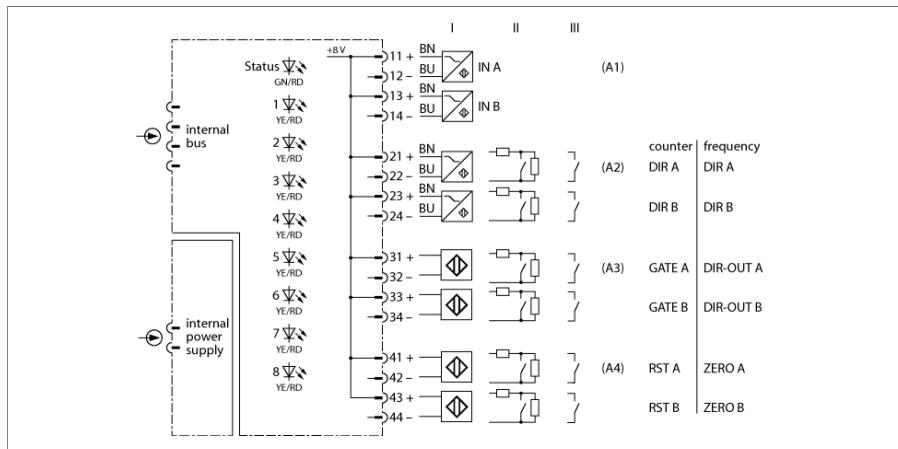


**excom I/O System**  
**Frequency Meter, 2-channel**  
**DF20-N**



The input module DF20-N is equipped with 8 channels acc. to NAMUR, which are grouped together in two blocks. There is one frequency input per block and three control inputs/outputs.

The module can be used as a counter or frequency input module: It is thus suited for pulse counting of binary input signals or frequency measurements of binary pulse sequences of NAMUR sensors.

The counting direction can either be set externally via a control input or internally by setting a parameter. The maximum frequency of one block is 4 kHz; with 2 blocks the frequency is reduced to 2 kHz.

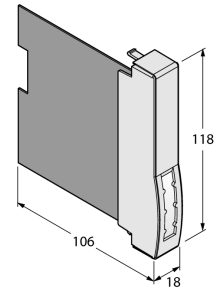
Input and output mode can be adjusted via the PROFIBUS-DP master. Each channel is equipped with parametrizable wire-break/short-circuit monitoring.

■ **Frequency module for the connection of NAMUR sensors**

**excom I/O System**  
**Frequency Meter, 2-channel**  
**DF20-N**

<b>Type designation</b>	DF20-N
Ident no.	6884212
<b>Supply voltage</b>	Via module rack, central power supply module
Power consumption	≤ 1 W
Galvanic isolation	to int. bus and supply circuit
Number of channels	2
<b>Input circuits</b>	acc. to EN 60947-5-6 (NAMUR)
No-load voltage	8 VDC
Short-circuit current	4 mA
Switching threshold on/off	type 1.8 / type 1.4 mA
Switching frequency	≤ 4000 Hz
Short-circuit	< 367 Ω
Wire-break	< 0.2 mA
<b>Measuring accuracy (including linearity, hysteresis and repeatability)</b>	≤ 0.1 % of full scale
<b>Ex approval acc. to conformity certificate</b>	IECEX TUR 21.0012X
Ex approval acc. to conformity certificate	TÜV 21 ATEX 8643 X
Device designation	Ⓢ II 3 G Ex ec IIC T4 Gc
<b>Operational readiness</b>	1 × green/red
State/ Fault	8 × yellow/red
<b>Housing material</b>	Plastic
Connection mode	module, plugged on rack
<b>Protection class</b>	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. to EN 61326-1
MTTF	101 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm
<b>Approvals</b>	Ex-Approval

**Dimensions**



**excom I/O System**  
**Frequency Meter, 2-channel**  
**DF20-N**

**Accessories**

Type code	Ident no.		Dimension drawing
excom-RMD1-BK	100020478	The resistor module prevents wire-break detection and short-circuit detection in digital input modules. For analog input modules, overflow and underflow messages are also suppressed.	