

LABOR – ASTER

INDUSTRY AUTOMATICS



Certyfikat nr QS/14/07



AC 083
QMS

Analog Signal to Frequency SF-S2A CONVERTER

- **Conversion to frequency:**
 - of current or voltage ($0/4\div 20\text{mA}$, $0\div 10\text{V}$)
 - any agreed signal
 - power supply and measurement $4\div 20\text{mA}$ by two-wire converter
- **Galvanic separation of input and output circuit**

APPLICATION :

The converter **SF-S2A** converts input analog signal value into a pulses frequency string in the open collector „OC” (NPN) type standard. Converter output circuit is galvanically separated from the input circuit, which cooperates with the sensor. The converter is of high measurement accuracy.

After turning on the power supply correct output signal will appear after time equal to lower frequency period $t=1/f_{\text{lower}}$.

SPECIFICATION :

Input signal	- $4\div 20\text{mA}$, $0\div 20\text{mA}$, $0\div 10\text{V}$
	- any signal on agreement
	- 24 Vdc supply of the two-wire converter $4\div 20\text{mA}$ loop
Output signal	- OC 45V/90mA, typically 1kHz
	- alternatively 10Hz, 100Hz, 2kHz
Accuracy class	- 0,2%
Non linearity	- $\pm 0,03\%$ for $\leq 1\text{kHz}$
	- $\pm 0,06\%$ for 2kHz
Temperature drift	- 0,01 %/°C
Voltage, supply and load alterations error	- $\pm 0,005\%$ /V
Supply voltage	- 18...28V/60mA
Time constant	- typically 0,2s
Galvanic separation	- 2kV, 50Hz
LED signaling:	
- normal operation	- diode lights
- line failure	- diode blinks
Housing	- rail IP40 width 22,5mm
Security requirements	- PN-EN 61010-1:2002
EMC requirements	- PN-EN 61000-6-1
	- PN-EN 61000-6-3

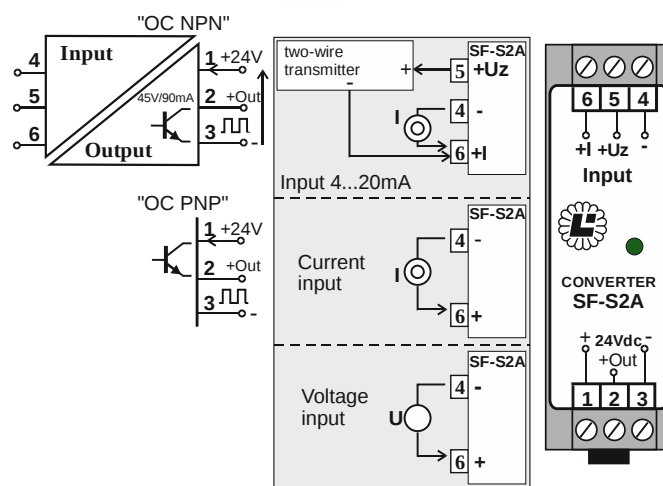
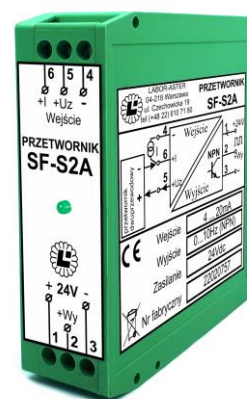
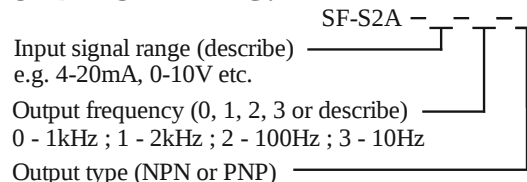


Fig.1 Terminals description of the converter SF-S2A

ORDERS MAKING:



In case of parameters other than standard please describe them in the order. Standard output is NPN. If PNP is needed please specify it in the order.

Example of an order:

Signal to frequency converter:

a) input $4\div 20\text{mA}$, output frequency $0\div 1\text{kHz}$, OC NPN type:

SF-S2A – (4...20mA) – 0 – NPN

b) input $4\div 20\text{mA}$, $f_{\text{lower}}=5\text{Hz}$, $f_{\text{upper}}=150\text{Hz}$, OC PNP type:

SF-S2A – (4...20mA) – (5...150Hz) – PNP

Production and distribution:

LABOR – ASTER

Poland, 04-218 Warsaw, ul. Czechowicka 19

tel. +48 22 610 71 80 ; +48 22 610 89 45; fax. +48 22 610 89 48

e-mail: biuro@labor-automatyka.pl labor@labor-automatyka.pl ; [http:// www.labor-automatyka.pl](http://www.labor-automatyka.pl)

The manufacturer reserves the right to make changes to the product.

Issue 05/2022