

RT40: Universal pulse continuity module
Automatic start or start at first pulse
With or without latch function

RT41: Delay-ON / delay OFF function in one module

16 time ranges/combinations in one unit

Inputs for many sensor types

1-pole relay output

DC supply or AC supplies up to 230 VAC

Made in accordance with the CE and EMC regulations



Technical data, RT40:

The unit is used for speed monitoring, where the output relay is activated, if the unit receives input pulses with an interval, which is shorter than the selected time.

By means of a rotary switch on top of the module you can select between 3 different functions and 4 time ranges. The module is available in 3 supply voltage and 3 time range variants, see specifications and table.

Supply, AC: 24, 115 and 230 VAC +/- 10%
Supply frequency: 40-70 Hz
Isolation voltage: Supply - internal - output: 3.75 kV
Supply, DC: 24 VAC/DC +/- 10%
 With DC-supply there is no isolation between supply and internal electronics.

Power consumption: 2.5 VA
Operation temp.: -20°C to +60°C
Humidity: 0 - 90% RH, non-condensing

Indications:
 Green LED: Supply voltage connected
 Red LED: Relay active

Sensor inputs:
 Namur sensor: 8,2 V / max. 10 mA
 NPN / PNP sensor: 24 V / max. 10 mA
 Contact input: 10 V / 2 mA

Time adjustment: Potentiometer, scale 2,5 - 100 % of the selected range

Accuracy, scale: 5 %.
Repeatability: 0,1 %
Max. load, relay: 1-pole 8 A - 250 VAC ohmic load

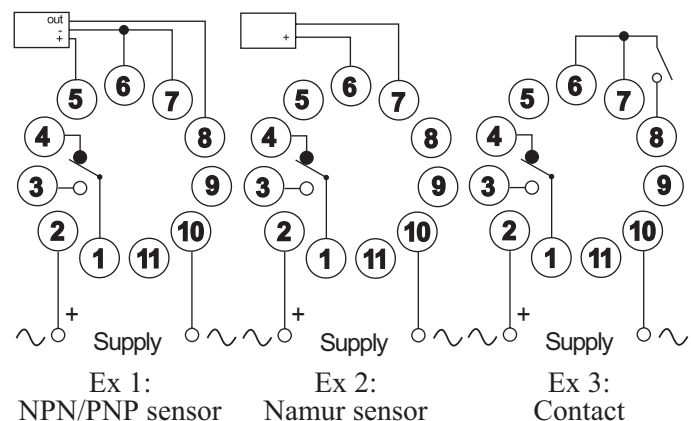
EMC og safety regulations.

Emmision: EN 50 081 - 1
Immunity: EN 50 082 - 2
Safety: EN 60 730

Approvals: The units are produced in accordance with the CE og low voltage regulations.

| Time ranges and selection of function, RT40 | | | | |
|---|-------------------------|---|---|---|
| switch | function | Time ranges, type variant | | |
| | | M1 | M2 | M3 |
| D E C F | Automatic start | 0,06- 2,5 s. 0,25- 10 s. 2- 80 s. 16- 640 s. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. | 0,06- 2,5 m. 0,25- 10 m. 2- 80 m. 16- 640 m. |
| 9 A 8 B | Start first pulse | 0,06- 2,5 s. 0,25- 10 s. 2- 80 s. 16- 640 s. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. | 0,06- 2,5 m. 0,25- 10 m. 2- 80 m. 16- 640 m. |
| 5 6 4 7 | Automatic start + latch | 0,06- 2,5 s. 0,25- 10 s. 2- 80 s. 16- 640 s. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. | 0,06- 2,5 m. 0,25- 10 m. 2- 80 m. 16- 640 m. |

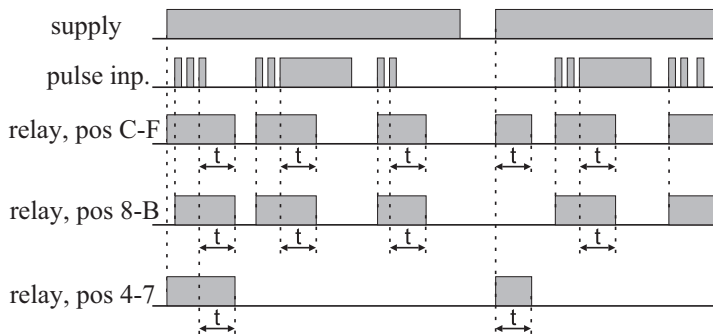
Connections RT40:



Note:

You can only use NPN/PNP sensors with true open collector output. If the sensor has an internal pull-up or pull-down resistor, you must order the module for the actual sensor type (NPN or PNP). Alternatively you can insert a diode in series with the sensor output (see RR10, page 8-4)

Functional diagram RT40:



Technical data, RT41:

By means of a 16-position rotary switch on top of the module, the delay-ON and delay-OFF ranges can be independently selected.

The module is available in 3 supply voltage and 3 time range variants, see specifications and table.

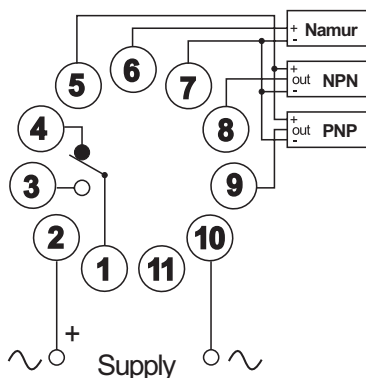
- Supply, AC:** 24, 115 and 230 VAC +/- 10%
- Supply frequency:** 40-70 Hz
- Isolation voltage:** Supply - internal - output: 3.75 kV
- Supply, DC:** 24 VAC/DC +/- 10%
With DC-supply there is no isolation between supply and internal electronics.
- Power consumption:** 2.5 VA
- Operation temp.:** -20°C to +60°C
- Humidity:** 0 - 90% RH, non-condensing
- Indications:**
Green LED: Supply voltage connected
Red LED: Relay active
- Voltage output:** pin 5, 24 VDC, max. 20 mA
- Time adjustment:** 2 potentiometers, scale 2,5 - 100 % of the range, for separate adjustments of delay-ON and delay-OFF.
- Accuracy, scale:** 5 %.
- Repeatability:** 0,1 %
- Max. load, relay:** 1-pole 8 A - 250 VAC, ohmic load

EMC og safety regulations.

- Emmission:** EN 50 081 - 1
- Immunity:** EN 50 082 - 2
- Safety:** EN 60 730

Approvals: The units are produced in accordance with the CE og low voltage regulations.

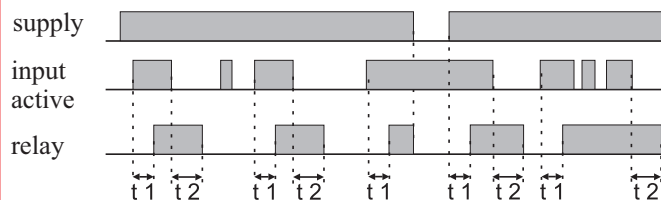
Connections:



Time combinations, RT41

| switch | variant M1 (seconds) or M3 (minutes) | | Variant M2 | |
|------------------|--------------------------------------|---|------------------|---|
| | Delay on release | Delay on operate | Delay on release | Delay on operate |
| A 9 8 B | 0,06- 2,5 | 0,06- 2,5 0,25- 10 2- 80 16- 640 | 0,4- 15 s. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. |
| 6 5 4 7 | 0,25- 10 | 0,06- 2,5 0,25- 10 2- 80 16- 640 | 1,5- 60 s. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. |
| 2 1 0 3 | 2- 80 | 0,06- 2,5 0,25- 10 2- 80 16- 640 | 0,2- 8 m. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. |
| E D C F | 16- 640 | 0,06- 2,5 0,25- 10 2- 80 16- 640 | 1,6- 64 m. | 0,4- 15 s. 1,5- 60 s. 0,2- 8 m. 1,6- 64 m. |

Functional diagram RT41:



Ordering guide:

- | | |
|-----------|-----------------|
| Supply | Type number |
| 24 VAC/DC | RT41-1-2-024-yy |
| 24 VAC | RT41-1-1-024-yy |
| 115 VAC | RT41-1-1-115-yy |
| 230 VAC | RT41-1-1-230-yy |
- yy = time range M1: 0,06 - 640 sec.
M2: 0,4 sek. - 64 min.
M3: 0,06 - 640 min.

Note: The type number is shown for RT41, but the same principle is used for RT40.

Ordering example:

RT40-1-1-230-M2

Mechanical dimensions, etc.: see page 9-2