

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.

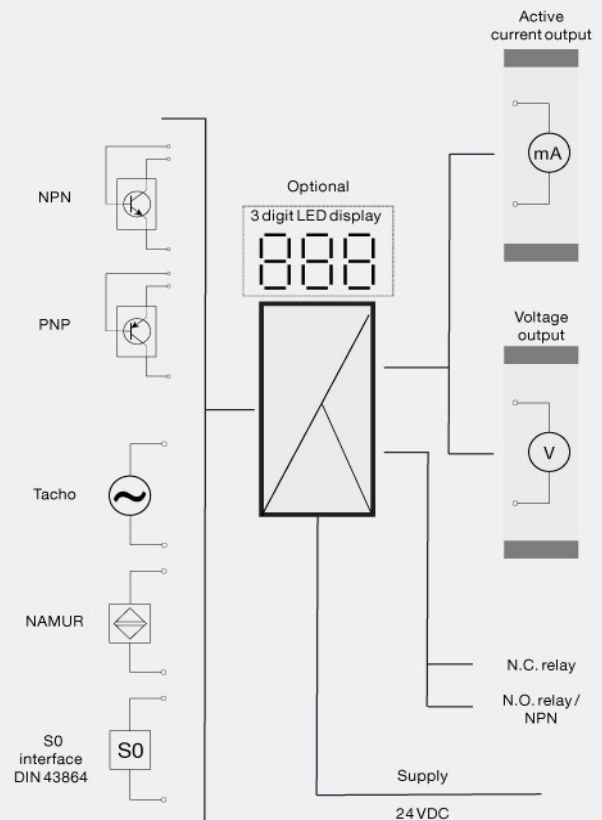
Application

- 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.

Applications



Order:

| Type | Version | Output |
|------|------------------|--|
| 2255 | Programmable : B | Analog + NPN output : 1 Analog + relay output : 2 |

Environmental Conditions

| | |
|------------------------------|----------------------|
| Operating temperature..... | -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**

| | |
|---------------------------------|-----------------|
| Supply voltage..... | 19.2...28.8 VDC |
| Internal power dissipation..... | 2.4 W |

Isolation voltage

| | |
|--|--------------------|
| Isolation voltage, test / working..... | 1.4 kVAC / 150 VAC |
|--|--------------------|

Response time

| | |
|--------------------------------------|------------------------------------|
| Response time (programmable)..... | 60 ms to 999 s + period time |
| Warm-up time..... | 1 min. |
| Signal / noise ratio..... | Min. 60 dB |
| Accuracy..... | Better than 0.1% of sel. range |
| 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**Common 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**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 |

Common output specifications

| | |
|--------------------|-------|
| Updating time..... | 20 ms |
|--------------------|-------|

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 |

| | |
|--|-----------------------------------|
| 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 |
| of span..... | = of the presently selected range |

Observed authority requirements

| | |
|-----------|----------------|
| EMC..... | 2014/30/EU |
| LVD..... | 2014/35/EU |
| RoHS..... | 2011/65/EU |
| EAC..... | TR-CU 020/2011 |