EN

Z112A

Amplifier with pulse divider for ON-OFF sensors

GENERAL CHARACTERISTICS

- Pulse input for all the most common sensors: mechanical contact, reed, 2 and 3 wire npn with 12Vdc and 24Vdc power supply, 3 wire pnp with 24Vdc power supply, NAMUR, photoelectric.
- Max frequency 400 Hz.
- Divider circuit programmable by dip switch from 1 to 256.
- Adjustment of pulse duration at output from 100 msec to 500 msec by means of trimmer on front panel.
- Relay output with 1 SPDT changeover with capacity 5 A 250 Vac (resistive load).
- Front panel LED indication of power on and relay energised.
- Insulation between power supply and inputs: 1500Vac, insulation to output > 3000Vac.

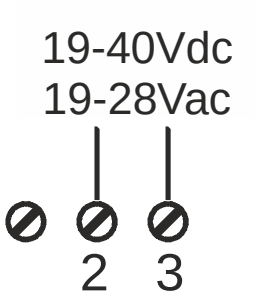
TECHNICAL SPECIFICATIONS

Power supply:	19 – 40 Vdc, 19-28 Vac 50-60Hz, max 2.5W.
Inputs:	Pulses: mechanical contact, reed, 2 and 3 wire npn with 12Vdc and 24Vdc power supply, 3 wire pnp with 24Vdc power supply, NAMUR, photoelectric. Max frequency 400 Hz.
Outputs:	Relay with 1 SPDT changeover with capacity 5 A 250 Vac (resistive load).
Ambient conditions:	Temperature: 0..50°C, Humidity - min:30%, max 90% at 40°C non condensing (also see section Installation standards).
The instrument conforms to the following standards: CE	EN61000-6-4 (electromagnetic emissions, industrial ambient) EN61000-6-2 (electromagnetic immunity, industrial ambient) EN61010-1 (safety)

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ELECTRICAL CONNECTIONS

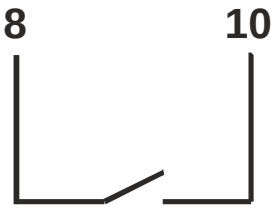
POWER SUPPLY



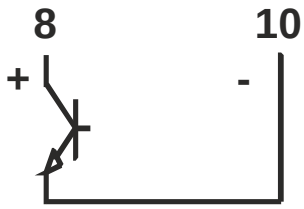
Power supply must be in the range 19 to 40 Vdc (at any polarity), or 19 to 28 Vac – also consult the section Installation standards.
The upper limits must not be exceeded, otherwise the module may be seriously damaged.
The power source must be protected against any trouble to the module by a fuse of adequate size.

INPUTS (Max frequency 400 Hz)

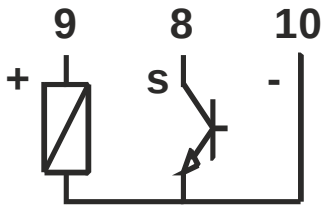
Contact / Reed



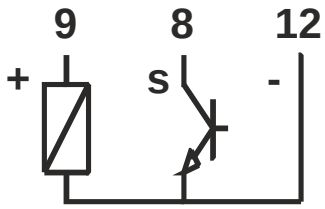
NPN (2 wires)



NPN 24V (3 wires)



NPN 12V (3 wires)



NAMUR

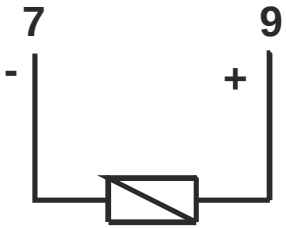
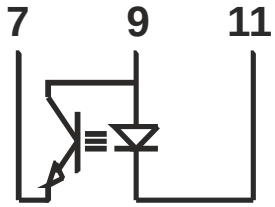
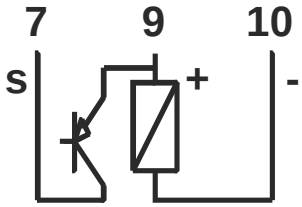


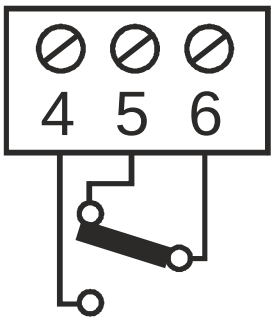
Photo electric



PNP 24V (3 wires)



OUTPUT



Relay with 1 SPDT changeover with capacity 5 A 250 Vac (resistive load)

REGULATION OF PULSE DURATION

Via the trimmer on the front panel it is possible to regulate the duration of the pulse from a minimum of 100 msec to a maximum of 500 msec.
To reduce the pulse duration, rotate the trimmer anticlockwise (- sign) and to increase, rotate the trimmer clockwise (+ sign).

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INSTALLATION INSTRUCTIONS

The Z112A module is designed for installation on a DIN 46277 guide, in vertical position.
For efficient operation and long-life, the modules must be adequately ventilated. Do not install any raceways or place other objects that could obstruct the ventilation slits.
Do not install the modules above heat generating appliances – we advise you to install the modules in the lower part of the panel.

SEVERE OPERATING CONDITIONS: These are considered severe operating conditions:

- *High supply voltage (> 30Vdc / > 26 Vac).*
- *Sensor powered at input.*

If the modules are installed side-by-side, it may be necessary to separate them by at least 5 mm in the following cases:

- If panel temperature exceeds 45°C and at least one of the severe operating conditions occurs.
- panel temperature exceeds 35°C and at least two of the severe operating conditions occur.

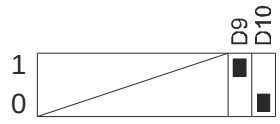
ELECTRICAL CONNECTIONS

You are recommended to use shielded cables for connection of signals – the shield must be connected to an earthing point giving priority to the instrumentation. Moreover, we advise you not to route the conductors near to power cables serving inverters, motors, induction ovens, etc.

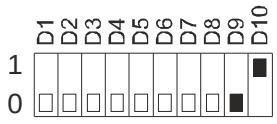
PRE-SETTING THE DIVIDER

By means of the dip switches at the side, the instrument can be pre-set to repeat at output all the pulses received at input or to divide the pulses received at input by a whole number between 2 and 256.

WITHOUT DIVIDER



WITH DIVIDER



If the divider is used, the dip switches from D1 to D8 must be set as shown in the following table to obtain the required division factor.

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N	D1	D2	D3	D4	D5	D6	D7	D8
2	1	0	0	0	0	0	0	0
3	0	1	0	0	0	0	0	0
4	1	1	0	0	0	0	0	0
5	0	0	1	0	0	0	0	0
6	1	0	1	0	0	0	0	0
7	0	1	1	0	0	0	0	0
8	1	1	1	0	0	0	0	0
9	0	0	0	1	0	0	0	0
10	1	0	0	1	0	0	0	0
11	0	1	0	1	0	0	0	0
12	1	1	0	1	0	0	0	0
13	0	0	1	1	0	0	0	0
14	1	0	1	1	0	0	0	0
15	0	1	1	1	0	0	0	0
16	1	1	1	1	0	0	0	0
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49	0	0	0	0	1	1	0	0
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134	1	0	1	0	0	0	0	1
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