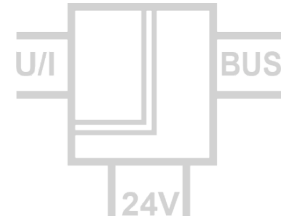


Standard Signal AI Module DMB 96100

Measuring input for Standard Signals, Modbus RTU



The Modbus Standard Signal AI Module is used for electrical isolated conversion of unipolar standard voltage and current signals. A transmitter power supply is provided for the operation of 2-wire and 3-wire transmitters.

All parameters can be set via the Modbus RTU interface and via a programming socket behind the front panel. A free PC configuration software also offers extended setting options and extensive diagnostic functions during operation. A subset of the most common settings is also available via DIP switches.

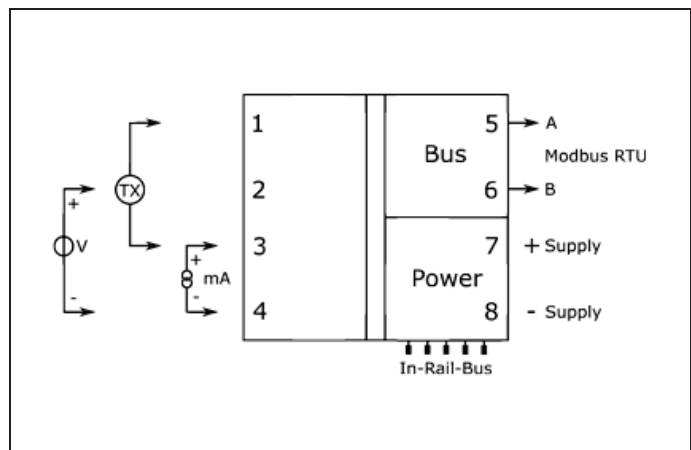
The measuring value can be read over the Modbus RTU (RS485) interface.

The 2-way isolation guarantees reliable decoupling of the sensor circuit from the processing circuit and the auxiliary power circuit. Auxiliary power and Modbus RTU can be connected via the connection terminals or via the In-Rail-Bus connector (see accessories).

- **Input for industrial standard signals**
current and voltage signals and transmitter supply
- **In-Rail-Bus Connector for Modbus and Power Supply**
allows fast and economical installation
- **Protective Separation up to 300 V AC/DC**
test voltage 3 kV
- **Easy configurable**
via DIP switches or Modbus interface
- **Freely scalable**
up to 247 DRAGO modules in one Modbus segment
- **Extremely slim design**
6.2 mm slim housing for a simple and space saving DIN rail mounting
- **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



Technical Data

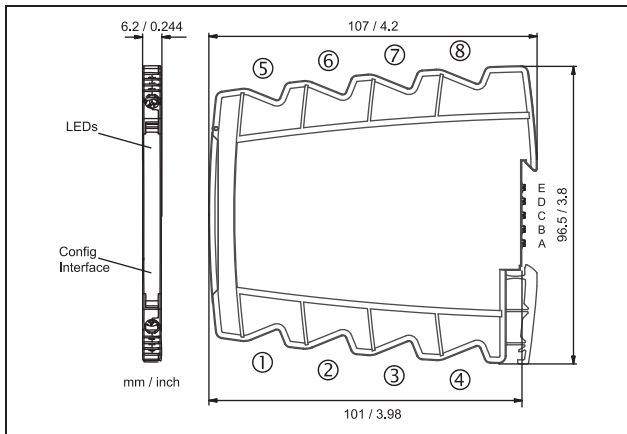
| Input | Voltage | Current |
|--|---|------------|
| Input signal | 0 to 10 V | 0 to 20 mA |
| Input resistance | ≥ 100 kΩ | ≤ 25 Ω |
| Overload | ≤ 30 V | ≤ 50 mA |
| Transmitter supply | 16 V (open circuit/short circuit < 22 V / 35 mA) | |
| Modbus | | |
| Protocol | Modbus RTU (RS485) | |
| Module addressing | 1 to 247 | |
| Response delay | 1 to 1000 ms | |
| Baud rate | 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 | |
| Configuration | Parity: Even, Odd, None 2 stop bits, None 1 stop bit | |
| Connectivity | Up to 247 DRAGO Modbus devices without additional repeater (1/8 Load) | |
| Indication | Yellow LED on front panel | |
| Measuring range | 0 to 115 % | |
| General Data | | |
| Measuring error | < 0.1 % full scale | |
| Temperature coefficient ¹⁾ | < 100 ppm/K | |
| Resolution | 14 bit | |
| Sampling rate | up to 100/s (a moving average filter with a width of 10 samples is applied internal) | |
| Test voltage | 3 kV AC, 50 Hz, 1 min. Input against Modbus/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 dangerous body currents ²⁾ | Protective Separation by reinforced insulation acc. to DIN EN 61010-1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between input and Modbus/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 16.8 V to 31.2 V DC, max. 1.3 W | |
| EMC ³⁾ | EN 61326-1 | |
| Construction | 6.2 mm (0.244") housing, protection type: IP 20, mounting on 35 mm DIN rail acc. to EN 60715 | |
| Weight | Approx. 70 g | |

1) Average TC related to full scale 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 Tx | |
| 2 | + Input U | |
| 3 | + Input I | |
| 4 | - Input GND | |
| 5 | Modbus A | (connected to In-Rail-Bus A) |
| 6 | Modbus B | (connected to In-Rail-Bus B) |
| 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 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. |
|----------------------------------|-------------|
| Modbus Standard Signal AI Module | DMB 96100 B |