Loop-Powered Isolator DH 18

Separation Of 0(4) ... 20 mA Standard Signals

With its introduction into the *Tiny Snap* Series of the Loop-Powered Isolator DH 18, DRAGO has further expanded its product offerings in the area of compact and economical interface technology components.

The loop-powered isolator DH 18 is used for the electrical isolation and processing of 0(4) ... 20 mA standard current signals. Its high level of reliability, extremely compact form, and cost optimized design make the DH 18 the first choice in its class!

Numerous sensible details: For example, because of its extremely small installation depth of only 60 mm, the DH 18 can also be installed in economical standard terminal boxes such as those frequently used for decentralized measuring points. The slim housing with 11.2 mm wide for one or two channels saves significant space on the DIN-rail.

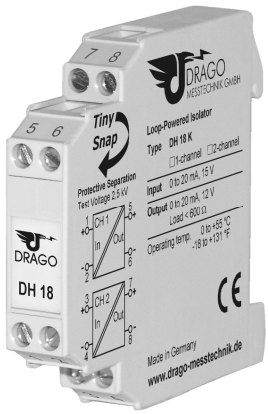
Analog signal processing utilizing the new *APT* technology guarantees precise measured values with short response times and outstanding signal reproduction at the output – and all this with unparallel sturdiness and long-term stability of the insulation paths under tough industrial conditions.

To protect both maintenance personnel as well as downstream equipment against impermissibly high voltages, the DH 18 offers Protective Separation in according to EN 61140. The DH 18 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.

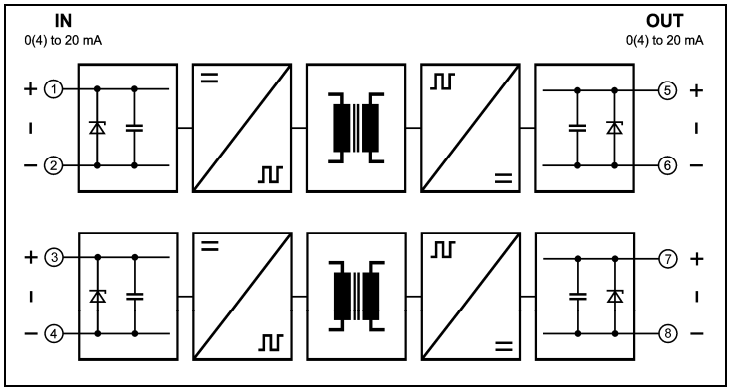
5 Years Warranty
Defects occurring within 5 years from delivery are remedied free of charge at our plant (carriage and insurance paid by sender).

- **1- and 2-channel versions**
  Economical separation for standard applications
- **Only 60 mm installation depth, 11.2 mm wide**
  Can be installed in economical standard terminal boxes
- **Galvanic isolation across input and output**
  Protection against erroneous measurements due to parasitic voltages or ground loops
- **High reliability and long-term stability**
  New *APT* technology for signal processing
- **Protective Separation acc. to EN 61140**
  Protects service personnel and downstream devices against impermissibly high voltage
- **No power supply required**
  Saving costs since wiring is reduced and line influences are omitted
- **5 Years Warranty**

APT TECHNOLOGY



Block diagram



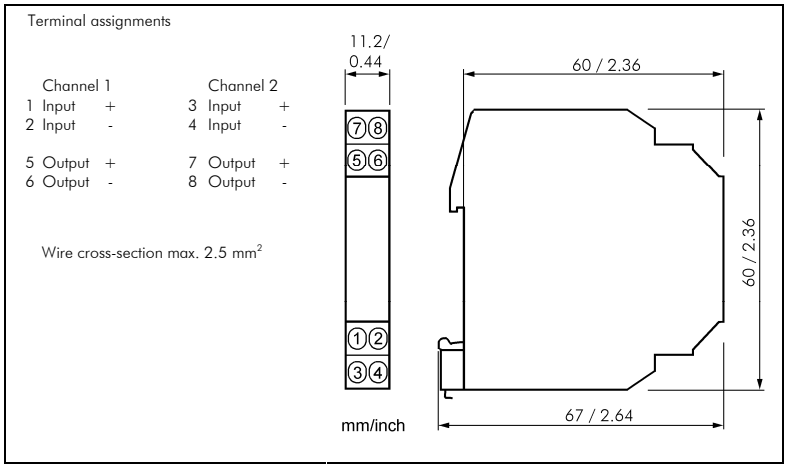
DRAGO MESSTECHNIK GMBH

Technical Data

Input	
Input signal	0(4) ... 20 mA
Operating current	< 100 µA
Voltage drop	< 3 V
Overload	≤ 50 mA, 15 V
Output	
Output signal	0(4) ... 20 mA
Load	< 600 Ω
Response time	Approx. 5 ms @ 500 Ω load
Ripple	< 10 mV_{rms}
General Data	
Transmission error	< 0.1 % of final value
Load error	< 0.05 % of measured value / 100 Ω load
Temperature coefficient[1)]	< 0.004 %/K of measured value / 100 Ω load
Test voltage	2.5 kV, 50 Hz between all circuits
Working voltage (Basic Insulation)[2)]	Up to 600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010 -1 between all circuits.
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 0 to +55 °C (+32 to +131 °F) Transport and storage -25 to +80 °C (-13 to +176 °F)
EMC[3)]	EN 61326 -1
Construction	11.2 mm housing, protection class: IP 20
Weight	Approx. 50 g

1) Average TC in specified operating temperature range
2) As far as relevant the standards and rules mentioned above are considered by development and production of our devices. In addition relevant assembly rules are to be considered by installation of our devices in other equipments. For applications with high working voltages, take measures to prevent accidental contact and make sure that there is sufficient distance or insulation between adjacent situated devices.
3) Minor deviations possible during interference

Dimensions



Product line

Devices			Order No.
Loop-powered isolator	DH 18 K	1-channel	DH 18 K - 1
Loop-powered isolator	DH 18 K	2-channel	DH 18 K - 2

Subject to change!