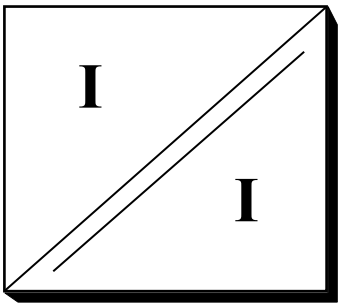
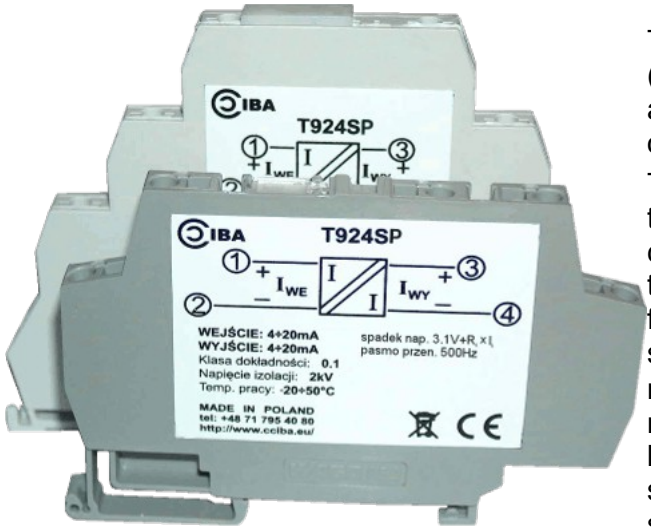
SEPARATOR T924sP

- input/output: 4÷20 mA / 4÷20 mA
- passive separator
- accuracy class: 0.1
- galvanic isolation: 2kV
- 6.2 or 7mm width enclosure



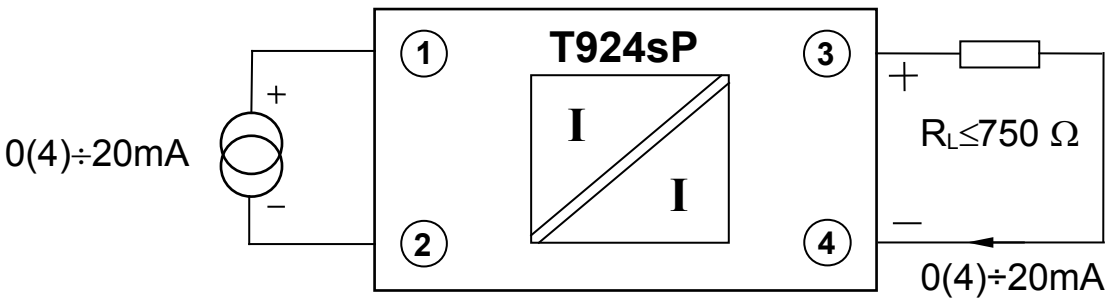


T924sP is a passive separator of 4÷20mA signal (in fact, separator functions from almost 0mA to about 25mA where internal limiting circuit turns on). Factory test isolation voltage equals 2kV.

The module works as constant current transformer - input signal is switched at comparatively high frequency to be passed through a transformer, and magnetic field feedback ensures accurate reproduction of input signal at the output. Typical accuracy within the nominal 4÷20mA signal range, including nonlinearity, does not exceed ±0.05% (for 50Ω load resistance). Some of the energy carried by signal is lost on protection elements and used to supply internal circuitry of the separator, which is seen externally as additional voltage drop that adds to voltage drop on load resistance. This additional voltage drop reaches 3V at 20mA. Load resistance affects the accuracy of signal transfer, but in a predictable way – deviation from ideal load resistance of 50Ω (where error is minimal) causes change of gain leading to error of -0.05% at 20mA per every 100Ω increase of load resistance. Load resistance should not exceed 750Ω.

One of the main advantages of the module is a system of overvoltage and overcurrent protections preventing accidental damage during installation or malfunction of other automation elements during exploitation. Both input and output are protected against overvoltage and bias reversal. The input current is limited internally to ca. 25mA which is rare in passive separators. Absolute maximum ratings are listed at the end of the data sheet.

Electrical connections:



The separator may be equipped with reactive circuit ensuring that the input current loop will not open when the output loop is broken. Such solution increases voltage drop by *ca*. 1V and slightly affects accuracy but may be necessary in some applications. Please add letter 'R' to the name of ordered module to ensure that this option will be added.

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Enclosures, made of self-extinguishing material, may be mounted on standard 35mm 'top-hat' rails. Two types of enclosures (with screw or spring terminals) are available and thus placing an order please specify the requested type:

- T924sP-1, srew terminals, enclosure width of 6.2mm,
- T924sP-2, spring terminals, enclosure width of 7mm.

Technical data:

Input:	input current	4÷20 mA
	voltage drop (I_{IN}=20mA)	3V + 20mA × R_L
	(reactive version	4V + 20mA × R_L)
Output:	output current	4÷20 mA
	load resistance (R_L)	0÷50÷750 Ω
Accuracy class:		0.1
	additional error (I=20mA)	– 0.05% × R_L/100Ω
Isolation test voltage:		2 kV

General technical parameters:

frequency band (-3dB, 50Ω load)		500 Hz
response time (10-90%)		< 1ms
maximal nonlinearity error		< 0.05 %
output noise level		< 50 μA
temperature coefficient		< 50 ppm/°C
warm-up time		< 1 s
operating temperature range		-25÷60 °C
storage temperature range		-40÷80 °C
ambient relative humidity		5÷90 % (no condensation)
ambient pressure		1000±200 hPa
external magnetic field		0÷400 A/m
working position		irrelevant
external dimensions	T924sP-1	6.2×80×94mm^3
	T924sP-2	7×91×64mm^3
housing protection type		IP 20

Absolute maximum ratings:

voltage applied to input terminals	100 V
input current (internally limited)	27 mA (at 20ºC)
voltage applied to output terminals	100 V

CE

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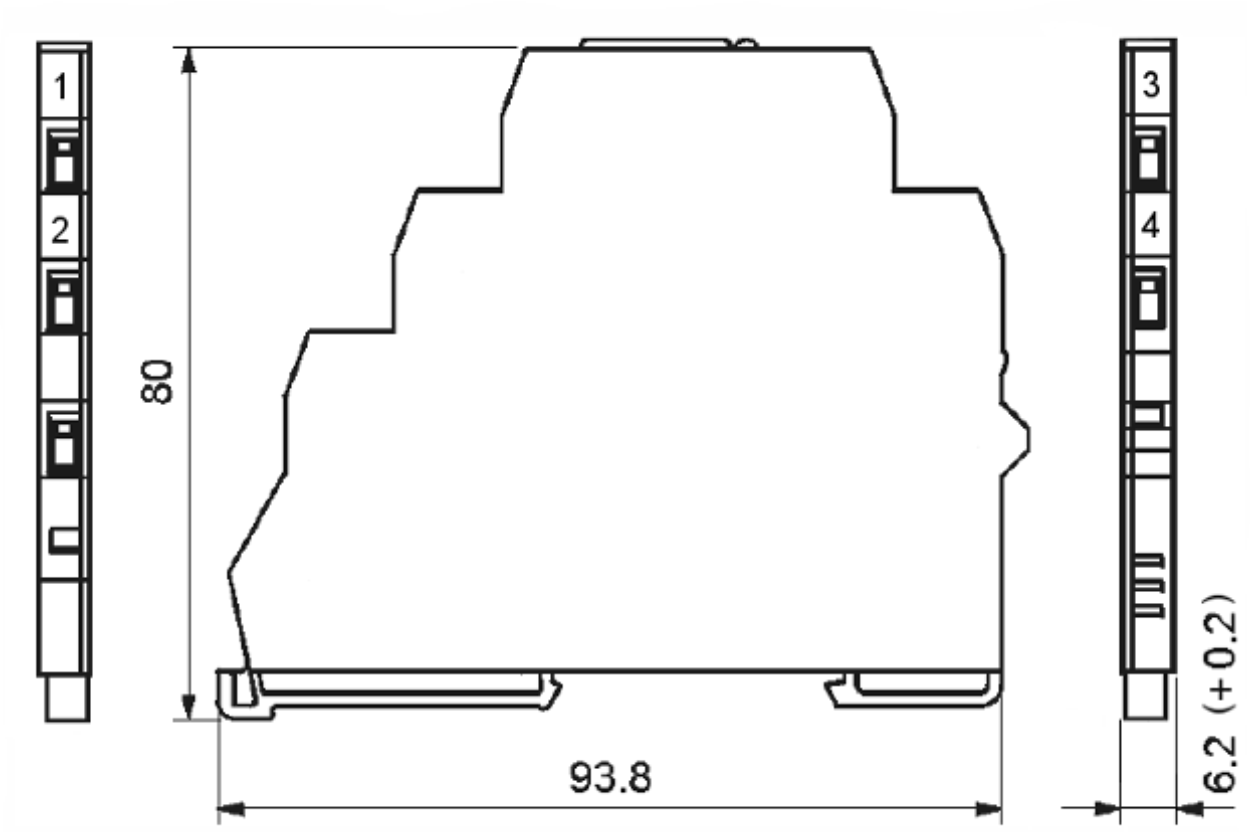
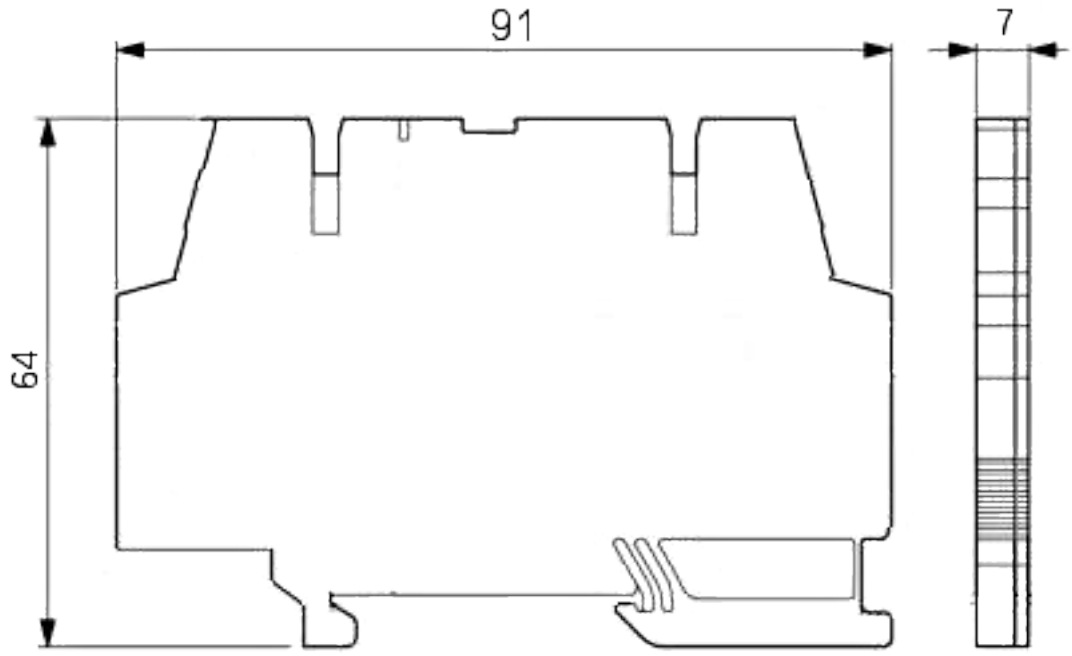
T924sP-1



T924sP-2



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