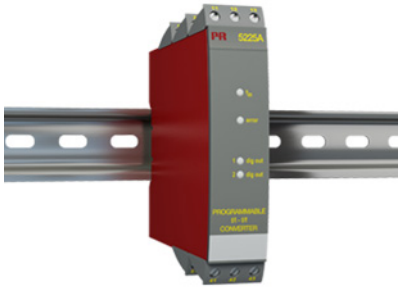
PERFORMANCE MADE SMARTER



Programmable f/I-f/f converter

5225

- Pulse conditioning
- Frequency generator
- Concurrent f/I and f/f function
- Analog current and voltage output
- PNP / NPN output, optional relays
- Programmable by PC and Loop Link

Advanced features

- The 5225 transmitter can be configured with a standard PC and the Loop Link communications unit, or delivered fully configured.

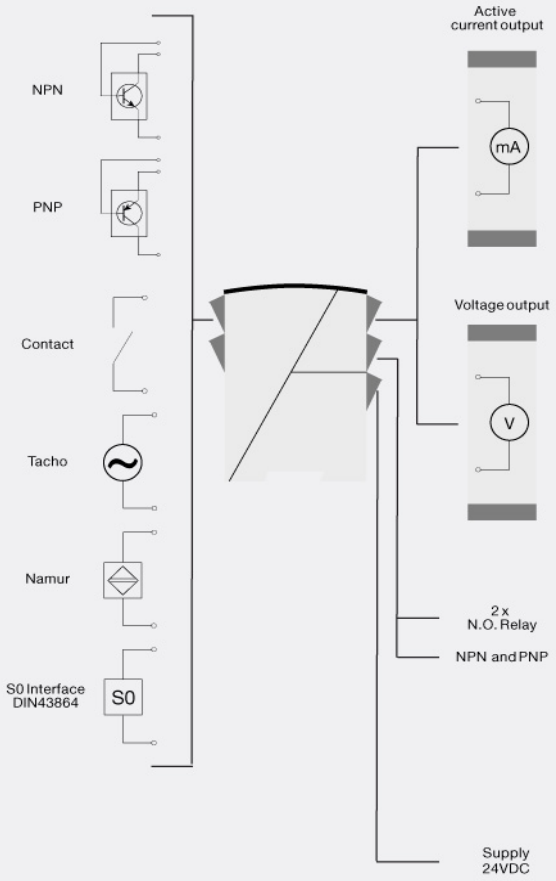
Application

- The f/I function performs frequency to current and voltage conversion.
- The f/f function can be used for pulse division or multiplication and as a buffer collecting fast pulse trains.
- The concurrent f/I and f/f functions enable a scaled digital output signal in conjunction with the analog output.
- The frequency generator function is used as e.g. a time base or clock generator.
- Input and supply polarity reversal protection.
- Programmable digital outputs including NPN, PNP or relay options.

Technical characteristics

- 4 front LEDs, indicating f in active inputs (not NPN), Dig.out.1 (NPN or relay 1) and Dig.out 2 (relay 2) outputs, and a NAMUR input error signal.
- Analog current output can be configured to any current within 0...20 mA range.
- Voltage output range is selectable between 0...10 VDC and 0...1 VDC by use of internal jumpers.

Connections



Order:

Type	Output	
5225	Analog + NPN / PNP	: 1
	Analog + relay output	: 2

Environmental Conditions

Specifications range..... -20°C to +60°C
Calibration temperature..... 20...28°C
Relative humidity..... < 95% RH (non-cond.)
Protection degree..... IP20

Mechanical specifications

Dimensions (HxWxD)..... 109 x 23.5 x 130 mm
Weight approx..... 190 g
DIN rail type..... DIN 46277
Wire size..... 1 x 2.5 mm^2 stranded wire
Screw terminal torque..... 0.5 Nm

Common specifications

Supply
Supply voltage..... 19.2...28.8 VDC

Isolation voltage
PELV/SELV..... IEC 61140

Max. required power..... 3.5 W
Internal consumption..... 1.7 W
Warm-up time..... 30 s
Power-up delay..... 0...999 s
Programming..... Loop Link
Signal / noise ratio..... Min. 60 dB
Response time, analog..... < 60 ms + period
Response time, digital output..... < 50 ms + period
Response time, concurrent f/I and f/f..... < 80 ms + period
Signal dynamics, output..... 16 bit
Effect of supply voltage change..... < ±0.002% of span / %V
Auxiliary voltage: NAMUR supply..... 8.3 VDC ±0.5 VDC / 8 mA
S0 supply..... 17 VDC / 20 mA
NPN / PNP supply..... 17 VDC / 20 mA
Special supply (programmable)..... 5...17 VDC / 20 mA
Temperature coefficient..... < ±0.01% of span / °C
Linearity error..... < 0.1% of span
EMC immunity influence..... < ±0.5%

Input specifications

Common input specifications
Max. offset..... 90% of selected max. frequency

Measurement range..... 0...20 kHz
Min. measurement range..... 0.001 Hz
Low cut-off frequency..... 0.001 Hz
Max. frequency, with input filter ON..... 50 Hz
Min. period time with input filter ON..... 20 ms
Input types..... NAMUR acc. to DIN 19234
Input types..... Tacho
Input types..... NPN / PNP
Input types..... TTL
Input types..... S0 acc. to DIN 43864

Output specifications

Current output
Signal range..... 0...20 mA
Min. signal range..... 5 mA
Load (@ current output)..... ≤ 600 Ω
Load stability..... ≤0.01% of span / 100 Ω
Current limit..... < 23 mA

Common output specifications
Updating time..... 20 ms
Updating time..... 40 ms for concurrent f/I and f/f

Relay output
Max. switching frequency..... 20 Hz
Isolation, test / working..... 3.75 kVAC / 250 VAC
Max. voltage..... 250 VRMS
Max. current..... 2 AAC
Max. AC power..... 500 VA
Max. load at 24 VDC..... 1 A

Voltage output through internal shunt..... See manual for details
Other output types..... Active outputs (NPN / PNP)
Other output types..... f/f converter output
Other output types..... Frequency generator
*of span..... = of the presently selected range

Observed authority requirements

EMC..... 2014/30/EU
LVD..... 2014/35/EU

Approvals

EAC..... TR-CU 020/2011