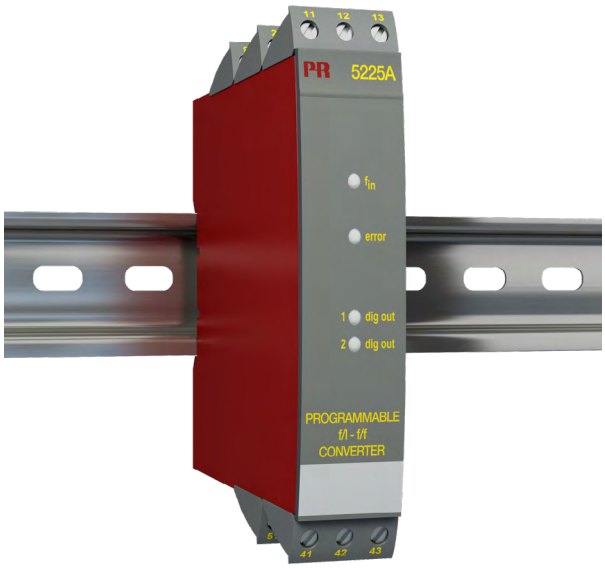
PR-5225

Railmounted
F/F- or F/I-converter



Features

/ Pulse conditioning

/ Frequency generator

/ Freq. division or multiplication

/ Buffer for fast pulse trains

/ 4. . .20 mA or 0. . .10 VDC output

/ PNP/NPN- or Relay outputs

/ Input range 0. . .20 kHz

/ Namur, Tacho, NPN, PNP, TTL

/ Four front-LEDs

Description:

PR-5225 converts the output frequency of nearly all Profimess flow-meters or any other units with pulse output, to an analogue output, which may be a power signal of any span between 0 mA and 20 mA with a minimum width of 5 mA or a voltage signal of either 0. . .1 VDC or 0. . .10 VDC gripped of at an internal shunt. Alternatively PR-5225 may be operated as a frequency converter, which either transforms the signal of too slow sensors up or the signal of too fast sensors down to a usable frequency. Even an operation mode as frequency generator e.g. as clock generator or time base is possible. If the FIFF-mode is chosen, PR-5225 outputs the evaluated frequency and the analogue signal simultaneously.

Application:

Pulse signals of flowmeters in practice often have to be converted into analogue outputs, because the downstream evaluating units do usually not possess any slots for frequency-based signals. Also a frequency adaption is frequently necessary, whenever the inputs of the PLC do not work with too high frequencies. PR-5225 offers there-fore a reliable, cost-effective solution. The emitted pulses of PR-5225 are usually much cleaner than those of the connected flowmeters, nevertheless a 50 Hz low-pass filter can be factory-set, to fade out high-frequent interfering signals.

Technical Specifications:

Protection class /	IP20
Temperature range /	-20°C. . .+60°C
Calibration temperature /	+20°C. . .+28°C
rel. Humidity /	< 95 % RH (non-cond.)
Dimensions (HxWxD) /	109 x 23.5 x 130 mm
Weight /	app. 190 g
DIN rail type /	DIN 46277
Wire size /	max. 1 x 2.5 mm^2 stranded wire
Screw terminal torque /	0,5 Nm

Electrical Specifications:

Supply voltage /	19.2. . .28.8 VDC
Power consumption /	max. 3.5 W
Internal consumption /	1.7 W
Warm-up time /	30 s
Power-up delay digital outputse /	0. . .999 s factory adjustable
Signal-noise ratio /	min. 60 dB
Response times /	
analogue output:	< 60 ms + 1 period
digital output:	< 50 ms + 1 period
concurrent f/i and f/f:	< 80 ms + 1 period
Effect of supply voltage /	≤ 0.002 % of span per %V
Temperature coefficient /	< ± 0.01% of span per °C
Linearity error /	< ± 0.1% of span
EMC-immunity influence /	< ± 0.5%
Auxiliary voltages /	
Supply NAMUR:	8.3 V ± 0.5 VDC / 8 mA
Supply S0:	17 V / 20 mA
Supply NPN / PNP:	17 V / 20 mA
Additional supply:	5. . .17 V / 20 mA factory adjustable

Inputs:

Common specifications /	
Input range:	0. . .20 kHz
max. Offset:	50% of selected max. frequency
min. Frequency:	0.001 Hz
Low cut-off frequency:	0.001 Hz
min. Pulse width:	25 µs
min. Period time:	50 µs
max. Frequency:	20 kHz
Trigger level:	0.025. . .6.5 V (nom.), factory adjustable
Trigger level LOW:	50 % of trigger HIGH
NAMUR-input acc. to DIN 19234 /	
Trigger level LOW:	≤ 1.2 mA
Trigger level HIGH:	≥ 2.1 mA
Input impedance:	1000 Ω
Sensor break:	≤ 0.1 mA
Short-circuit:	≥ 7 mA
Response time:	≤ 400 ms
Tacho-input /	
Trigger level LOW:	≤ -50 mV
Trigger level HIGH:	≥ +50 mV
Input impedance:	≥ 100 kΩ
max. Input voltage:	80 V AC pp
NPN-/PNP-input /	
Trigger level LOW:	≤ 4,0 V
Trigger level HIGH:	≥ 7,0 V
Standard input impedance:	3.48 kΩ
Input impedance special version:	13.3 kΩ / NPN
TTL-input /	
Trigger level LOW:	≤ 0.8 V DC
Trigger level HIGH:	≥ 2.0 V DC
Input impedance:	≥ 100 kΩ
S0-input acc. to DIN 43864 /	
Trigger level LOW:	≤ 2.2 mA
Trigger level HIGH:	≥ 9.0 mA
Input impedance:	800 Ω

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Outputs:

Digital outputs (PNP/NPN) /

max. Current source:	30 mA
max. Current sink:	130 mA
max. Voltage:	28.5 V

Power output /

Signal range:	0. . .20 mA
min. Span:	5 mA
Signal dynamics:	16 bit
max. Offset:	50% of selected max. value
Updating time:	max. 20 ms
Updating time for concurrent f/f and f/i:	max. 40 ms
max. Load:	20 mA / 600 Ω/ 12 VDC
Load stability:	≤ 0.01% of span per 100 Ω
Current limit:	< 23 mA

Voltage output through internal shunt /

Signal range:	0. . .10 VDC
min. Span:	250 mV
max. Offset:	50% of selected max. value
Load:	min. 500 kΩ

FF-converter output /

Signal range:	0. . .1000 Hz
Multiplicator / Divisor:	1. . .1000000
min. Pulse width:	500 µs
max. Pulse width:	999 ms
max. Duty Cycle:	50 %

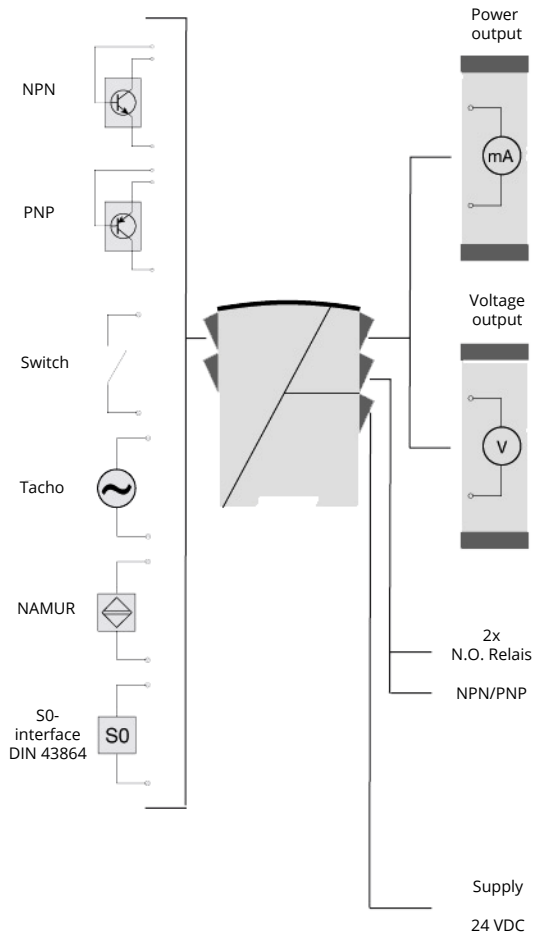
Frequency generator /

min. Periodic time:	50 µs
max. Frequency:	20 kHz
Duty Cycle:	50 %

Relay outputs /

max. Output frequency:	20 Hz
Isolation voltage test / operation:	3.75 kV AC / 250 V AC
max. Voltage:	250 VRMS
max. Current:	2 A AC
max. Power (AC):	500 VA
max. Relay load at 24 VDC:	1 A

Connections:



Ordering Codes:

Order number	PR-5225.	1.	FI

PR-5225 Railmounted F/F- or F/I-Converter

Digital outputs /

1 = two PNP / NPN-outputs
2 = two relay outputs (max. 20 Hz)

Mode of operation /

FI = F/I-converter
digital outputs are configuered as setpoint outputs
analogue output is switched on

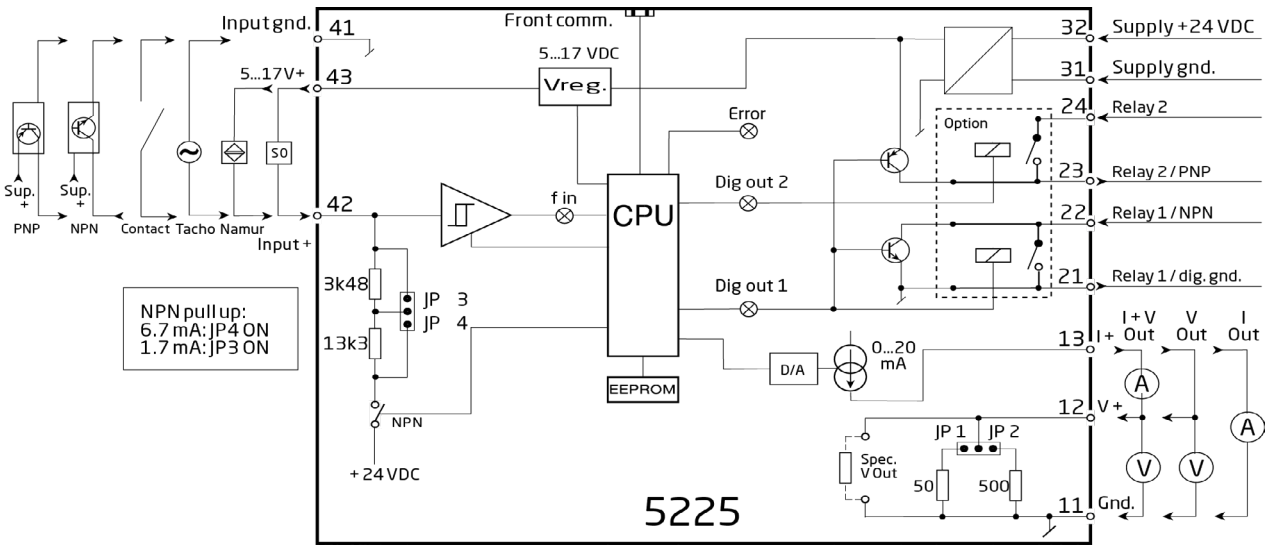
FF = F/F-converter
digital output 1 outputs the evaluated frequency
analogue output is switched off

FG = Frequency generator
digital output 1 outputs the selected freqency
analogue output is switched off

FIFF = F/I and F/F-converter
digital output 1 outputs the evaluated frequency,
digital output 2 is configuered as setpoint
analogue output is switched on

Please specify the analogue output range (how many mA at what frequency) and the setpoints for increasing or decreasing values in % (for FI or FIFF), the divisior or multiplicator (for FF or FIFF) respectivily the generated frequency (for FG) in clear text. Please specify additionally the mode of the digital outputs (PNP or NPN for transistor outputs respectivily open-circuit current or closed current for relay outputs).

Electrical Connections:



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