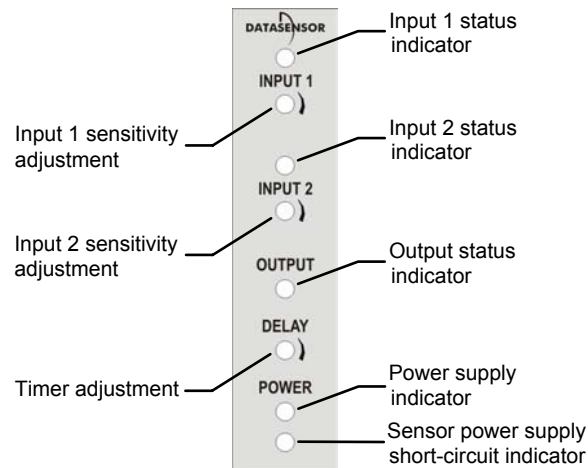


INSTRUCTION MANUAL

CONTROLS



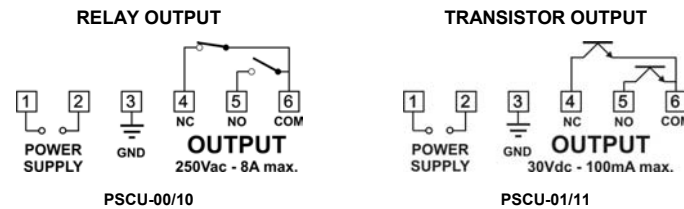
TECHNICAL DATA

Power supply:	24 Vac/Vdc \pm 10% (PSCU-0x) 100 ... 240 Vac (PSCU-1x)
Consumption:	2 VA max.
Sensor input:	1 or 2, switch selectable
Sensor signal:	switch selectable: 0...10 Vdc analogue, 100 K Ω impedance \square NPN static, PNP, relay, static and relay contact, 10 K Ω impedance.
Sensor power supply:	20 Vdc \pm 10% 100 mA max (IN1 + IN2); protection with automatic reset in presence of short-circuits (POWER GREEN LED Off and RED LED ON).
Output:	\square SPDT 250 Vac relay version, 8 A on resistive load ($\cos\Phi=1$) \square transistor version with PNP/NPN (NO/NC) complementary output, optoisolated; I_{on} max 100 mA per channel; fold-back protection with automatic reset and short-circuit current < 40 mA.
Response time (*):	\square 10 ms max relay version \square 0.1 ms max. transistor version \square outputs deactivated for 400 ms at unit powering ON (*) timer deactivated
Timing functions:	switch selectable, monostable reset, monostable non-reset, delay on rising edge, delay on falling edge, delay on both edges, bistable (without timing).
Timing period:	switch selectable: 0.004...1 s, 0.1...10 s.
Input logic functions:	switch selectable: inversion of single channel, AND, OR, NAND, NOR.
Isolation:	> 2 KVdc/1min input/output/power supply
Rigidity:	> 2 KVdc/1min input/output/power supply
Operating temperature:	-10 ... +55 °C
Storage temperature:	-20 ... +65 °C
Humidity:	35 ... 85% rH non condensing.
Vibration resistance:	0.35 mm, 10...55 Hz for every axis (EN60068-2-6)
Shock resistance:	18 ms (30 G) for every axis (EN60068-2-27)
Mechanical protection:	IP20
Terminal block:	screw terminals for cables upto 5 mm ² .
Dimensions:	120 x 101 x 23 mm.
Weight:	200 g. max.

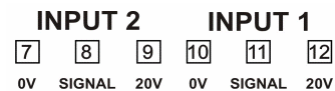
STANDARD CONFIGURATION

Inputs (IN1 and IN2): analogue 0...10Vdc.
Input number: 2.
Input logic function: AND
Timer function: passing (no timing).
Timing period: 0.004...1 s (if activated)

CONNECTIONS



SENSOR INPUT



Power supply:

Do not power directly with power lines and avoid installation near electric motors or other electromagnetic interference sources.

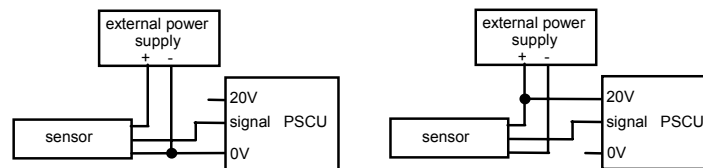
Sensor input:

Connection of sensors powered by PSCU: use terminals as above indicated. Different sensors can be used.

Terminal grounded:

Strong electromagnetics interference can compromise the correct functioning of the device. In these conditions the ground connection of the device is necessary.

Connection of sensors with external power supply:



NPN or analogue sensors 0...10V, relay

PNP sensors

WARNING!

Different sensors cannot be used with an external power supply.

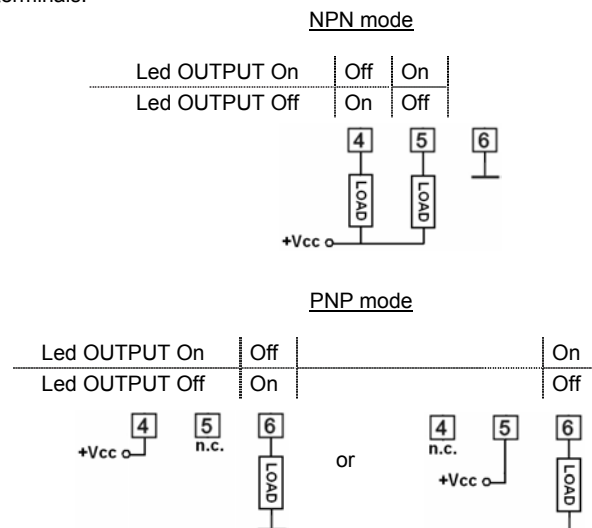
Relay output:

the maximum current through the contacts decreases according to the power factor in case of inductive loads.

Transistor output:

the outputs are floating, overload protected for relay control or solid state (SSR), suitable for high loads. The two NC and NO channels are independent and operate in antivalent mode.

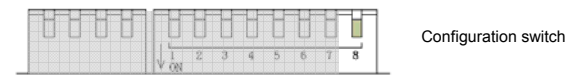
When the output is high, OUTPUT LED ON, the transistor saturation voltage is present on the 5/6 terminals, interdiction voltage is present on the 4/6 terminals:



PRODUCT CONFIGURATION

NUMBER OF SENSORS

Effect the configuration with the device turned off and sensors deactivated.



Switch sector 8

1	ON
2	OFF

In the single sensor mode the INPUT 1 is used. The INPUT 2 is deactivated, the INPUT 2 LED is off and the sensitivity trimmer INPUT 2 is not used.

SENSOR TYPE

Effect the configuration with the device turned off and the sensors deactivated. Please refer to the INPUT 1 column, in the single sensor mode.

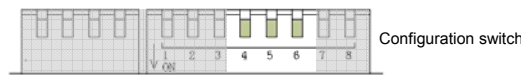


Switch sector

	1	2	3	4
NPN, relay	X	X	OFF	ON
PNP	X	X	ON	OFF
analog. 0...10V	X	X	OFF	OFF
NPN, relay	OFF	ON	X	X
PNP	ON	OFF	X	X
analog. 0...10V	OFF	OFF	X	X

'X' = indifferent

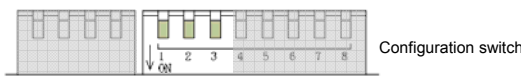
LOGIC OPERATIONS BETWEEN THE INPUTS



Logic operation	INPUT1	INPUT2	Switch sector		
			4	5	6
AND	DIRECT	DIRECT	OFF	OFF	OFF
AND	INVERSE	DIRECT	OFF	OFF	ON
AND	DIRECT	INVERSE	OFF	ON	OFF
NAND	DIRECT	DIRECT	ON	OFF	OFF
NOR	INVERSE	INVERSE	OFF	ON	ON
OR	INVERSE	DIRECT	ON	OFF	ON
OR	DIRECT	INVERSE	ON	ON	OFF
OR	INVERSE	INVERSE	ON	ON	ON

THE INPUT 1 and INPUT 2 LEDs indicate the input status AFTER the sensitivity adjustment effected with SENS trimmer and direct/inverse setting, and BEFORE the logic operation.

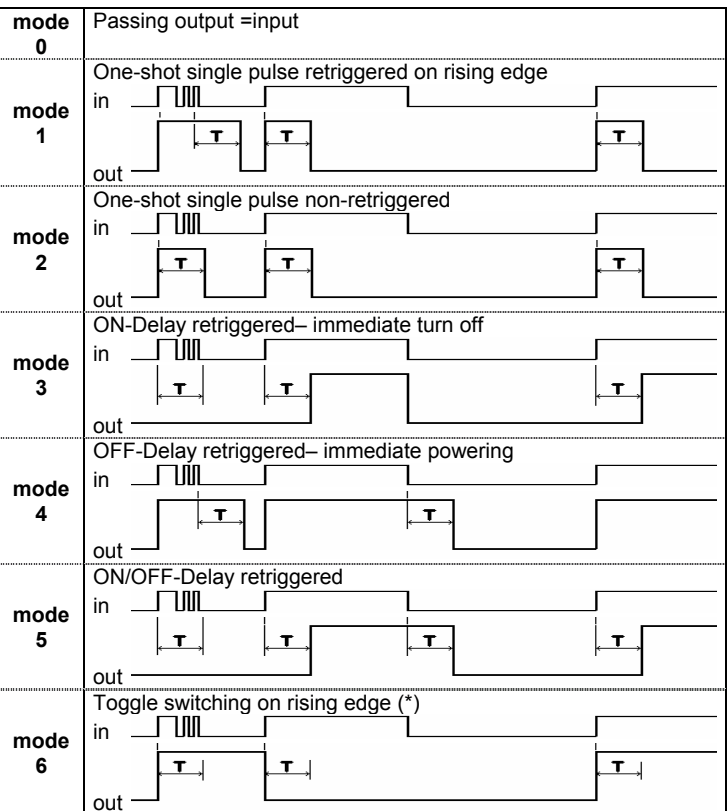
TIMING TYPES



Type	Switch sector		
	1	2	3
Mode 0	OFF	OFF	OFF
Mode 1	ON	OFF	OFF
Mode 2	OFF	ON	OFF
Mode 3	ON	ON	OFF
Mode 4	OFF	OFF	ON
Mode 5	ON	OFF	ON
mode 6	OFF	ON	ON

DECLARATION OF CONFORMITY

We DATASENSOR S.p.A. declare under our sole responsibility that these products are conform to the 2004/108 CEE, 73/23 CEE Directives and successive amendments.



in = signal after logic operations on inputs
out = output condition signalled by the OUT LED
T = delay time set with DELAY trimmer.
(*) in mode 6, T is blanking time towards switchings.

TIMING SCALE

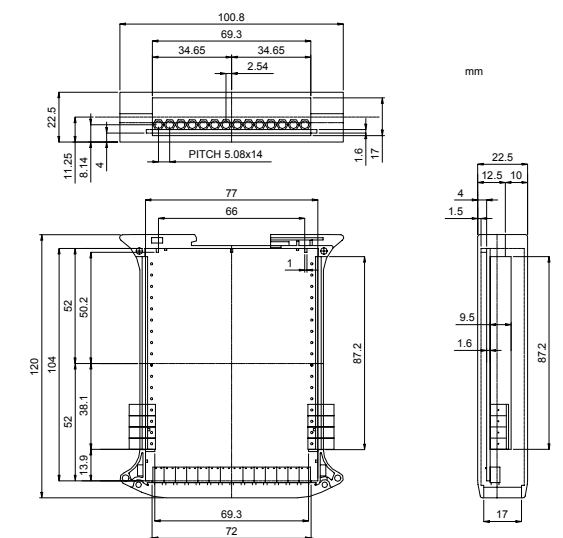


switch sector 7

0.004...1 sec	OFF
0.1...10 sec	ON

In mode 6, the scale is fixed to 0.004...1 s.

DIMENSIONS



WARRANTY

DATASENSOR S.p.A. warrants its products to be free from defects. DATASENSOR S.p.A. will repair or replace, free of charge, any product found to be defective during the warranty period of 36 months from the manufacturing date. This warranty does not cover damage or liability deriving from the improper application of DATASENSOR products.

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