial standard signals.

The input and output range of DB 64000 can be easily set by using DIP switch. Due to the calibrated range selection no further adjustment is necessary.

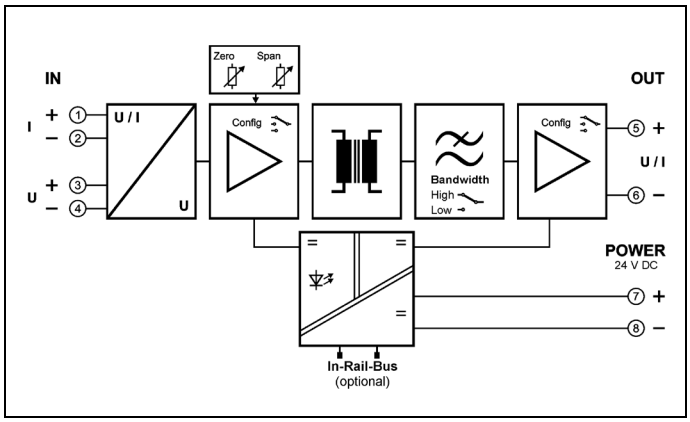
A switchable compensation of the measuring range can be performed at the Zero/Span potentiometers on the front panel. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.

- **Calibrated signal setting via DIP switch**
  Input and output range can be set by using DIP switch – high precision without any further adjustment
- **High bandwidth; short response time**
  No signal distortion; no falsification of measured signal
- **Switchable Zero/Span compensation**
  For readjustment of the sensor or field device
- **3-Port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



6 mm

Technical Data

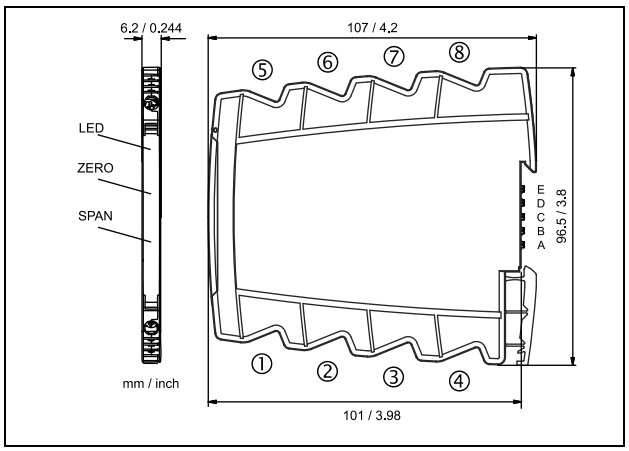
Input	Current			Voltage		
Input signal (calibrated switchable)	± 20 mA ± 10 mA	0 ... 20 mA 0 ... 10 mA	4 ... 20 mA 2 ... 10 mA	± 10 V ± 5 V	0 ... 10 V 0 ... 5 V	2 ... 10 V 1 ... 5 V
Input resistance	≤ 25 Ω			≥1 MΩ		
Overload	< 50 mA			< 30 V		

Output	Current			Voltage		
Output signal (calibrated switchable)	± 20 mA ± 10 mA	0 ... 20 mA 0 ... 10 mA	4 ... 20 mA 2 ... 10 mA	± 10 V ± 5 V	0 ... 10 V 0 ... 5 V	2 ... 10 V 1 ... 5 V
Load	≤ 12 V	(600 Ω at 20 mA)		≤ 5 mA	(2 kΩ at 10 V)	
Linear transmission range	unipolar: –1 ... +110 %		bipolar: –110 ... +110 %			
Residual ripple	< 10 mV_{rms}					

General Data			
Transmission error	< 0.1 % full scale		
Temperature coefficient[1]	< 100 ppm/K		
Zero/Span compensation (switchable)	± 5 % of measuring range		
Cut-off frequency -3 dB (switchable)	8 kHz	100 Hz	
Response time T_{99}	100 µs	7 ms	
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply	
Working voltage[2] (Basic Insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electrical shock[2]	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits		
Ambient temperature	Operation Transport and storage	- 25 °C to + 70 °C - 40 °C to + 85 °C	(- 13 to + 158 °F) (- 40 to + 185 °F)
Power supply	24 V DC	voltage range 9.6 V ... 31.2 V DC, approx. 0.8 W	
EMC[3]	EN 61326-1		
Approvals	ATEX IECEx UL	DEMKO 16 ATEX 1685X IECEx UL 16.0055X E478692 USA/Canada	Ⓔx II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Class I, Division 2 Groups A, B, C, D T4
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715		
Weight	Approx. 70 g		

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Input current
2	-	Input current
3	+	Input voltage
4	-	Input voltage
5	+	Output
6	-	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	-	Power supply (connected to In-Rail-Bus C)

Connection

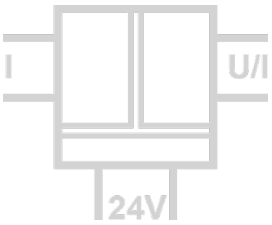
Captive plus-minus clamp screws
Wire cross-section 0.5 ... 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	**Order No.**
Bipolar Isolation Amplifier, calibrated range selection	DB 64000 S
Bipolar Isolation Amplifier, calibrated range selection, In-Rail-Bus for power supply	DB 64000 B

Repeater Power Supply DC 52100

Powering and Isolation of 2- and 3-wire Transmitters



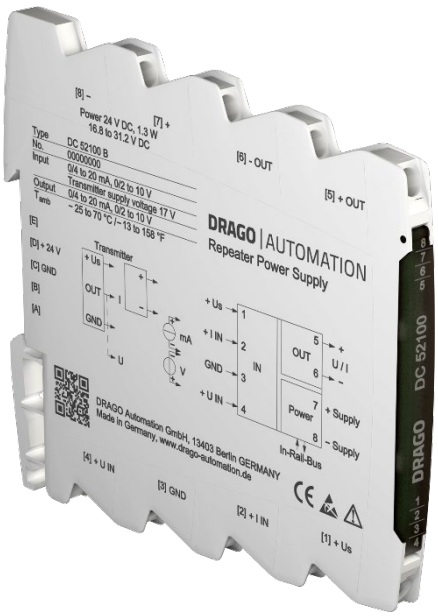
The repeater power supply DC 52100 is used to supply and separate 2- and 3-wire transmitters and active sensor signals.

The repeater power supply supplies the transmitter with power and transmits the current or voltage measuring signal with high accuracy galvanic isolated to the output. Alternative the measuring input accepts active signals from 4-wire transmitters.

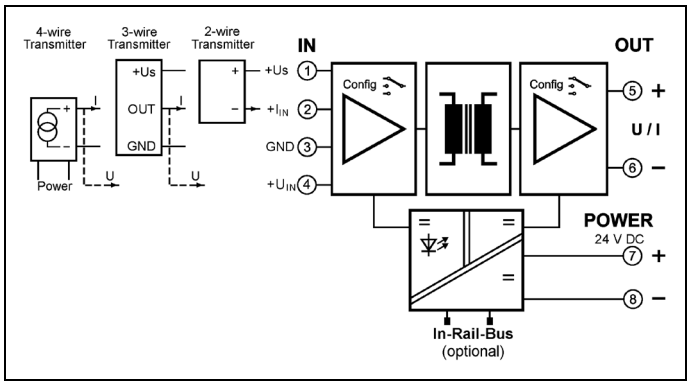
The input and output range of DC 52100 can be easily set by using DIP switch. Due to the calibrated range selection no further adjustment is necessary.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.

- **Universal operation of Transmitters**
  Energization and separation of field located 2-, 3- and 4-wire transmitters with current or voltage output
- **Calibrated signal setting via DIP switch**
  Input and output range can be set by using DIP switch - high precision without any further adjustment
- **3-Port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



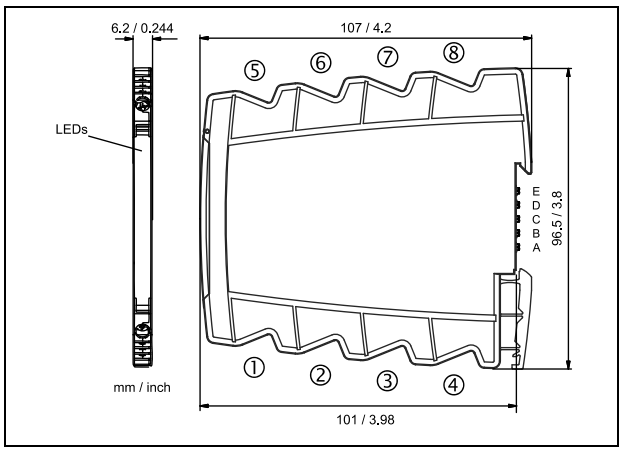
6mm

Technical Data

Input				
Input signal (calibrated switchable)	0 … 20 mA	4 … 20 mA	0 … 10 V	2 … 10 V
Input resistance	Current input ≤ 25 Ω		Voltage input ≥100 kΩ	
Overload	50 mA / 30 V			
Transmitter supply (Tx)	16 V (open circuit voltage/short circuit current < 22 V/35 mA)			
Output				
Output signal (calibrated switchable)	0 … 20 mA	4 … 20 mA	0 … 10 V	2 … 10 V
Load	Current output: ≤ 12 V (600 Ω at 20 mA)		Voltage output: ≤ 5 mA (2 kΩ at 10 V)	
Linear transmission range	–1 … +110 %			
Residual ripple	< 10 mV_{rms}			
General Data				
Transmission error	< 0.1 % full scale			
Temperature coefficient[1)]	< 100 ppm/K			
Cut-off frequency -3 dB (switchable)	5 kHz	100 Hz		
Response time T_{99}	150 µs	7 ms		
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply		
Working voltage[2)] (Basic Insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1			
Protection against electrical shock[2)]	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2			
Ambient temperature	Operation	– 25 °C to + 70 °C	(– 13 to + 158 °F)	
	Transport and storage	– 40 °C to + 85 °C	(– 40 to + 185 °F)	
Power supply	24 V DC	voltage range 16.8 V … 31.2 V DC, approx. 1.3 W		
EMC[3)]	EN 61326-1			
Approvals	ATEX	DEMKO 16 ATEX 1685X	Ⓔx II 3 G Ex nA IIC T4 Gc	
	IECEx	IECEx UL 16.0055X	Ex nA IIC T4 Gc	
	UL	E478692 USA/Canada	Class I, Division 2 Groups A, B, C, D T4	
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 70 g			

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Transmitter supply voltage U_{Tx}
2	+	Input current
3	-	Input GND
4	+	Input voltage
5	+	Output
6	-	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	-	Power supply (connected to In-Rail-Bus C)

Connection

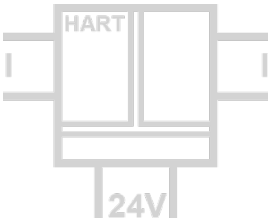
Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	Order No.
Repeater Power Supply, calibrated range selection	DC 52100 S
Repeater Power Supply, calibrated range selection, In-Rail-Bus for power supply	DC 52100 B

Repeater Power Supply HART
DC 52500

Powering and Isolation of
SMART Transmitters with HART Communication



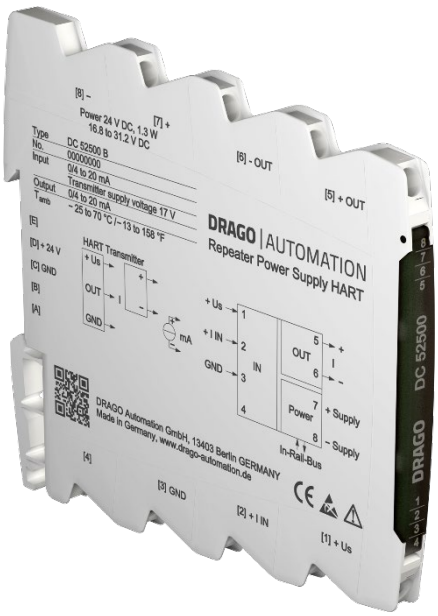
The Repeater Power Supply DC 52500 is used to supply and separate 2- and 3-wire SMART Transmitters and active sensor signals with HART communication.

It supplies the transmitter with power and transmits the measuring signal with high accuracy galvanic isolated to the output. Alternative the measuring input accepts active 0/4 … 20 mA signals from 4-wire transmitters.

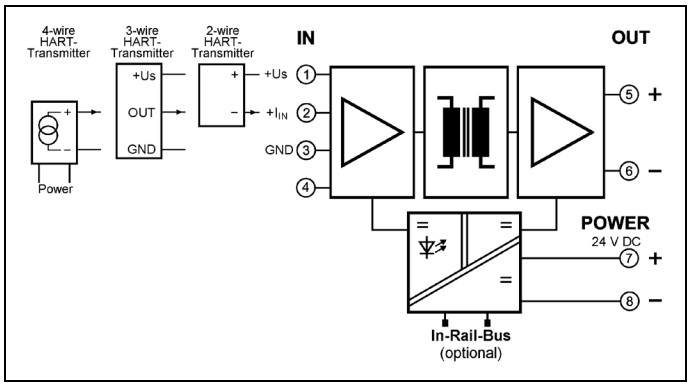
In addition to the analog signal, the DC 52500 also transmits data protocols for HART communication. It allows bidirectional communication with the field device from every point of the cabling.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.

- **Universal operation of SMART Transmitters**
  Energization and separation of field located 2-, 3- and 4-wire transmitters
- **Bidirectional HART transmission**
  HART data transfer for repeater and isolator operation
- **3-Port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving installation
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



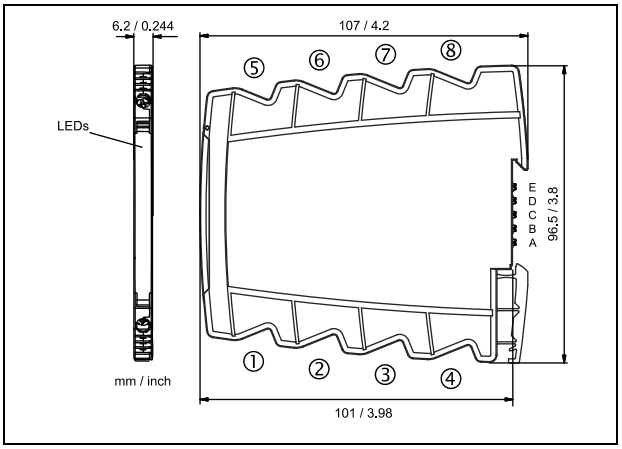
DRAGO Automation GmbH, Waldstr. 86-90, 13403 Berlin, GERMANY

Technical Data

Input		
Input signal	0/4 … 20 mA	(4 … 20 mA with HART signal)
Input resistance	≤ 50 Ω	
Over load	50 mA / 30 V	
Transmitter supply (Tx)	16 V (open circuit voltage/short circuit current < 22 V/35 mA)	
Communication signal	Bidirectional HART transmission, internal AC impedance 250 Ω	
Output		
Output signal	0/4 … 20 mA	(4 … 20 mA with HART signal)
Load	0 … 600 Ω (at 20 mA)	(230 … 600 Ω with HART signal)
Linear transmission range	–1 ... +110 %	
Residual ripple	< 10 mV_{rms}	
General Data		
Transmission error	< 0.1 % full scale	
Temperature coefficient[1)]	< 100 ppm/K	
Cut-off frequency -3 dB	100 Hz	> 2,5 kHz HART signal
Response time T_{99}	7 ms	
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply
Working voltage[2)] (Basic Insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1	
Protection against electrical shock[2)]	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010 -1 up to 300 V AC/DC for overvoltage category II and pollution degree 2	
Ambient temperature	Operation Transport and storage	– 25 °C to + 70 °C (– 13 to + 158 °F) – 40 °C to + 85 °C (– 40 to + 185 °F)
Power supply	24 V DC	voltage range 16.8 V … 31.2 V DC, approx. 1.3 W
EMC[3)]	EN 61326-1	
Approvals	ATEX IECEx UL	DEMKO 16 ATEX 1685X IECEx UL 16.0055X E478692 USA/Canada
		⟨Ex⟩ II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Class I, Division 2 Groups A, B, C, D T4
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715	
Weight	Approx. 70 g	

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Transmitter supply voltage U_{Tx}
2	+	Input current
3	-	Input GND
4		n.c.
5	+	Output
6	-	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	-	Power supply (connected to In-Rail-Bus C)

Connection

Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	Order No.
Repeater Power Supply , bidirectional HART transmission	DC 52500 S
Repeater Power Supply , bidirectional HART transmission, In-Rail-Bus for power supply	DC 52500 B

Switch Amplifier
DG 31000

Input for NAMUR, SN, S0, DC sensor, Contact, V AC/DC, PNP, NPN and Push-Pull, configurable per DIP switches

The configurable switch amplifier DG 31000 is used to capture, amplify and supply of industrial binary signals. A SPST relay or optionally an isolated, passive transistor switch (Open-Collector) is available at the output.

The switching amplifier detects the status of 2- and 3-wire sensors, binary signals and AC/DC voltages und transmit the state to the switching output. The input is protected against polarity reversal and short circuit. The connected sensors can be supplied by the switching amplifier or externally.

The mode of operation and action direction can be switched with DIP switches. The device has an adjustable switch-on delay, a switch-off delay and a wiper function.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. The switching status and the device status are indicated by LEDs on the front panel. If the device is operated via the In-Rail-Bus, a common fault message is available on the status line.

- **Universal Binary Input**
  for all common industrial status signals
- **Easily configurable via DIP switches**
  Sensor type, action direction and mode of operation directly selectable
- **Switchable timer functions**
  Switch-on delay, switch-off delay and wiper function
- **3-Port Isolation**
  Protection against switching errors due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  Allows fast and cost-effective installation and provides a common fault message
- **Protective separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)

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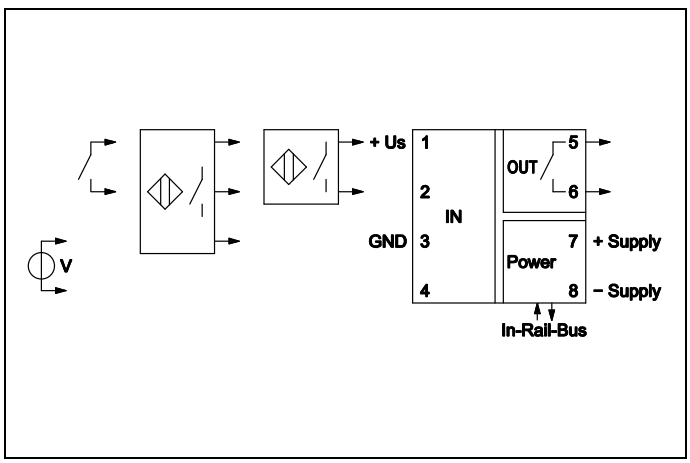


6mm

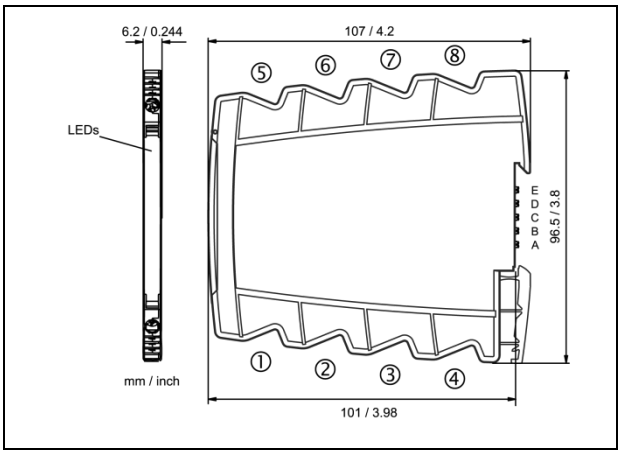
Technical Data

Input				
2-wire Sensors	Terminal 1, 2	NAMUR / SN	S0 Sensor	DC Sensor
	Standard	EN60947-5-6	EN 62053-31, Type B	EN 60947-5-2
	Sensor supply	8 V	16 V	16 V / 25 mA (ext. < 32 V)
	Switching point L/H	1.2/2.1 mA	1.2/2.1 mA	2 mA/6 mA
	Input resistance	1 kΩ	3 kΩ	1 kΩ
Binary Signal	Terminal 1, 2, 3	NPN	PNP / Push-Pull	Mechanical Contact
	Standard	EN60947-5-2	EN60947-5-2	ON/OFF
	Sensor supply	16 V / 25 mA (ext. < 32 V)	16 V / 25 mA (ext. < 32 V)	16 V / 25 mA (ext. < 32 V)
	Switching point L/H	3/5 V	8/10 V	8/10 V
	Input resistance	3 kΩ	3 kΩ	3 kΩ
Voltage	Terminal 3, 4	0 to 300 V AC 50/60 Hz or DC		
	Switching point L/H (preferred range)	7/15 V (24 V)	40/85 V (115 V)	80/160 V (230 V) switchable (any voltage up to 300 V permitted)
	Input resistance	> 500 kΩ		

Output			
DG31000	Relay	250 V AC / 30 V DC / 2 A	Recommended minimum load 300 mW / 5 V / 5 mA
DG31080	Transistor	36 V DC / 50 mA	galvanically isolated, not current limited
Response time		≤ 20 ms	
Switching functions (selectable)		Make / break contact	ON delay, OFF delay or wiper: OFF, 0.5 s, 1 s, 5 s, 10 s
Common fault message		Signal on In-Rail-Bus E (supply circuit) at device failure, cable break und short circuit	
General Data			
Test voltage		3 kV AC, 50 Hz, 1 Min.	Input against output against power supply/In-Rail-Bus
Working voltage[1] (Basic Insulation)		600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1	
Protection against electrical shock[1]		Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits	
Ambient temperature		Operation: -25 °C to +70 °C (-13 to +158 °F)	Transport and storage: -40 °C to +85 °C (-40 to +185 °F)
Power supply		24 V DC	voltage range 16.8 V to 31.2 V DC, max. 1.0 W
EMC[2]		EN 61326-1	
Approvals (pending)		UL (USA/Canada) ATEX / IECEx	UL 61010, Class I, Div. 2 Zone 2 (nA)
Construction		6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715	
Weight		Approx. 70 g	

1) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
2) Minor deviations possible during interference

Dimensions



Terminal assignments

1	+	Sensor supply		
2	+	Binary input		
3	–	GND input		
4	≂	AC/DC-voltage input		
5	≂	Relay	+	Transistor output
6	≂	Relay	–	Transistor output
7	+	Power supply (connected to In-Rail-Bus D)		
8	–	Power supply (connected to In-Rail-Bus C)		

Connection

Captive plus-minus clamp screws
Wire cross-section 0.5 to 2.5 mm² / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Subject to change!

Product line

Device	Order No.	Relay	Transistor
Switch Amplifier, configurable per DIP switch		DG 31000 S	DG 31080 S
Switch Amplifier, configurable per DIP switch, In-Rail-Bus for power supply and status message		DG 31000 B	DG 31080 B

Limit Alarm Unit
DG 35200

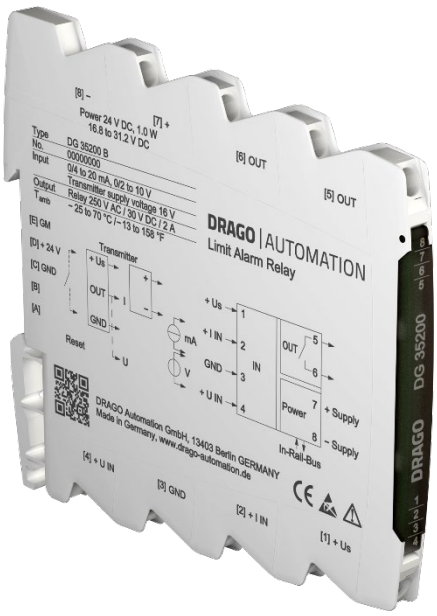
Monitoring of analog standard signals

The configurable Limit Alarm Switch DG 35200 is used for limit monitoring and processing of unipolar and bipolar standard signals. A SPST relay or optionally an isolated, passive transistor switch (Open-Collector) is available at the output.

The Limit Alarm Unit monitors standardized current and voltage signals, and transmits the signal to the switching output. A transmitter power supply is provided for the operation of 2-wire and 3-wire transmitters.

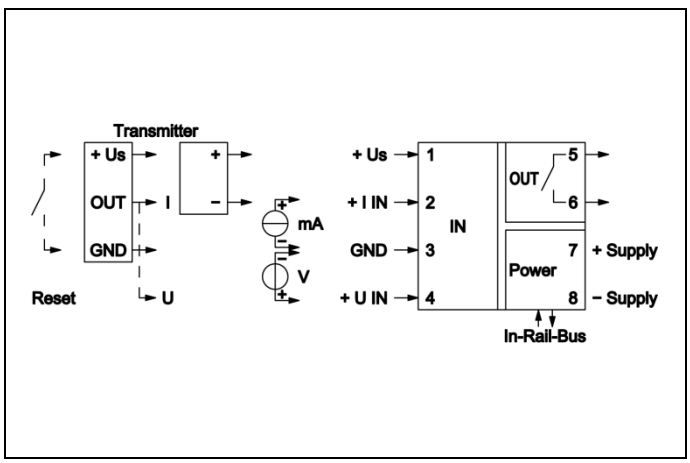
The configuration is carried out via DIP switch or USB interface. The switch point can be taught-in and corrected during operation with the front-side Teach-In buttons. The Alarm Unit has an adjustable switch-on delay, switch-off delay and a wiper function. Further settings such as memory function and window function can be programmed via USB interface.

The input is protected against polarity reversal and short circuit. The power supply can be provided via the connection terminal blocks or via the optional In-Rail-Bus. The switch status and the device status are indicated by LEDs on front panel. If the device is operated via the In-Rail-Bus, a common fault message is available on the status line.



- **Universal input for current and voltage**
  and integrated transmitter supply
- **Easy configurable via DIP switches or via USB**
  Limit point, hysteresis and mode of operation can be directly set, limit point adjust also in operation via teach-in function
- **Switchable timer and special functions**
  Switch-on delay, switch-off delay and wiper function, Memory and window functions
- **3-Port-Separation**
  Protection against switching errors due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)

Prinzipschaltbild



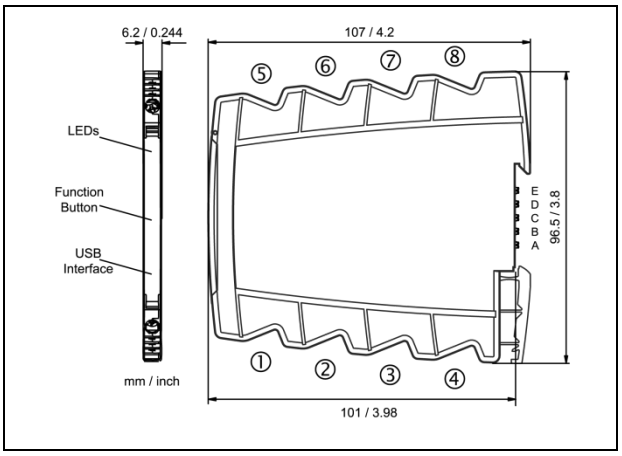
6 mm

Technical Data

Input		Current			Voltage		
Input signal		0 to 20 mA 0 to 10 mA ABS 20 mA 4 to 20 mA/NE43 (Relay inactive outside the NAMUR range 3.6 to 22 mA)	4 to 20 mA 2 to 10 mA	± 20 mA ± 10 mA	0 to 10 V 0 to 5 V ABS 10 V	2 to 10 V 1 to 5 V	± 10 V ± 5 V
Input resistance		≤ 20 Ω			≥ 1 MΩ		
Overload		< 50 mA			< 30 V		
Transmitter supply (Tx)		16 V (open circuit voltage/short circuit current < 22 V/35 mA)					
Output							
DG35200	Relay	250 V AC / 30 V DC / 2 A	Recommended minimum load 300 mW / 5 V / 5 mA				
DG35280	Transistor	36 V DC / 50 mA	galvanically isolated, not current limited				
Response time		≤ 20 ms					
Switching functions (selectable)		Make / break contact	ON delay, OFF delay or wiper: OFF, 0.5 s, 1 s, 5 s, 10 s				
Common fault message		Signal on In-Rail-Bus E (supply circuit) at device failure, cable break und short circuit					
General Data							
Test voltage		3 kV AC, 50 Hz, 1 Min.	Input against output against power supply/In-Rail-Bus				
Working voltage[1] (Basic Insulation)		600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1					
Protection against electrical shock[1]		Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits					
Ambient temperature		Operation: -25 °C to +70 °C (-13 to +158 °F)	Transport and storage: -40 °C to +85 °C (-40 to +185 °F)				
Power supply		24 V DC	voltage range 16.8 V to 31.2 V DC,	max. 1.0 W			
EMV[2]		EN 61326-1					
Approvals (pending)		UL (USA/Canada) ATEX / IECEx	UL 61010, Class I, Div. 2 Zone 2 (nA)				
Construction		6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715					
Weight		Approx. 70 g					

1) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
2) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Transmitter supply		
2	+	Current input		
3	–	GND		
4	+	Voltage input		
5	≂	Relay	+	Transistor output
6	≂	Relay	–	Transistor output
7	+	Power supply (connected to In-Rail-Bus D)		
8	–	Power supply (connected to In-Rail-Bus C)		

Connection

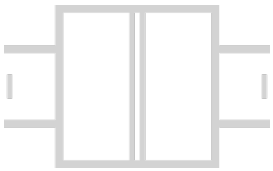
Captive plus-minus clamp screws
Wire cross-section 0.5 to 2.5 mm² / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	**Order No.**	**Relay**	**Transistor**
Limit Alarm Unit, configurable		DG 35200 S	DG 35280 S
Limit Alarm Unit, configurable, In-Rail-Bus for power supply and status message		DG 35200 B	DG 35280 B

Passive Isolator
DH 11000

Separation of 0(4) ... 20 mA Standard Signal



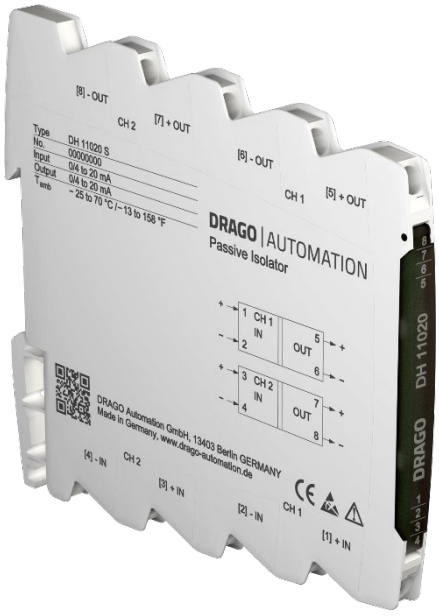
The input loop-powered isolator DH 11000 provides galvanic separation for 0(4) ... 20 mA standard signals, while transferring the measurement signal to the output with a high degree of accuracy.

The unit avoids interference voltage carry-over and effectively suppressing parasitic noise. The very low drop voltage of 2.3 V and the high level of accuracy work together to make the DH 11000 the first choice in system design.

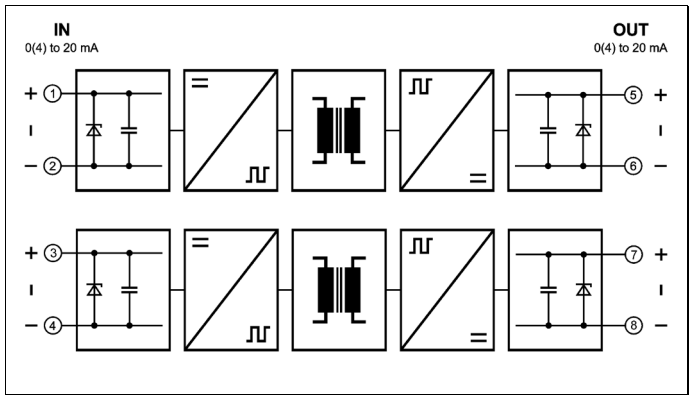
Intelligent design and their consequential avoidance of highly integrated components result in extremely long service lives and reliability - without any falsification of the measurement signal.

The DH 11000 requires no additional power supply since the auxiliary power is obtained from the input signal without distorting it. This not only saves costs during installation, but also increases reliability.

- **Galvanic isolation across input and output**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **No power supply required**
  Saving costs since wiring is reduced and line influences are omitted
- **Extremely slim design, 1- and 2-channel versions**
  Only 3.1 mm DIN-rail per channel
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **Maximum reliability**
  No maintenance costs
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



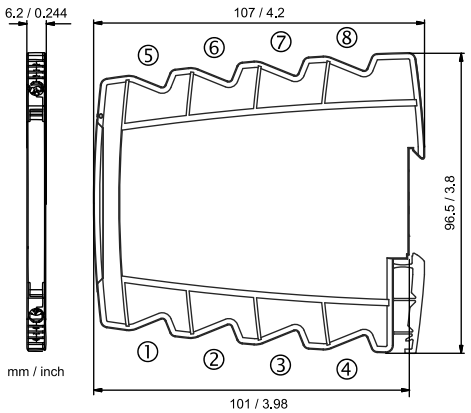
6 mm

Technical Data

Input			
Input signal	0(4) ... 20 mA		
Start-up current	< 200 µA		
Voltage drop	< 2.3 V		
Overload	≤ 50 mA, 30 V		
Output			
Output signal	0(4) ... 20 mA		
Load	600 Ω		
Cut-off frequency -3 dB	100 Hz		
Response time T_{99}	5 ms		
Residual ripple	< 10 mV_{rms}		
General Data			
Transmission error	< 0.1 % full scale		
Load error	< 0.05 % of measured value / 100 Ω load		
Temperature coefficient[1)]	< 100 ppm/K		
Test voltage	3 kV AC, 50 Hz, 1 min. all circuits against one another		
Working voltage[2)] (Basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electrical shock[2)]	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits		
Ambient temperature	Operation	– 25 to + 70 °C	(– 13 to + 158 °F)
	Transport and Storage	– 40 to + 85 °C	(– 40 to + 185 °F)
EMC[3)]	EN 61326-1		
Approvals	ATEX	DEMKO 16 ATEX 1685X	Ⓔx II 3 G Ex nA IIC T4 Gc
	IECEx	IECEx UL 16.0055X	Ex nA IIC T4 Gc
	UL	E478692 USA/Canada	Class I, Division 2 Groups A, B, C, D T4
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715		
Weight	Approx. 70 g		

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Input I
2	-	Input I
3	+	Input II
4	-	Input II
5	+	Output I
6	-	Output I
7	+	Output II
8	-	Output II

Connection

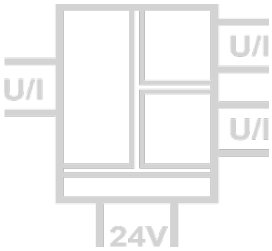
Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in

Product line

Device	Order No.
Loop-Powered Isolator, 1-channel	DH 11010 S
Loop-Powered Isolator, 2-channel	DH 11020 S

Signal Splitter/Repeater DN 21000

Isolation, Conversion and Loop Supply of Standard Signals with 2 Outputs

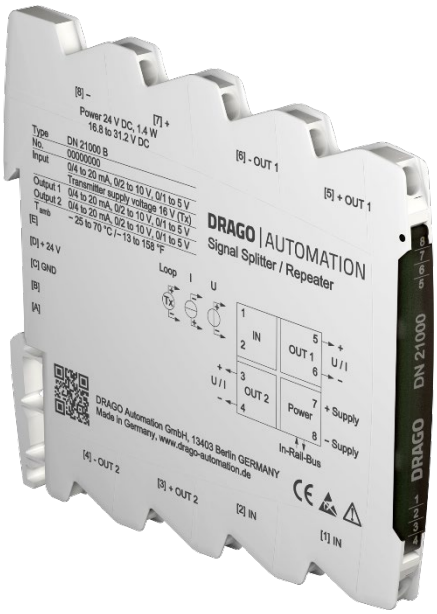


The Signal Splitter/Repeater DN 21000 is used for isolation, conversion and distribution of 0/4 ... 20 mA, 0/1 ... 5 V and 0/2 ... 10 V standard signals. The measuring input can also supply the loop power for 2-wire transmitters.

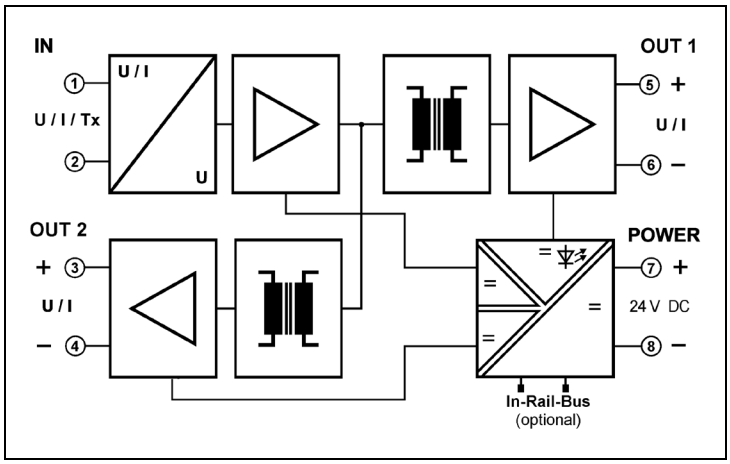
The input and two isolated outputs can be easily configured by using DIP switch. Due to the calibrated range selection no further adjustment is necessary.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.

- **Universal configurable operating**
  Signal isolator or repeater power supply for 2-wire transmitters, 2 independent outputs
- **Calibrated signal setting via DIP switch**
  Input and outputs can be set by using DIP switch – high precision without any further adjustment
- **4-Port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **Maximum reliability**
  No maintenance costs
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



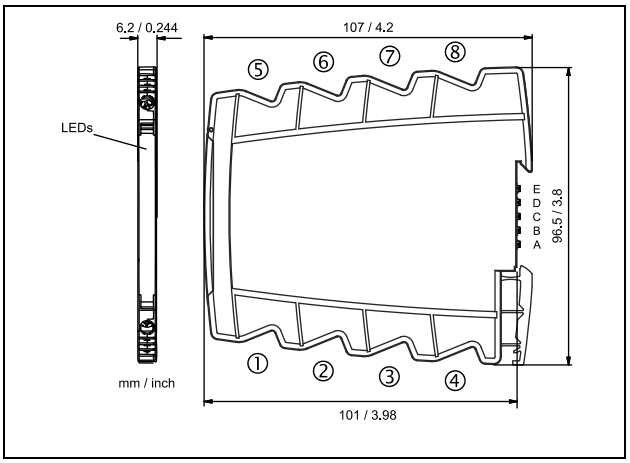
6 mm

Technical Data

Input			
Input signal (calibrated switchable)	0 ... 20 mA 4 ... 20 mA	0 ... 10 V 2 ... 10 V	0 ... 5 V 1 ... 5 V
Input resistance	Current input Voltage input		≤ 35 Ω ≥ 100 kΩ
Overload	Current input Voltage input		< 50 mA < 30 V
Transmitter supply Tx (switchable)	16 V (open circuit voltage/short circuit current ≤ 22 V/35 mA)		
Output I / Output II			
Output signal (calibrated switchable)	0 ... 20 mA 4 ... 20 mA	0 ... 10 V 2 ... 10 V	0 ... 5 V 1 ... 5 V
Load	Current output: ≤ 6 V (300 Ω at 20 mA)		Voltage output: ≤ 5 mA (2 kΩ at 10 V)
Linear transmission range	–1 ... +110 %		
Residual ripple	< 10 mV_{rms}		
General Data			
Transmission error	< 0.1 % full scale		
Temperature coefficient[1]	< 100 ppm/K		
Cut-off frequency -3 dB	5 kHz		
Response time T_{99}	150 µs		
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against Output 1 against Output 2 against power supply	
Working voltage[2] (Basic Insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electrical shock	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits		
Ambient temperature	Operation Transport and storage	– 25 °C to + 70 °C – 40 °C to + 85 °C	(– 13 to + 158 °F) (– 40 to + 185 °F)
Power supply	24 V DC	voltage range 16.8 ... 31.2 V DC, approx. 1.4 W	
EMC[3]	EN 61326-1		
Approvals	ATEX IECEx UL	DEMKO 16 ATEX 1685X IECEx UL 16.0055X E478692 USA/Canada	Ⓔx II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Class I, Division 2 Groups A, B, C, D T4
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715		
Weight	Approx. 70 g		

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Terminal assignments

1	Input -I +U	+ Loop
2	Input +I -U	- Loop
3	+	Output II
4	-	Output II
5	+	Output I
6	-	Output I
7	+	Power supply (connected to In-Rail-Bus D)
8	-	Power supply (connected to In-Rail-Bus C)

Connection

Captive plus-minus clamp screws
Wire cross-section 0.5 ... 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

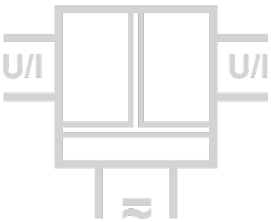
Subject to change!

Product line

Devices	Order No.
Signal Splitter/Repeater, calibrated range selection	DN 21000 S
Signal Splitter/Repeater, calibrated range selection, In-Rail-Bus for power supply	DN 21000 B

Isolation Amplifier
DN 25000

Isolation and Conversion of Standard Signals

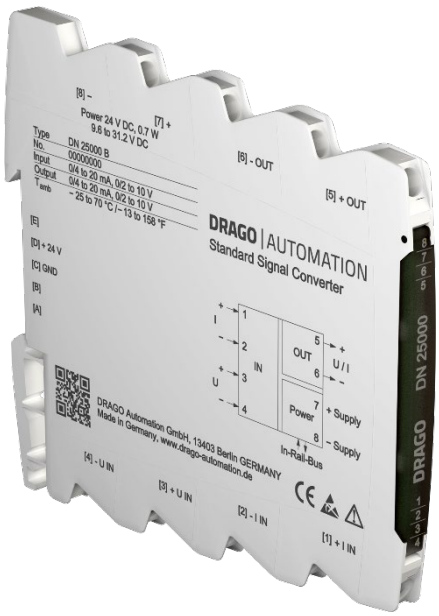


The Isolation Amplifier DN 25000 is used for isolation and conversion of 0/4 ... 20 mA and 0/2 ... 10 V standard signals.

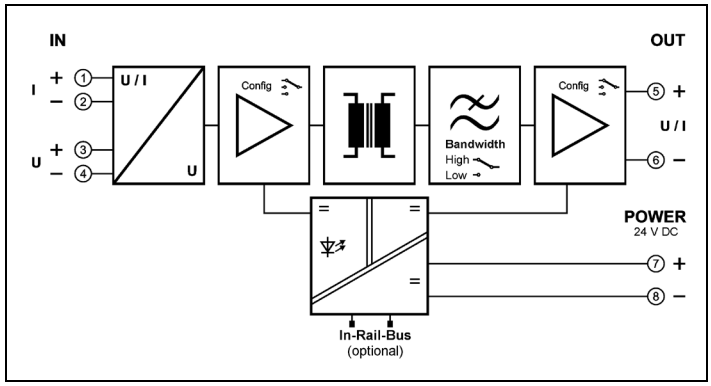
The input and output range of DN 25000 can be easily set by using DIP switch. Due to the calibrated range selection no further adjustment is necessary. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.

- **Calibrated signal setting via DIP switch**
  Input and output range can be set by using DIP switch – high precision without any further adjustment
- **3-Port Isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **Maximum reliability**
  No maintenance costs
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram



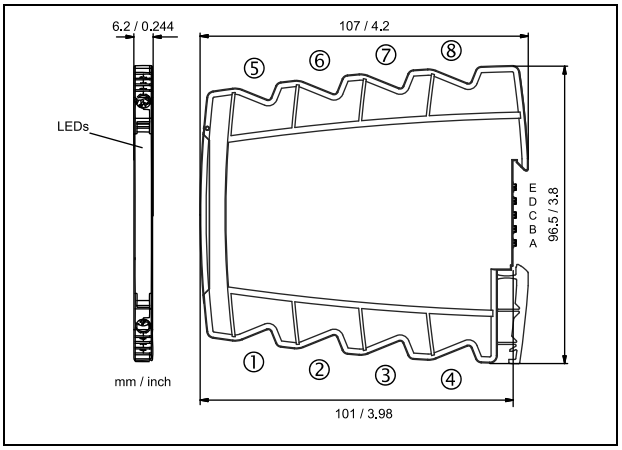
6mm

Technical Data

Input				
Input signal (calibrated switchable)	0 ... 20 mA 0 ... 10 V	4 ... 20 mA 2 ... 10 V		
Input resistance	Current input Voltage input		≤ 25 Ω ≥100 kΩ	
Overload	Current input Voltage input		< 50 mA < 30 V	
Output				
Output signal (calibrated switchable)	0 ... 20 mA 0 ... 10 V	4 ... 20 mA 2 ... 10 V		
Load	Current output: ≤ 12 V (600 Ω at 20 mA)			Voltage output: ≤ 5 mA (2 kΩ at 10 V)
Linear transmission range	–1 ... +110 %			
Residual ripple	< 10 mV_{rms}			
General Data				
Transmission error	< 0.1 % full scale			
Temperature coefficient [1]	< 100 ppm/K			
Cut-off frequency -3 dB (switchable)	5 kHz	100 Hz	10 Hz	
Response time T_{99}	150 µs	7 ms	70 ms	
Test voltage	3 kV AC, 50 Hz, 1 min.		Input against output against power supply	
Working voltage[2] (Basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1			
Protection against electrical shock	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits			
Ambient temperature	Operation Transport and storage		– 25 °C to + 70 °C – 40 °C to + 85 °C	(– 13 to + 158 °F) (– 40 to + 185 °F)
Power supply	24 V DC	voltage range 9.6 V ... 31.2 V, approx. 0.7 W		
EMC[3]	EN 61326-1			
Approvals	ATEX IECEx UL	DEMKO 16 ATEX 1685X IECEx UL 16.0055X E478692 USA/Canada	⟨Ex⟩ II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Class I, Division 2 Groups A, B, C, D T4	
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 70 g			

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Input current
2	-	Input current
3	+	Input voltage
4	-	Input voltage
5	+	Output
6	-	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	-	Power supply (connected to In-Rail-Bus C)

Connection

Captive plus-minus clamp screws
Wire cross-section 0.5 ... 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Devices	Order No.
Isolation Amplifier, calibrated range selection	DN 25000 S
Isolation Amplifier, calibrated range selection, In-Rail-Bus for power supply	DN 25000 B

2-Channel Isolation Amplifier DN 26000

Isolation and Conversion of Standard Signals

The 2-Channel Isolation Amplifier DN 26000 is used for isolation and conversion of 0/4 ... 20 mA and 0 ... 10 V, 0... 5 V standard signals.

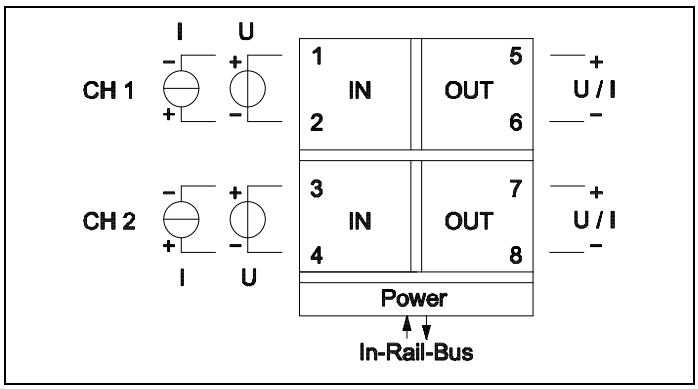
Due to the extremely slim design, the space requirement is only 3 mm per channel. The input and output ranges can be selected individually for each channel via DIP switches. A readjustment is not necessary due to the calibrated measuring ranges. A signal clipping and the cut-off frequency can also be set via DIP switches.

The power is supplied via the In-Rail-Bus, which ensures pre-wiring on a standard DIN rail. This significantly reduces the wiring effort. A green LED on the front of the unit has been provided to monitor the power supply.

- **Calibrated signal setting via DIP switch**
  Input and output range can be set by using DIP switch – high precision without any further adjustment
- **5-Port Isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Power supply via In-Rail-connector**
  allows fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **Maximum reliability**
  No maintenance costs
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)

CE

Block diagram



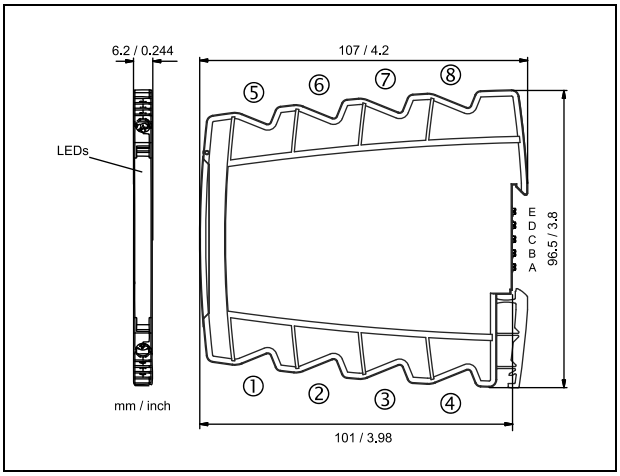
DRAGO Automation GmbH, Waldstr. 86-90, 13403 Berlin, GERMANY

Technical Data

Input			
Input signal	0 ... 20 mA	4 ... 20 mA	
(calibrated switchable)	0 ... 10 V	0 ... 5 V	
Input resistance	Current input		≤ 25 Ω
	Voltage input		≥100 kΩ
Overload	Current input		≤ 50 mA
	Voltage input		≤ 30 V
Output			
Output signal	0 ... 20 mA	4 ... 20 mA	
(calibrated switchable)	0 ... 10 V	0 ... 5 V	
Load	Current output: ≤ 10 V (500 Ω at 20 mA)		Voltage output: ≤ 5 mA (2 kΩ at 10 V)
Linear transmission range	–1 ... +110 %		
Residual ripple	< 10 mV_{rms}		
General Data			
Transmission error	< 0.1 % full scale		
Temperature coefficient [1]	< 100 ppm/K		
Cut-off frequency -3 dB (switchable)	100 Hz	10 Hz	
Response time T_{99}	10 ms	55 ms	
Test voltage	3 kV AC, 50 Hz, 1 min.		Inputs against outputs against power supply
Working voltage[2] (Basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electrical shock	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits		
Ambient temperature	Operation	– 25 °C to + 70 °C	(– 13 to + 158 °F)
	Transport and storage	– 40 °C to + 85 °C	(– 40 to + 185 °F)
Power supply	24 V DC via In-Rail-Bus		voltage range 16.8 V ... 31.2 V, approx. 1.1 W
EMC[3]	EN 61326-1		
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715		
Weight	Approx. 70 g		

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Terminal assignments

1	Input channel 1 (+U / –I)	5	Output channel 1 +
2	Input channel 1 (–U / +I)	6	Output channel 1 –
3	Input channel 2 (+U / –I)	7	Output channel 2 +
4	Input channel 2 (–U / +I)	8	Output channel 2 –
D	Power supply In-Rail-Bus D +		
C	Power supply In-Rail-Bus C –		

Connection

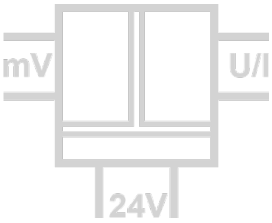
Captive plus-minus clamp screws
Wire cross-section 0.5 ... 2.5 mm^2 / 0.5 ... 1.5 mm^2
Stripped length 8 mm
Screw terminal torque 0.6 Nm
Power connection via In-Rail-Bus (see accessories)

Subject to change!

Product line	Order No.
2-Channel Isolation Amplifier, screw terminals	DN 26000 B
In-Rail-Bus for power supply (see accessories)	

Shunt/mV Isolation Amplifier DS 75000

Isolation and Conversion of Bipolar and Unipolar mV-Signals

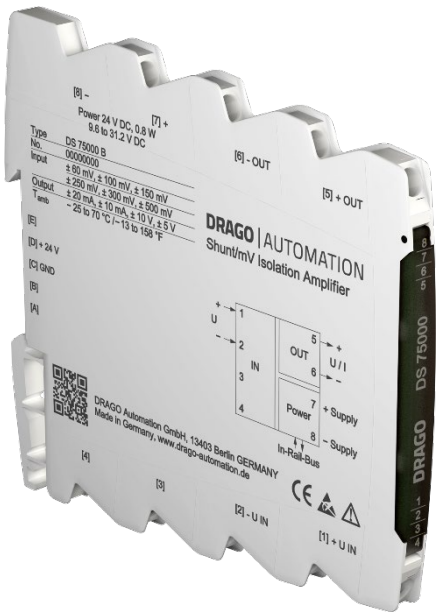


The Isolation Amplifier DS 75000 is used for separation and conversion of bipolar and unipolar mV-signals such as those frequently used for current measuring with shunt resistors or other applications with low sensor voltages.

The input and output range of DS 75000 can be easily set by using DIP switch. Due to the calibrated range selection no further adjustment is necessary.

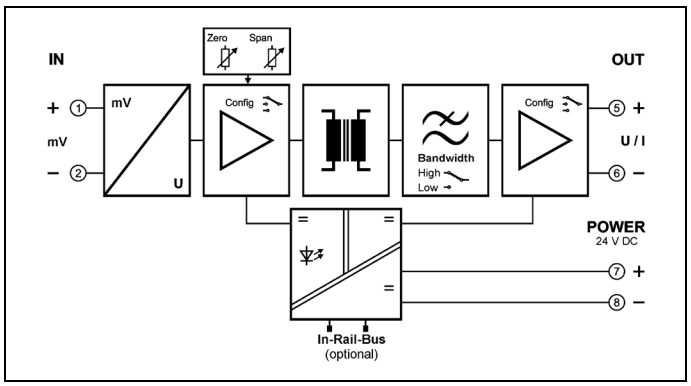
A switchable compensation of the measuring range can be performed at the Zero/Span potentiometers on the front panel. Also the cut-off frequency can be adapted to the measurement task by using the DIP Switch.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. A green LED on the front of the unit has been provided to monitor the power supply.



- **Calibrated signal setting via DIP switch**
  Input and output range can be set by using DIP switch – high precision without any further adjustment
- **High bandwidth; short response time**
  No signal distortion; no falsification of measured signal
- **Switchable Zero/Span compensation**
  For readjustment of the shunt/mV signal or measuring section
- **3-Port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)

Block diagram



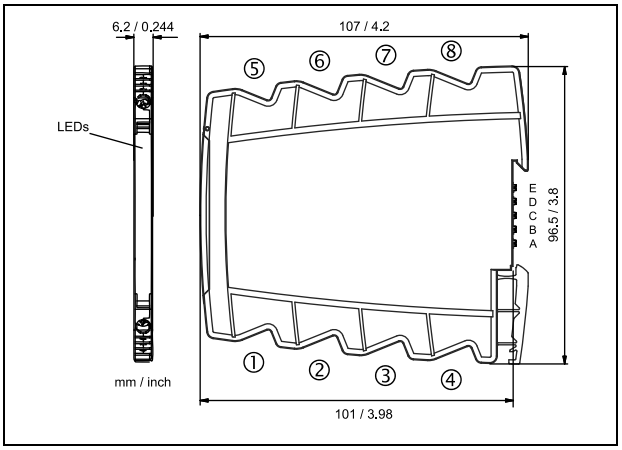
6 mm

Technical Data

Input						
Input signals (calibrated switchable)	± 60 mV 0 ... 60 mV	± 100 mV 0 ... 100 mV	± 150 mV 0 ... 150 mV	± 250 mV 0 ... 250 mV	± 300 mV 0 ... 300 mV	± 500 mV 0 ... 500mV
Input resistance	≥ 100 kΩ					
Overload	≤ 30 V					
Output	Current			Voltage		
Output signals (calibrated switchable)	± 20 mA ± 10 mA	0 ... 20 mA 0 ... 10 mA	4 ... 20 mA 2 ... 10 mA	± 10 V ± 5 V	0 ... 10 V 0 ... 5 V	2 ... 10 V 1 ... 5 V
Load	≤ 12 V (600 Ω at 20 mA)			≤ 5 mA (2 kΩ at 10 V)		
Linear transmission range	unipolar: –1 ... +110 %		bipolar: –110 ... +110 %			
Residual ripple	< 10 mV_{rms}					
General Data						
Transmission error	< 0.1 % full scale					
Temperature coefficient[1)]	< 100 ppm/K					
Zero/Span compensation (switchable)	± 5 % of measuring range					
Cut-off frequency -3 dB (switchable)	8 kHz	100 Hz				
Response time T_{99}	100 µs	7 ms				
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply				
Working voltage[2)] (Basic Insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1					
Protection against electrical shock[2)]	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010-1 up to 300 V AC/DC for overvoltage category II and pollution degree 2 between all circuits					
Ambient temperature	Operation Transport and storage	– 25 °C to + 70 °C – 40 °C to + 85 °C	(– 13 to + 158 °F) (– 40 to + 185 °F)			
Power supply	24 V DC	voltage range 9.6 V ... 31.2 V DC, approx. 0.8 W				
EMC[3)]	EN 61326-1					
Approvals	ATEX IECEx UL	DEMKO 16 ATEX 1685X IECEx UL 16.0055X E478692 USA/Canada	⟨Ex⟩II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Class I, Division 2 Groups A, B, C, D T4			
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715					
Weight	Approx. 70 g					

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Input
2	-	Input
3		N.C.
4		N.C.
5	+	Output
6	-	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	-	Power supply (connected to In-Rail-Bus C)

Connection

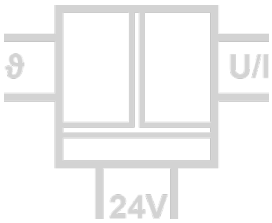
Captive plus-minus clamp screws
Wire cross-section 0.5 ... 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	Order No.
Shunt/mV Isolation Amplifier, calibrated range selection	DS 75000 S
Shunt/mV Isolation Amplifier, calibrated range selection, In-Rail-Bus for power supply	DS 75000 B

Temperature Transmitter
DT 45000

for Pt, Ni, KTY,TC, R, Potentiometer and mV Sensors,
programmable via USB and DIP switch



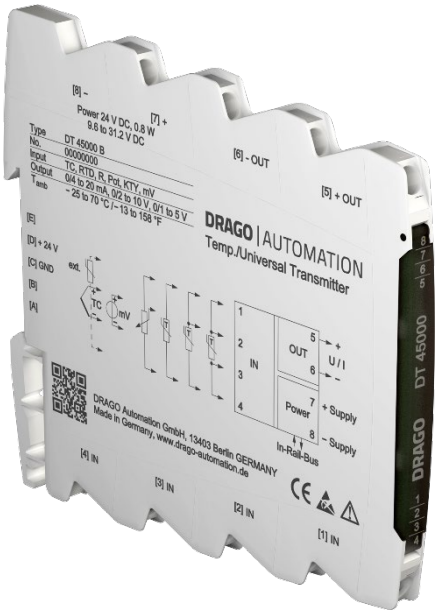
The programmable Temperature Transmitter DT 45000 is used for measure industrial process signals. It converts Pt, Ni, KTY or TC sensor signals as well as poti, resistor and mV signals to isolated standard signals.

Due to the easy configuration via USB interface and the calibrated range selection per DIP switch the Transmitter is suitable for flexible use.

The Commissioning Function, switchable on front panel, generates an output reference signal for testing and adjusting of the downstream signal path. With der Teach-In Function the measuring range limits can be set during operation.

With the USB Programming-Kit DRAGOset the Transmitter can be configured and all data can be stored by a PC. In mode of programming no additionally auxiliary power is required.

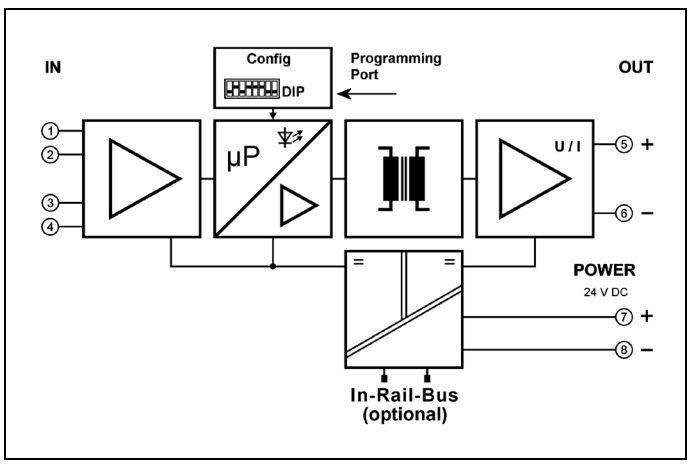
The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. The status of power supply and sensor connection will be displayed by a LED on front.



- **Universal Measuring Input**
  for all common industrial sensor signals
- **Easy configurable via USB or DIP switches**
  complete programmable via USB interface
  or selectable per DIP switch
- **Switchable Service Functions**
  Simulation and Teach-In Function for an easy commissioning
- **3-port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)

Zone 2

Block Diagram



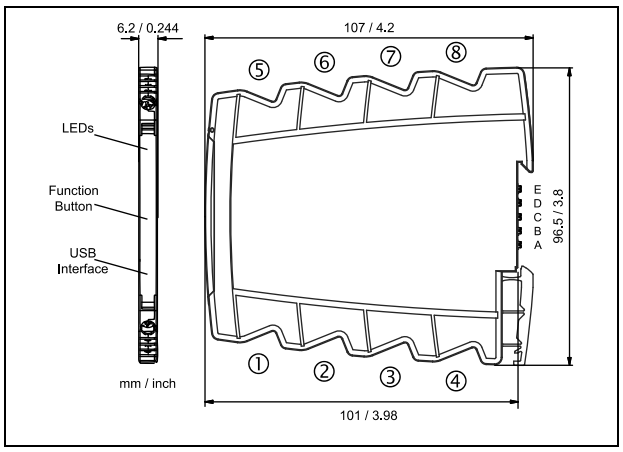
6 mm

Technical Data

Input			
Sensor	**Type**	**Span min.**	**Measuring error**
Pt	Pt100, Pt200, Pt500, Pt1000	10 K	< 0.1 K + 0.05 % meas. val.
Ni	Ni100, Ni200, Ni500, Ni1000	10 K	< 0.2 K + 0.05 % meas. val.
KTY	KTY, 29 types	25 K	< 0.3 K + 0.05 % meas. val.
Resistor	0 to 5000 Ω	100 Ω	< 0.1 Ω + 0.02 % meas. val.
Sensor current / connection	0.2 mA / 4-wire, 3-wire, 2-wire		
Cable resistance	< 100 Ω per wire, manual compensation for 2-wire connection programmable		
Thermocouples	E, J, K, L, N, R, S, T, U / B, C, D	50 K / 100 K	< 0.3 K + 0.08 % meas. val.
Cold junction compensation	Internal, external, uncompensated, manual setting	Error of Cold junction internal < 1.5 K	
mV Input	±100 mV ±1000 mV	5 mV / 50 mV	< 50 µV + 0.02 % meas. val.
Potentiometer	100 Ω to 50 kΩ	10 %	< 0.05 %
Output	**Current**	**Voltage**	
Output signal	0/2 … 10 mA 0/4 … 20 mA	0/1 … 5 V 0/2 … 10 V	
Load	≤ 12 V (600 Ω at 20 mA)	≤ 5 mA (2 kΩ at 10 V)	
Residual ripple	< 10 mV_{rms}		
Transfer range	0 to 102.5 % (3.8 to 20.5 mA at output 4 to 20 mA)	Transfer characteristic rising / falling	
Error signal	Sensor/wire break, error signal programmable		
General data			
Transmission error	< 0.1 % full scale	Temperature coefficient[1] < 100 ppm/K	
Sampling rate / Response time T_{99}	4/s / 250 ms		
Test voltage	3 kV AC, 50 Hz, 1 min. Input against output against power supply		
Working voltage[2] (basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1		
Protection against electric shocke[2]	Protective Separation by reinforced insulation acc. to EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between input and output and power supply		
Ambient temperature	Operation -25 °C to +70 °C (-13 to +158 °F) Transport and storage -40 °C to +85 °C (-40 to +185 °F)		
Power supply	24 V DC voltage range 9.6 V to 31.2 V DC, approx. 0.8 W		
EMC[3]	EN 61326-1		
Approvals	ATEX DEMKO 16 ATEX 1685X ⟨Ex⟩II 3 G Ex nA IIC T4 Gc IECEx IECEx UL 16.0055X Ex nA IIC T4 Gc UL E478692 USA/Canada Class I, Division 2 Groups A, B, C, D T4		
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715		
Weight	Approx. 70 g		

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Terminal assignments

1		Input
2		Input
3		Input
4		Input
5	+	Output
6	−	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	−	Power supply (connected to In-Rail-Bus C)

Connection

Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

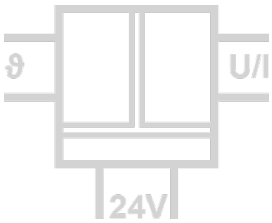
Subject to change!

Product line

Device	Order No.
Temperature Transmitter, programmable via USB and DIP switch	DT 45000 S
Temperature Transmitter, programmable via USB and DIP switch, In-Rail-Bus for power supply	DT 45000 B

Pt Temperature Transmitter DT 45200

Temperature Measuring with Pt Sensors, configurable via DIP Switch or USB



The Pt Temperature Transmitter DT 45200 is used for measure industrial process signals. It converts Pt sensor signals to isolated standard signals.

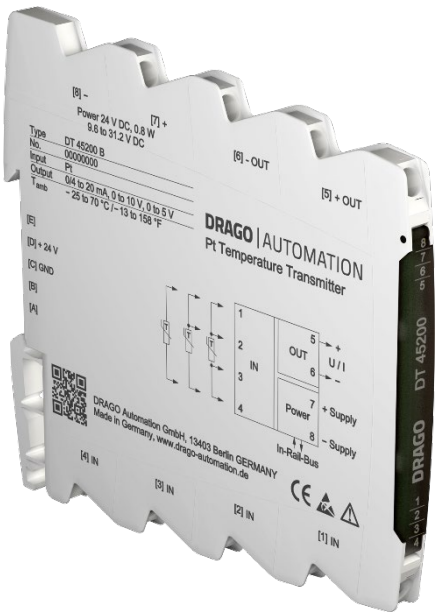
Due to the easy setting of the calibrated measuring ranges via DIP switch the Transmitter is suitable for flexible use.

With the USB Programming-Kit DRAGOset the Transmitter can be configured and all data can be stored by a PC. In mode of programming no additionally auxiliary power is required.

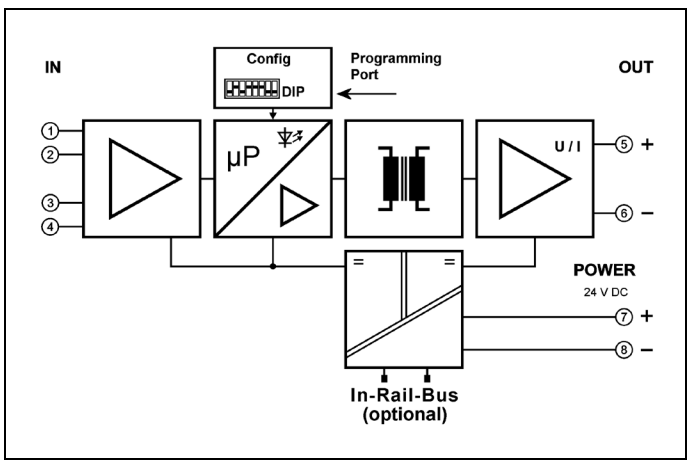
The Commissioning Function, switchable on front panel, generates an output reference signal for testing and adjusting of the downstream signal path.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. The status of power supply and sensor connection will be displayed by a LED on front.

- **Measuring input for all Pt temperature sensors**
  more than 1200 standard ranges ready to use
- **Easy configurable via DIP switches**
  or via USB interface without auxiliary power supply
- **Switchable service functions**
  for an easy commissioning
- **3-port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block Diagram



DRAGO Automation GmbH, Waldstr. 86-90, 13403 Berlin, GERMANY

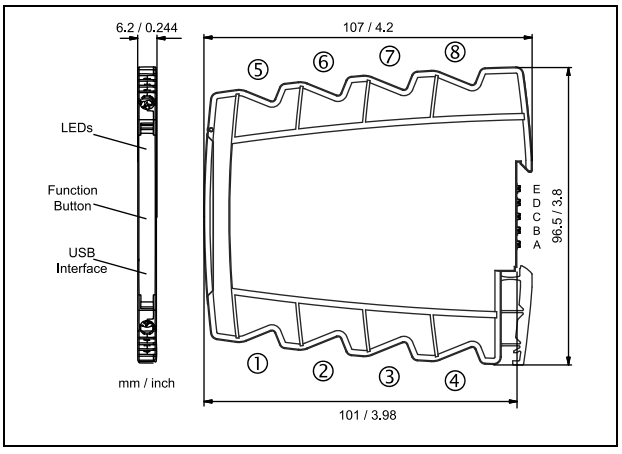
6 mm

Technical Data

Input				
Sensor	Pt100, Pt200, Pt500, Pt1000, Pt2000 JPt50, JPt100 (TK3916)	acc. IEC 60751 acc. JIS C 1604		
Measuring range	-200 to +850 °C in calibrated steps of 25 °C, configurable via DIP switch or USB interface			
Measuring span min.	25 K			
Measuring error	< 0.1 K + 0,05 % meas. val.			
Sensor connection	4-wire, 3-wire, 2-wire			
Sensor current	0.2 mA			
Cable resistance	< 100 Ω per wire at 4-wire and 3-wire connection			
Output	**Current**		**Voltage**	
Output signal	0 … 20 mA	4 … 20 mA	0 … 5 V	0 … 10 V
Load	≤ 12 V (600 Ω at 20 mA)		≤ 5 mA (2 kΩ at 10 V)	
Residual ripple	< 10 mV_{rms}			
Transfer range	0 to 102.5 % (3.8 to 20.5 mA at output 4 to 20 mA)		Transfer characteristic rising / falling	
Error signal	Sensor/wire break, Error signal programmable			
General data				
Transmission error	< 0.1 % full scale			
Temperature coefficient[1]	< 100 ppm/K			
Sampling rate / Response time T_{99}	4/s / 250 ms			
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply		
Working voltage[2] (basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1			
Protection against electric shocke[2]	Protective Separation by reinforced insulation acc. to EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between input and output and power supply			
Ambient temperature	Operation -25 °C to +70 °C (-13 to +158 °F)	Transport and storage -40 °C to +85 °C (-40 to +185 °F)		
Power supply	24 V DC	voltage range 9.6 V to 31.2 V DC,	approx. 0.8 W	
EMC[3]	EN 61326-1			
Approvals	ATEX IECEx UL	DEMKO 16 ATEX 1685X IECEx UL 16.0055X E478692 USA/Canada	Ⓔx II 3 G Ex nA IIC T4 Gc Ex nA IIC T4 Gc Class I, Division 2 Groups A, B, C, D T4	
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 70 g			

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Input Pt
2	+	Input 3/4-Leiter
3	–	Input 4-Leiter
4	–	Input Pt
5	+	Output
6	–	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	–	Power supply (connected to In-Rail-Bus C)

Connection

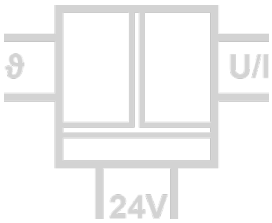
Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	Order No.
Pt Temperature Transmitter, configurable via DIP switch and USB	DT 45200 S
Pt Temperature Transmitter, configurable via DIP switch and USB, In-Rail-Bus for power supply	DT 45200 B

Ni Temperature Transmitter DT 45400

Temperature Measuring with Ni Sensors, configurable via DIP Switch or USB



The Ni Temperature Transmitter DT 45400 is used for measure industrial process signals. It converts Ni sensor signals to isolated standard signals.

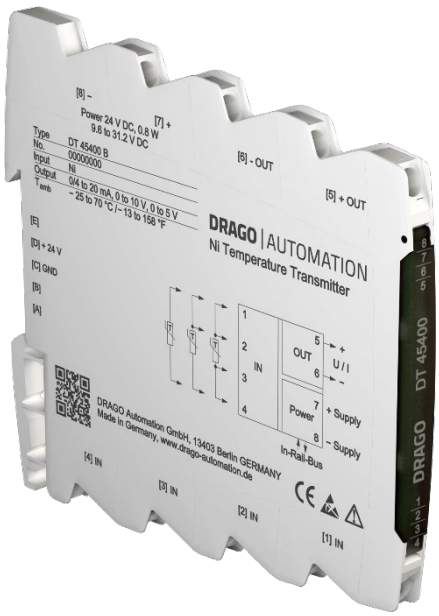
Due to the easy setting of the calibrated measuring ranges via DIP switch the Transmitter is suitable for flexible use.

With the USB Programming-Kit DRAGOset the Transmitter can be configured and all data can be stored by a PC. In mode of programming no additionally auxiliary power is required.

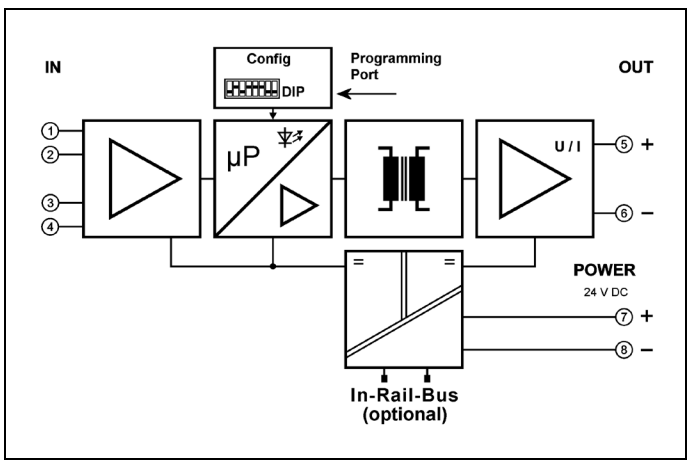
The Commissioning Function, switchable on front panel, generates an output reference signal for testing and adjusting of the downstream signal path.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. The status of power supply and sensor connection will be displayed by a LED on front.

- **Measuring input for all Ni temperature sensors**
  calibrated standard measuring ranges ready to use
- **Easy configurable via DIP switches**
  or via USB interface without auxiliary power supply
- **Switchable service functions**
  for an easy commissioning
- **3-port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block Diagram



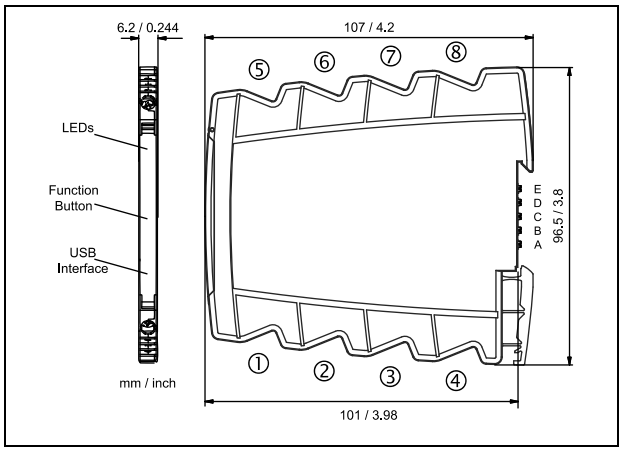
6 mm

Technical Data

Input				
Sensor	Ni100, Ni200, Ni500, Ni1000 DIN 43760 (TK6180) Ni120 (TK6720), Ni1000 (TK5000), Ni1000 (TK6370)			
Measuring range	-50 to +250 °C in calibrated steps of 25 °C, configurable via DIP switch or USB interface			
Measuring span min.	25 K			
Measuring error	< 0.2 K + 0,05 % meas. val.			
Sensor connection	4-wire, 3-wire, 2-wire			
Sensor current	0.2 mA			
Cable resistance	< 100 Ω per wire at 4-wire and 3-wire connection			
Output	Current		Voltage	
Output signal	0 … 20 mA	4 … 20 mA	0 … 5 V	0 … 10 V
Load	≤ 12 V (600 Ω at 20 mA)		≤ 5 mA (2 kΩ at 10 V)	
Residual ripple	< 10 mV_{rms}			
Transfer range	0 to 102.5 % (3.8 to 20.5 mA at output 4 to 20 mA)		Transfer characteristic rising / falling	
Error signal	Sensor/wire break, Error signal programmable			
General data				
Transmission error	< 0.1 % full scale			
Temperature coefficient[1]	< 100 ppm/K			
Sampling rate / Response time T_{99}	4/s / 250 ms			
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply		
Working voltage[2] (basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1			
Protection against electric shocke[2]	Protective Separation by reinforced insulation acc. to EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between input and output and power supply			
Ambient temperature	Operation -25 °C to +70 °C (-13 to +158 °F)	Transport and storage -40 °C to +85 °C (-40 to +185 °F)		
Power supply	24 V DC	voltage range 9.6 V to 31.2 V DC, approx. 0.8 W		
EMC[3]	EN 61326-1			
Approvals	ATEX	DEMKO 16 ATEX 1685X	Ⓔx II 3 G Ex nA IIC T4 Gc	
	IECEx	IECEx UL 16.0055X	Ex nA IIC T4 Gc	
	UL	E478692 USA/Canada	Class I, Division 2 Groups A, B, C, D T4	
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 70 g			

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Subject to change!

Terminal assignments

1	+	Input Ni
2	+	Input 3/4-Leiter
3	–	Input 4-Leiter
4	–	Input Ni
5	+	Output
6	–	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	–	Power supply (connected to In-Rail-Bus C)

Connection

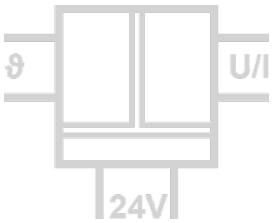
Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Product line

Device	Order No.
Ni Temperature Transmitter, configurable via DIP switch and USB	DT 45400 S
Ni Temperature Transmitter, configurable via DIP switch and USB, In-Rail-Bus for power supply	DT 45400 B

KTY Temperature Transmitter DT 45600

Temperature Measuring with KTY Sensors, configurable via DIP Switch or USB



The KTY Temperature Transmitter DT 45600 is used for measure industrial process signals. It converts KTY sensor signals to isolated standard signals.

Due to the easy setting of the calibrated measuring ranges via DIP switch the Transmitter is suitable for flexible use.

With the USB Programming-Kit DRAGOset the Transmitter can be configured and all data can be stored by a PC. In mode of programming no additionally auxiliary power is required.

The Commissioning Function, switchable on front panel, generates an output reference signal for testing and adjusting of the downstream signal path.

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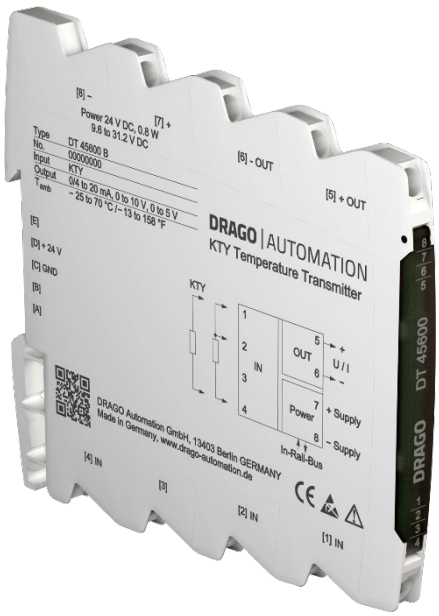
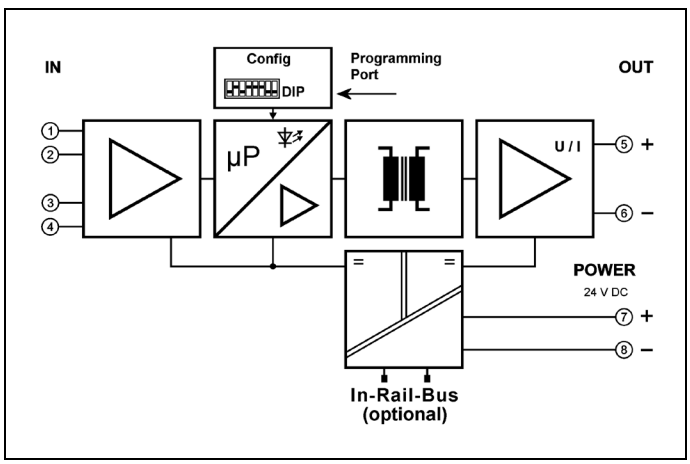
- **Measuring input for all KTY temperature sensors**
  calibrated standard measuring ranges, ready to use
- **Easy configurable via DIP switches**
  or via USB interface without auxiliary power supply
- **Switchable service functions**
  for an easy commissioning
- **3-port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **5 Years Warranty**
  Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block Diagram



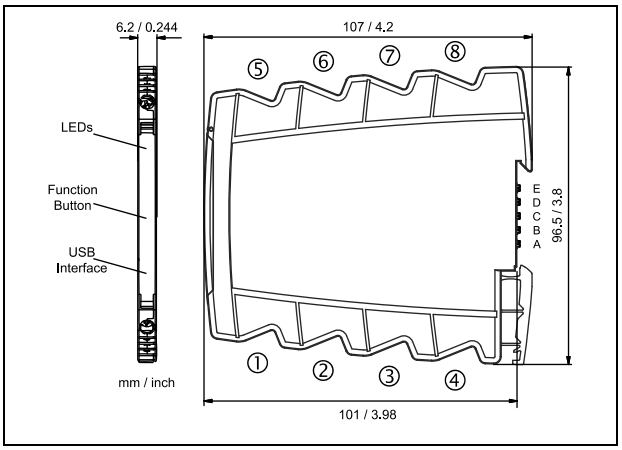
6 mm

Technical Data

Input				
Sensor	KT100, KT110, KT130, KT210, KT230, KTY10-5, KTY10-6, KTY10-62, KTY10-7, KTY11-5, KTY11-6, KTY11-7, TY13-5, KTY13-6, KTY13-7, KTY16-6, KTY19-6M, KTY19-6Z, KTY21-5, KTY21-6, KTY21-7, KTY23-5, KTY23-6, KTY23-7, KTY81-110, KTY81-120, KTY81-121, KTY81-122, KTY81-210, KTY81-220, KTY81-221, KTY81-222, KTY81-250, KTY81-251, KTY81-252, KTY82-110, KTY82-120, KTY82-121, KTY82-122, KTY82-150, KTY82-151, KTY82-152, KTY82-210, KTY82-220, KTY82-221, KTY82-222, KTY82-250, KTY82-251, KTY82-252, KTY83-110, KTY83-120, KTY83-121, KTY83-122, KTY83-150, KTY83-151, KTY83-152, KTY84-130, KTY84-150, KTY84-151, KTY84-152, ST-13, ST-15, ST-16, ST-20M, ST-20Z			
Messbereich	calibrated steps of 25 °C in complete sensor measuring ranges, configurable via DIP switch or USB interface			
Measuring span min.	25 K			
Measuring error	< 0.3 K + 0,05 % meas. val.			
Sensor connection	3-wire, 2-wire			
Sensor current	0,2 mA			
Cable resistance	< 100 Ω per wire at 3-wire connection			
Output	**Current**		**Voltage**	
Output signal	0 … 20 mA	4 … 20 mA	0 … 5 V	0 … 10 V
Load	≤ 12 V (600 Ω at 20 mA)		≤ 5 mA (2 kΩ at 10 V)	
Residual ripple	< 10 mV_{rms}			
Transfer range	0 to 102.5 % (3.8 to 20.5 mA at output 4 to 20 mA)		Transfer characteristic rising / falling	
Error signal	Sensor/wire break, Error signal programmable			
General data				
Transmission error	< 0.1 % full scale			
Temperature coefficient[1]	< 100 ppm/K			
Sampling rate / Response time T_{99}	4/s / 250 ms			
Test voltage	3 kV AC, 50 Hz, 1 min.	Input against output against power supply		
Working voltage[2] (basic insulation)	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010-1			
Protection against electric shocke[2]	Protective Separation by reinforced insulation acc. to EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between input and output and power supply			
Ambient temperature	Operation -25 °C to +70 °C (-13 to +158 °F)	Transport and storage -40 °C to +85 °C (-40 to +185 °F)		
Power supply	24 V DC	voltage range 9.6 V to 31.2 V DC,	approx. 0.8 W	
EMC[3]	EN 61326-1			
Approvals	ATEX	DEMKO 16 ATEX 1685X	⟨Ex⟩ II 3 G Ex nA IIC T4 Gc	
	IECEx	IECEx UL 16.0055X	Ex nA IIC T4 Gc	
	UL	E478692 USA/Canada	Class I, Division 2 Groups A, B, C, D T4	
Construction	6.2 mm (0.244") housing, protection class IP 20, mounting on 35 mm DIN rail acc. to EN 60715			
Weight	Approx. 70 g			

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C
2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.
3) Minor deviations possible during interference

Dimensions



Terminal assignments

1	+	Input KTY
2	+	Input 3-wire
3		
4	−	Input KTY
5	+	Output
6	−	Output
7	+	Power supply (connected to In-Rail-Bus D)
8	−	Power supply (connected to In-Rail-Bus C)

Connection

Captive plus-minus clamp screws
Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

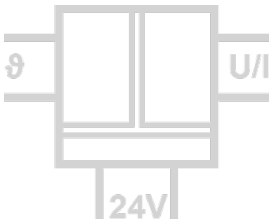
Product line

Device	Order No.
KTY Temperature Transmitter, configurable via DIP switch and USB	DT 45600 S
KTY Temperature Transmitter, configurable via DIP switch and USB, In-Rail-Bus for power supply	DT 45600 B

Subject to change!

TC Temperature Transmitter DT 45800

Temperature Measuring with Thermocouple Sensors, configurable via DIP Switch or USB



The TC Temperature Transmitter DT 45800 is used for measure industrial process signals. It converts Thermocouple sensor signals to isolated standard signals.

Due to the easy setting of the calibrated measuring ranges via DIP switch the Transmitter is suitable for flexible use.

With the USB Programming-Kit DRAGOset the Transmitter can be configured and all data can be stored by a PC. In mode of programming no additionally auxiliary power is required.

The Commissioning Function, switchable on front panel, generates an output reference signal for testing and adjusting of the downstream signal path.

The auxiliary power can be supplied via the connection terminals or via the optional In-Rail-Bus connector. The status of power supply and sensor connection will be displayed by a LED on front.

- **Measuring input for all TC temperature sensors**
  more than 1800 standard ranges ready to use
- **Easy configurable via DIP switches**
  or via USB interface without auxiliary power supply
- **Switchable service functions**
  for an easy commissioning
- **3-port isolation**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **Extremely slim design**
  6.2 mm slim housing for a simple and space saving DIN rail mounting
- **Optional In-Rail-Bus mounting rail connector**
  allows for fast and economical installation
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
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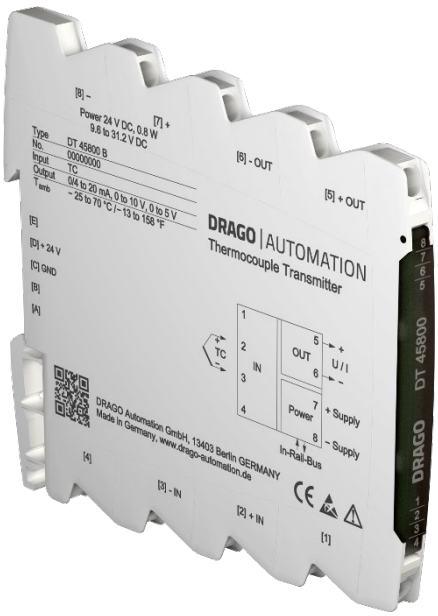
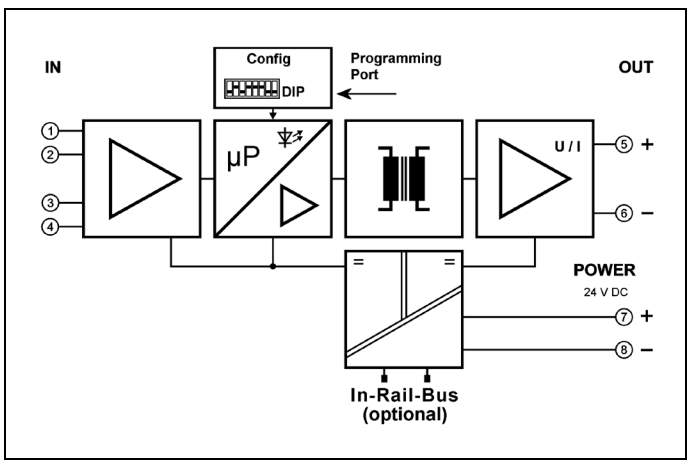


Block Diagram



6mm

Technical Data

Input					
Thermocouple	Sensor	Standard	Measuring range	Span min.	Measuring error
Type K	NiCr-Ni	IEC 584	-200 to +1350 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type J	Fe-CuNi	IEC 584	-200 to +1200 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type A	W5Re-W20Re	GOST 8.585	0 to +2500 °C	100 K	< 0.3 K + 0.08 % meas. Val.
Type B	Pt30Rh-Pt6Rh	IEC 584	+250 to +1800 °C	100 K	< 0.3 K + 0.08 % meas. Val.
Type C	W5Re-W26Re	ASTM E988	0 to +2300 °C	100 K	< 0.3 K + 0.08 % meas. Val.
Type D	W3Re-W25Re	ASTM E988	0 to +2300 °C	100 K	< 0.3 K + 0.08 % meas. Val.
Type E	NiCr-CuNi	IEC 584	-200 to +1000 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type L	Fe-CuNi	DIN 43710	-200 to +900 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type N	NiCrSi-NiSi	IEC 584	-200 to +1300 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type R	Pt13Rh-Pt	IEC 584	-50 to +1700 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type S	Pt10Rh-Pt	IEC 584	-50 to +1700 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type T	Cu-CuNi	IEC 584	-200 to +400 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Type U	Cu-CuNi	DIN 43710	-200 to +600 °C	50 K	< 0.3 K + 0.08 % meas. Val.
Cold junction compensation	Internal / OFF		Error of Cold junction compensation < 1.5 K		

Output	**Current**		**Voltage**	
Output signal	0 to 20 mA	4 to 20 mA	0 to 5 V	0 to 10 V
Load	≤ 12 V (600 Ω at 20 mA)		≤ 5 mA (2 kΩ at 10 V)	
Residual ripple	< 10 mV_{rms}			
Transfer range	0 to 102.5 % (3.8 to 20.5 mA at output 4 to 20 mA)		Transfer characteristic rising / falling	
Error signal	Sensor/wire break, error signal programmable			

General data			
Transmission error	< 0.1 % full scale		Temperature coefficient[1] < 100 ppm/K
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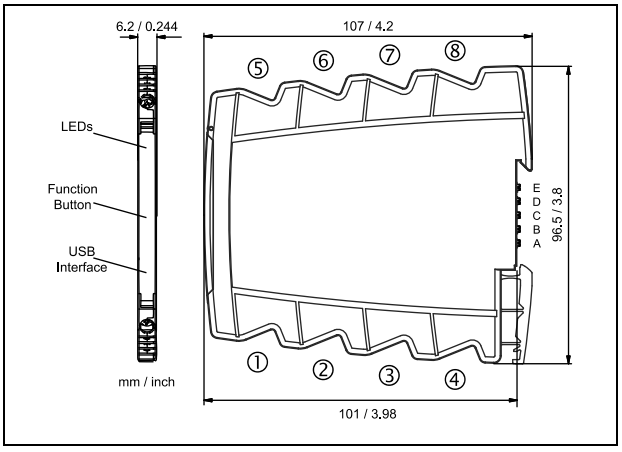

Terminal assignments

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2	+ Input TC
3	– Input TC
4	
5	+ Output
6	– Output
7	+ Power supply (connected to In-Rail-Bus D)
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Wire cross-section 0.5 … 2.5 mm^2 / AWG 20-14
Stripped length 8 mm / 0.3 in
Screw terminal torque 0.6 Nm / 5 lbf in
Optional power connection via In-Rail-Bus (see accessories)

Subject to change!

Product line

Device	Order No.
TC Temperature Transmitter, configurable via DIP switch and USB	DT 45800 S
TC Temperature Transmitter, configurable via DIP switch and USB, In-Rail-Bus for power supply	DT 45800 B

Unsere Leistungen – Ihr Vorteil

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- Made in Germany

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