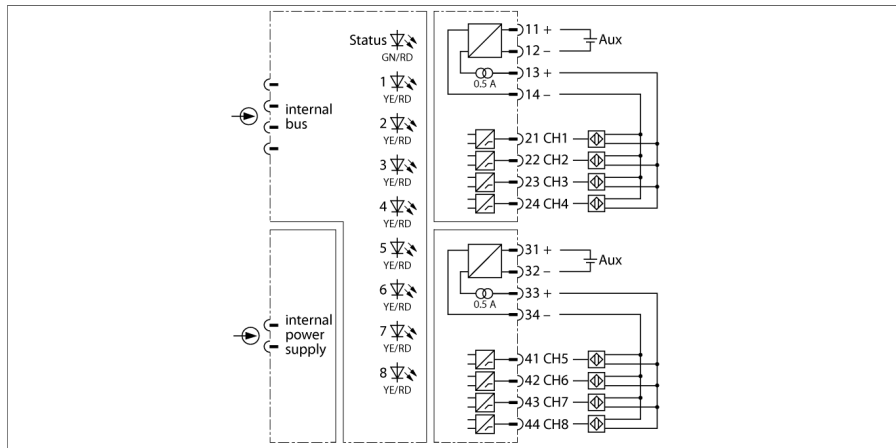


excom I/O System

Input Module, Digital, 8-channel

DI80-N



The digital input module DI80-N serves for connection of eight 3-wire PNP/NPN sensors (IEC 61131, Type 3). The sensors are not powered via the module, but via a reverse-polarity protected auxiliary energy which is fed separately via the terminals to the channels 1 ... 4 (group 1) and 5 ... 8 (group 2). The input groups are galvanically isolated from each other.

The input behaviour is parametrized via the PROFIBUS-DP master. Possible parameters are switching behaviour (PNP or NPN), polarity, substitute value strategy, wire-break monitoring, short-circuit monitoring and flutter monitoring.

Flutter monitoring detects and reports procedurally unusual signal patterns, for example too frequent fluctuation of the input signal between "0" and "1". The occurrence of such signal patterns is an indication of faulty sensors or process-related instabilities.

For each input channel there is a parametrizable monitoring window. With the first signal change of the input signal, the monitoring window is started. If the input signal changes more often within the monitoring window than the configured number of signal changes, this is recognized as a flutter error. If no flutter error is detected within the monitoring window, then the monitoring window is started again with the next signal change.

If a flutter error occurs, the current signal status is entered in the process image and the value status of the signal is set to "invalid". In addition, the diagnostic information "flutter error" is entered and an incoming diagnostic alarm is triggered. The value status and diagnostic information can be evaluated and processed in the user program. If no more fluttering of the input signal has been recognized within the triple monitoring window, the diagnostic entry is removed and an outgoing diagnostic alarm is triggered. The status of the current signal in the process image is set to "valid".

- Input module for 3-wire sensors (NPN and PNP)
- Supply of sensors reverse polarity protected via auxiliary power



Dimensions

Type	DI80-N
ID	6884273
Supply voltage	Via module rack, central power supply module
Power consumption	≤ 1 W
Galvanic isolation	two isolated groups
Number of channels	8
Input circuits	
Auxiliary power	2 × (19.2...30 VDC)
Power dissipation	≤ 1.2 W
Switching frequency	≤ 50 Hz
Short-circuit	< 500 Ω
Wire-break	< 0.2 mA
3-wire input	
0-signal	≤ 5.0 V
1-signal	≥ 11.0 V
Output circuits	
Output current	≤ 500 mA
Short-circuit protection	yes, cyclic
Ex approval acc. to conformity certificate	IECEX TUR 21.0012X
Ex approval acc. to conformity certificate	TÜV 21 ATEX 8643 X
Device designation	Ex II 3 G Ex ec IIC T4 Gc
Displays/Operating elements	
Operational readiness	1 × green/red
State/ Fault	8 × yellow/red
Housing material	Plastic
Connection mode	module, plugged on rack
Protection class	IP20
Ambient temperature	-20...+70 °C
Relative humidity	≤ 93 % at 40 °C acc. to IEC 60068-2-78
Vibration test	Acc. to IEC 60068-2-6
Shock test	Acc. to IEC 60068-2-27
EMC	acc. EN 61326-1 (2013) acc. to Namur NE21 (2012)
MTTF	55 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm
Approvals	ATEX IECEX CE

