PR electronics

PERFORMANCE MADE SMARTER

f/I-f/f converter

2255

– Programmable f/I converter

– Programmable decimal divider / decimal multiplier

– Programmable frequency generator

– Relay output as option

– Supply voltage 24 VDC

Advanced features
• The user programmable version has a multifunction user interface consisting of three pushbuttons and a 3-digit LED displays.
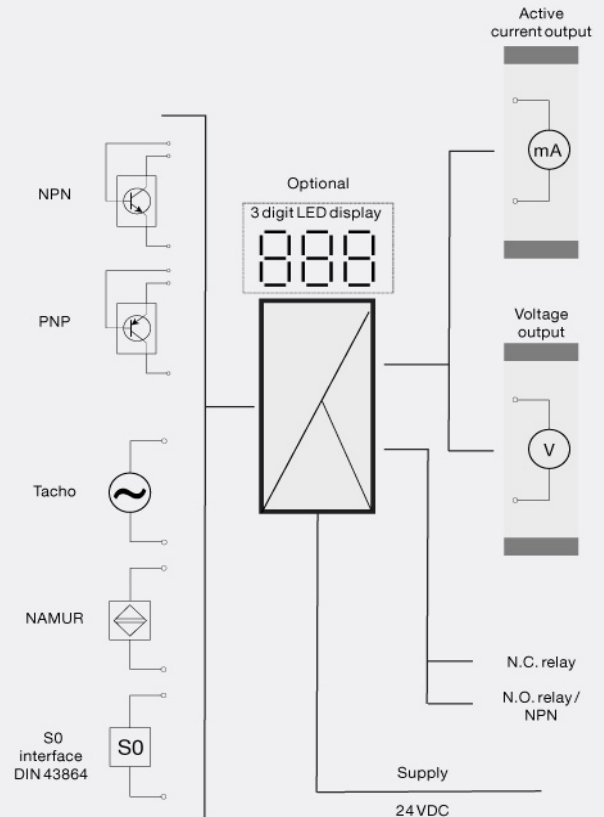
Application
• Typical signalling devices may be pulse generators, for instance flow meters, tacho-generators or inductive sensors.
• The f/I function is used for frequency to current / voltage conversion.
• The f/f function is used for division or multiplication of pulses and as a buffer for fast pulse trains.
• A frequency generator function e.g. used as a time base or a clock generator.

Technical characteristics
• 3 front LEDs, indicating f.in active input (not NPN), Dig.out (NPN or relay 1) active output and a NAMUR input error signal.
• Analog current output can be configured within 0...20 mA range.
• Voltage output range is selectable between 0...10 VDC by use of internal jumpers.
• Feature include input filter, contact filter and an auxiliary supply for sensor such as NAMUR and S0.
• Mounting for a standard 11-pole socket which can be adapted for DIN rail or plate use with PR's 7023 adaptor and 7024 mounting keying.

Connections

Order:

Type	Version		Output	
2255	Programmable	: B	Analog + NPN output	: 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..	IP50

Mechanical specifications

Dimensions (HxWxD)......................................	80.5 x 35.5 x 84.5 mm (D is without pins)
Weight approx..	125 g

Common specifications

Supply voltage..	19.2...28.8 VDC
Internal consumption.....................................	2.4 W
Isolation voltage, test / working..	1.4 kVAC / 150 VAC
Warm-up time..	1 min.
Signal / noise ratio..	Min. 60 dB
Response time (programmable)....................	60 ms to 999 s + period time
Signal dynamics, output................................	16 bit
Effect of supply voltage change....................	< 0.005% of span / VDC
Temperature coefficient................................	< ±0.01% of span / °C
Linearity error...	< 0.1% of span
S0 supply..	15 VDC / 25 mA
Special supply (programmable).....................	5...15 VDC / 30 mA (acc. to order)
EMC immunity influence................................	< ±0.5%

Input specifications

Max. offset..	90% of selec. max. value
Measurement range.......................................	0...20 kHz
Min. measurement range...............................	0.001 Hz
Low cut-off frequency....................................	0.001 Hz
Min. pulse length..	25 µs
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

Max. offset..	50% of selected max. value
Current output: Signal range.........................	0...20 mA
Min. signal range..	5 mA
Updating time..	20 ms
Load (max.)...	20 mA/600 Ω/12 VDC
Load stability, current output.........................	≤0.01% of span/100 Ω
Voltage output through internal shunt..	See manual for details
Max. current, NPN output..............................	130 mA
Max. voltage, NPN output..............................	28 VDC
Frequency output range.................................	0...1000 Hz
Min. pulse length..	500 µs
Max. pulse length..	999 ms
Max. duty cycle...	50%
Frequency generator: Pulse length f < 50 Hz...	Min. 10 ms
Frequency generator: Pulse length f < 50 Hz...	Max. 999 s
Pulse length f ≥ 50 Hz..................................	50% duty cycle
Relay output: Max. switching frequency..	20 Hz
Max. voltage...	150 VRMS
Max. current..	2 AAC
Max. AC power..	300 VA
Max. load at 24 VDC.....................................	1 A
*of span..	= of the presently selected range

Approvals

EMC..	EN 61326-1
LVD...	EN 61010-1
GOST R...	Yes

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