

4-channel Analog Input



4–20 mA with HART®

801-HI-04

- ◆ power supply for 4–20 mA loop powered transmitters
- ◆ short and break detection
- ◆ isolation, input to bus and input to power
- ◆ common return for all inputs
- ◆ 4-channel, EEx ia IIC
- ◆ transmission of HART® frames

MODULE SPECIFICATION

See also System Specification

INPUT

Input current 4 to 20 mA
 Range 0 to 24 mA
 Transmitter supply > 15 V (20 mA)
 Internal current limitation 24 to 26 mA
 Input impedance 240 ohm
 Residual ripple < 100 mV
 Short-circuit detection < 5 V
 Line-break detection < 2 mA

EXPLOSION PROTECTION

Certificate number PTB 01 ATEX 2137X
 Max. short-circuit current $I_0 = 93$ mA
 Voltage $U_0 = 22.1$ V
 Performance $P_0 = 403$ mW
 External inductance $L_0 = 1.78$ mH
 External capacitance $C_0 = 100$ nF

DIAGNOSTIC INFORMATION

System / Module power on LED green / red
 Line break or short circuit LED 1 to 4, red

Via fieldbus

Break, short per channel
 Over/under-range per channel
 Simulation per channel
 Communication, hardware for each I/O module

CHARACTERISTICS AT RATED CONDITIONS

Accuracy incl. nonlinearity < 0.1 %
 Digital Accuracy 14 bit
 Linearity < 0.05 %
 Temperature effect < 0.05 % / 10 K
 Response time 50 ms (10% -> 90%)
 50/60 Hz filter > 30 dB
 Damping per software PT1
 Total power consumption < 2.6 W (20 mA)

