

2800-2051 Field display for pulse sensors (Hz)

- Input frequency range 0,0001 Hz..5 kHz
- Sensors: NPN, PNP, Namur, Closing contact or Pickup
- 6-digit processor-based LED display, digit height 20 mm
- Galvanically isolated output 0/4..20 mA, 0..5/10V
- Two alarm relays
- Pulse output for a cumulative counter
- Serial output RS-232 or RS-485
- Sensor supply 24 VDC, max. 150 mA
- Power supply 85..240 VAC or 12..32 VDC/ 24 VAC



The field display is designed for pulse sensors, whose frequency will be measured. The inputs are NPN-, PNP-, Namur -sensors, closing contact or a pickup-sensor. The front panel has large 20-mm-high red LED digits, the readability of which is about 10 metres.

The input frequency range 0,0001Hz..5 kHz is exceptionally wide starting with extremely low frequencies. The display is scaleable on the whole frequency range, e.g. 0-1,23 Hz can correspond to the range 0-5000 on the display. Output is freely scaleable on the basis of the display, e.g. 4-20 mA. The measuring method applied for low frequencies is to measure the time interval between two incoming pulses and for higher frequencies to measure the frequency. The display also provides a power supply of 24VDC, max. 150 mA for a sensor.

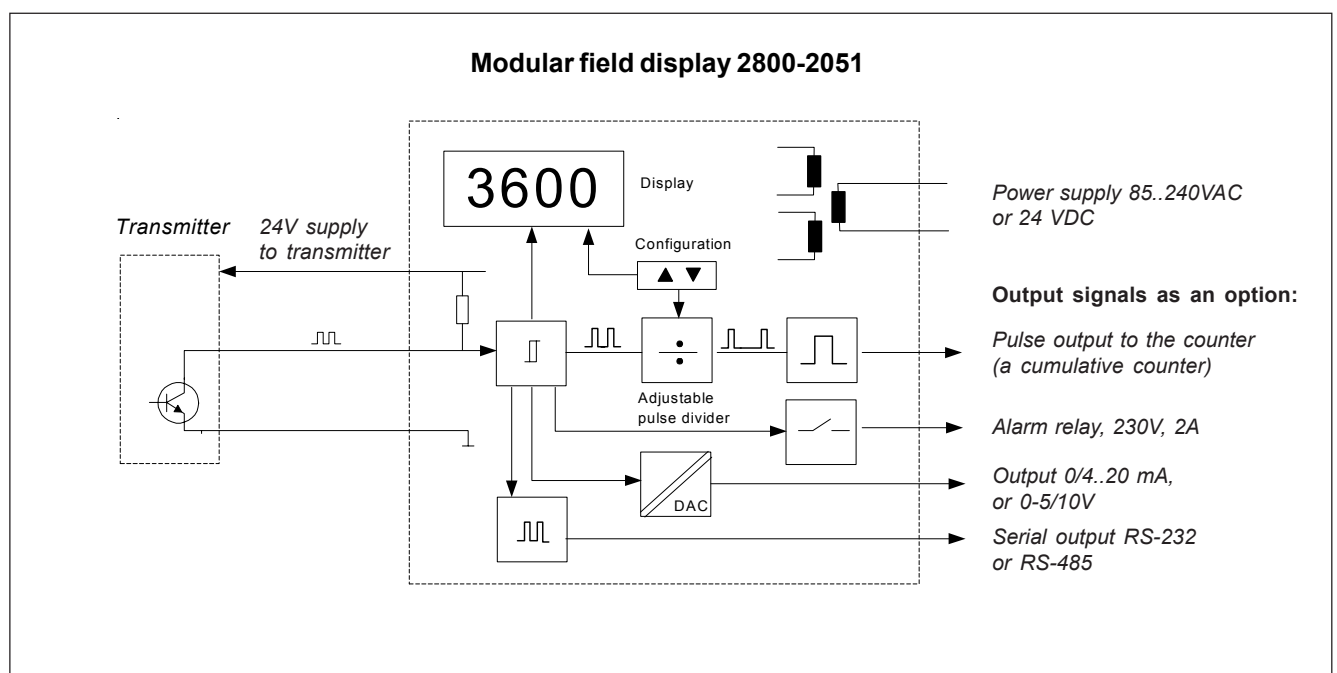
The display has two optional card slots: one for output 0/4-20 mA, 0-10V, and the other for alarms relay or serial output RS-485/232. Optional cards can easily be added afterwards as well.

The alarm relay card (or I/O -card) may also be used as an output for a pulse divider. The pulse divider transmits a pulse for instance to an external counter when the pulse rate set in the divider is reached (e.g. 1 pulse/ 1000 litres).

Separate passwords can be set for access to the configuration menu and alarms. Brightness of the display is selectable. The display can be mounted onto a wall with or without the mounting brackets (removable) at the corners. Case protection rating is IP65.

The field display is part of the wide and flexible indicator series 2000 and is easy to modify by changing input cards for different kinds of sensors, such as temperature sensors, pulse sensors, serial inputs etc. The modification does not require any calibration. All the input and output cards of the series 2000 are available. Each display type has its own datasheet.

The display is also available as a panelmeter, model 2051.



Technical specification:

Input frequency range: 0,0001..5 kHz
Display scaling: on the whole display range
Decimal point selection: freely selectable
Updating time of display: 1..2 incoming pulses
Sensors: NPN, PNP, Namur, pick-up or closing contact
 input pulse 0 = <1V, 1 = 5..32V

Sensor supply: 24 VDC ±5 %, max. 150 mA, isolated from power supply

Measuring method: measuring the time interval between incoming pulses

Accuracy: 0,01 % of span

Output signal (optional):
 Output 0..20 mA, 4..20 mA, max. load 1000 ohm.,
 Voltage output 0-10V (max. load 5 mA).
 Galvanic isolation from input and power supply (test voltage 2500 V, 1min.). Scaling programmable.
 DAC 12 bits, accuracy 0,05% of span.

Serial output (optional):
 RS-232 or RS-485 only for reading measurement values.
 Baud rate: 300..19200 baud.

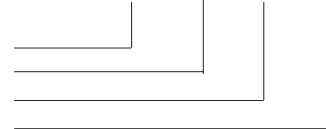
Alarms (optional):
 Two alarm levels freely adjustable on the front panel. Choice of direction for relay function.
 Relay contacts max. 230 VAC, 2A (2000-REL2).
 An alternative to the pulse output.

Pulse output (optional):
 Divider range 1..64000
 Output pulse width 1..100 ms
 I/O card max. 60 V, 0,5 A
 An alternative to the alarm relay for frequencies > 1 Hz

General:
 Number of digits 6 digits, bright red LED, brightness selectable
 Digit height 20 mm, readability 10 m
 Input filter digital, freely adjustable
 Operating temperature -20..+55 °C
 Terminals removable, wire 2,5 mm²
 Power supply 85..240 VAC or 12..32 VDC/24 VAC
 Case protection IP65
 Case material polycarbonate, colour light grey
 Weight 600g

How to order: 2800-2051-OUT-REL2-230VAC

Type
 Output
 Alarm card
 Power supply 85..230VAC or 12..32 VDC/24VAC

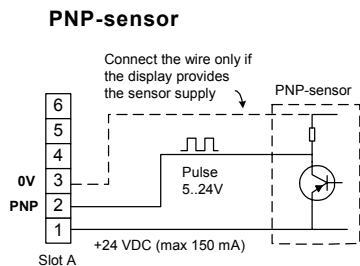
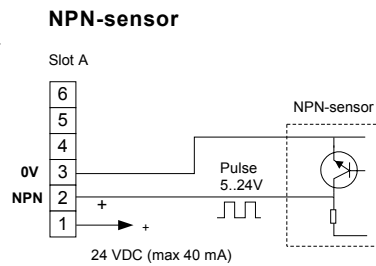


Optional cards (two options possible at a time) :

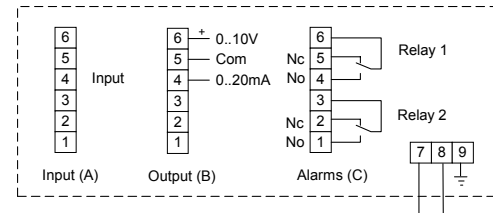
Output card	2000-OUT
Alarm card, 2 relays	2000-REL2
I/O card (4 I/O-lines)	2000-I/O
Serial output RS-232/485	2000-RS

(When ordering a field display, the "2000" of the cards is left out.)

Connections:



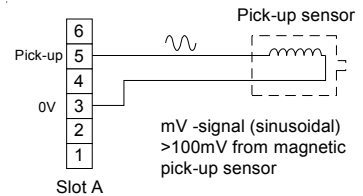
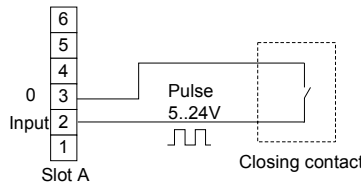
Typical combination



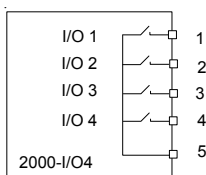
Slot A is for sensor input and slots B and C for optional cards.

Power supply 85..240 VAC or 12..32 VDC / 24 VAC (no polarity)

Closing contact



Optional alarm card



2000-I/O4

- 4 I/O-ports, max. 60 V, 100 mA
- Only one port available

Dimensions

Wall mounting brackets at the corners of the case - easily removable.

Glands: 3 xPG11

