

LABOR – ASTER

INDUSTRIAL AUTOMATION



Certyfikat nr QS/14/07



AC 083
QMS

ADJUSTABLE SEPARATOR with universal supply TYPE S2Us-U

- Rail housing 12,5mm width
- Input and output signal set using code switches
- Ability to supply the input 4÷25mA loop with two-wire transmitter
- Switch-selectable current output 4÷20mA active or passive
- Wide range of supply voltage 21÷240VAC/DC
- Full galvanic insulation of circuits: input, output and power supply



APPLICATION:

Separator **S2Us-G** acts as universal separator with user-adjustable standards of input and output signals. Settings of input and output standards 0÷20mA, 4÷20mA, 0÷10V are performed using four code-switches: SW1, SW2, SW3, SW4 placed inside the housing. A two-position switch (SW2) is on the input side and three switches (SW1, SW3, SW4) are located on the output side. The separator can function as a power supply-separator for two-wire converters, controlling separator input (terminals 1, 3) Separator output current 4÷20mA can be active or passive. At the passive output, separator controls a 4÷20mA loop, powered with e.g. controller.

A typical application of the separator is a galvanic separation of measurement circuits installed on the object from the central unit. This reduces the impact of object interference on drivers, controllers and recorders, and ensures the safety of these devices isolating their inputs from hazards resulting from cooperation with distant signal sources (lightning, power energy, radio frequency interference, potential differences between the object and central unit).

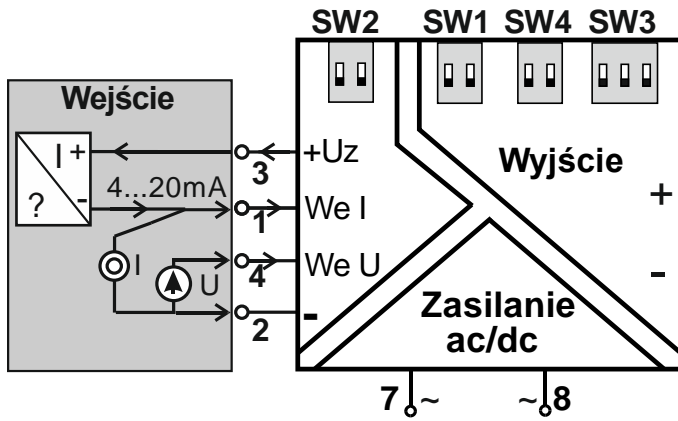
Replacement of any input signal into any output signal makes it easy to fit devices working in various standards.

Setting of standards (TABLE 1):

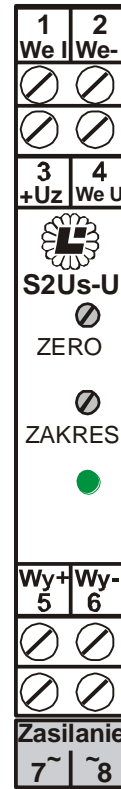
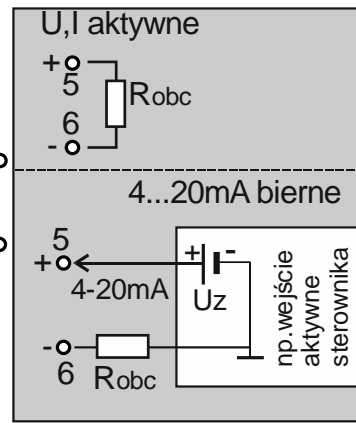
- Setting of the input and output standards is done by moving the lever of coded switches, according to Table 1.
- Calibration of the beginning of the "zero" range and the increase of "span" is performed within $\pm 8\%$ using potentiometers accessible through holes in the front panel.
- Other input and output signals can be arranged on request.

BASIC TECHNICAL PARAMETERS:

Input signal	- 0/4...20mA, 0...10V switch-selectable
Input resistance	- current inputs 70Ω voltage inputs $\geq 100k\Omega$
Input current loop 4...20mA supply	- 24V dc $\pm 1,5V$
Output signal	- 0/4...20mA active, 4...20mA passive, 0...10V set using 3 switches
Load resistance	- current outputs max 750Ω
Robc	- voltage outputs $\geq 2k\Omega$
Supply voltage	- 21...240VAC/DC; 2VA (W)
Class	- 0,15%
Nonlinearity	- $\pm 0,05\%$
Temperature drift	- $\pm 0,015\% / ^\circ C$
Voltage, current or Robc changes error	- $\pm 0,02\%$
Galvanic insulation	- 2kV, 50Hz mutual between input, output and power supply
Time constant	- 0,2s or other after agreement
Rail housing:	- width – 12,5 mm height - 99 mm depth - 114,5 mm
Protection level	- IP40
mounting	- on TS35 rail
Operation conditions:	
ambient temperature	- -30...+60°C
ambient atmosphere	- dust and corrosive gases free
relative humidity	- up to 90%
Security requirements	- PN-EN 61010-1:2002
EMC requirements	- PN-EN 61000-6-1 PN-EN 61000-6-3



Description of terminals



Front panel view

TABLE 1 Setting of in/out standards				Switches position								
Input range	Terminals	Output range	Terminals	SW2		SW1		SW4		SW3		
				1	2	1	2	1	2	1	2	3
4...20mA	+1, -2	0...20mA	+5, -6	OFF	ON	OFF	ON	OFF	OFF	ON	OFF	ON
4...20mA	+1, -2	4...20mA active	+5, -6	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
4...20mA	+1, -2	0...10V	+5, -6	OFF	ON	ON	OFF	ON	OFF	ON	OFF	ON
4...20mA	+1, -2	4...20mA passive	+5, -6	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
Two-wire converter	+3, -1	0...20mA	+5, -6	OFF	ON	OFF	ON	OFF	OFF	ON	OFF	ON
Two-wire converter	+3, -1	4...20mA active	+5, -6	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
Two-wire converter	+3, -1	0...10V	+5, -6	OFF	ON	ON	OFF	ON	OFF	ON	OFF	ON
Two-wire converter	+3, -1	4...20mA passive	+5, -6	OFF	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
0...20mA	+1, -2	0...20mA	+5, -6	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
0...20mA	+1, -2	4...20mA active	+5, -6	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
0...20mA	+1, -2	0...10V	+5, -6	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON
0...20mA	+1, -2	4...20mA passive	+5, -6	ON	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
0...10V	+4, -2	0...20mA	+5, -6	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
0...10V	+4, -2	4...20mA active	+5, -6	ON	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
0...10V	+4, -2	0...10V	+5, -6	OFF	OFF	ON	OFF	ON	OFF	ON	OFF	ON
0...10V	+4, -2	4...20mA passive	+5, -6	ON	OFF	OFF	OFF	ON	ON	OFF	ON	OFF

HOW TO ORDER: Adjustable separator with universal supply, type S2Us-U

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