



LABOR – ASTER

INDUSTRIAL AUTOMATION



Certyfikat nr QS/14/07



AC 083
QMS

CIRCUITS SEPARATOR TYPE As 416

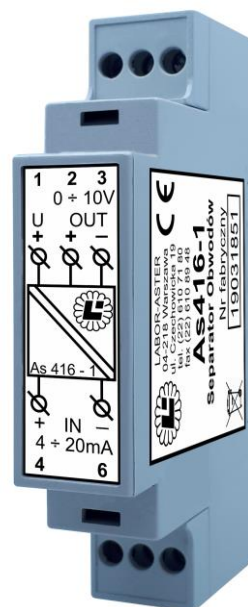
APPLICATION:

Circuits separator **As 416** is designed to galvanically separate circuits and conversion of signal standards in measurement systems and automatic regulation of industrial processes.

Separator **As 416** converts signal $4 \div 20\text{mA}$ to galvanically separated voltage signal $0 \div 10\text{V}$, $0 \div 5\text{V}$, $2 \div 10\text{V}$ or $1 \div 5\text{V}$.

As 416 can be used in measurement channels where are problems with separation signal groundings, large interferences especially from external power suppliers and where are needs of conversion analog signals.

Circuits separator **As 416** is designed to be mounted on TS35 rail in control closets.

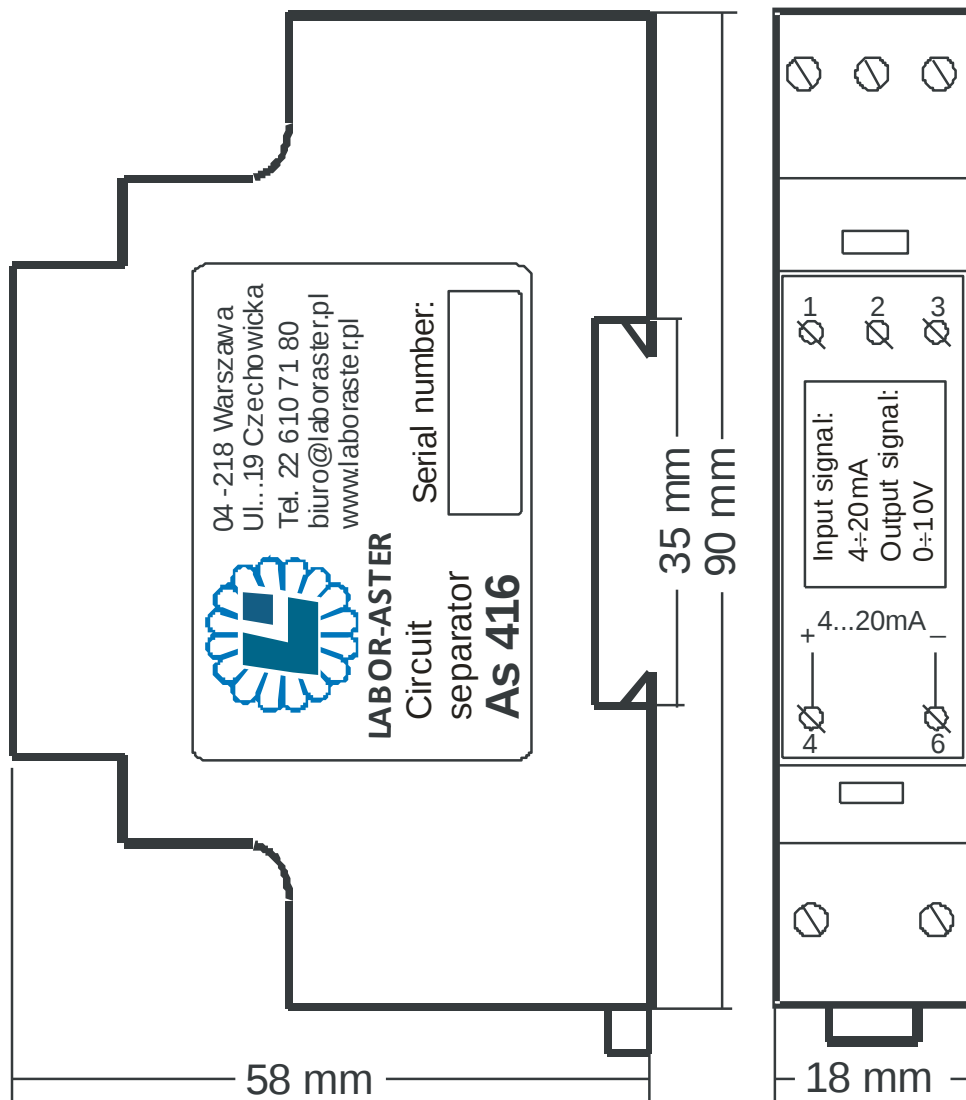


BASIC TECHNIAL PARAMETERS

1. **Input signal**
 - a. max. destruction current - $4 \div 20\text{mA}$
 - b. voltage dropout - 60mA
 - c. input is resistant to changing polarity - $< 6\text{V}$
 - d. input capacity - 100nF
2. **Output signal**
(three-wire version)
 - a. voltage limit - $0 \div 10\text{V}$, $0 \div 5\text{V}$, $2 \div 10\text{V}$, $1 \div 5\text{V}$ or other range
 - b. power supply voltage
 - nominal - 24V_{DC}
 - current consumption - 3.5mA
 - c. permissible power
 - supply voltage - $16 \div 36 \text{V}_{\text{DC}}$
 - d. nominal load resistance at $U_{\text{sup}}=16\text{V}$ - $R_0 \geq 10\text{k}\Omega$
 - e. load resistance permissible at $U_{\text{sup}}=24\text{V}$ - $R_0 \geq U_{\text{out}} \cdot 3.3 / (U_z - 12.7\text{V})$

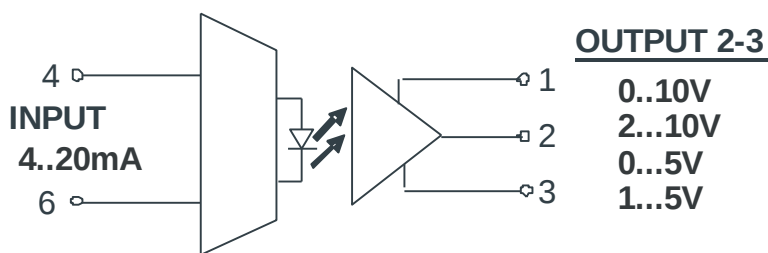
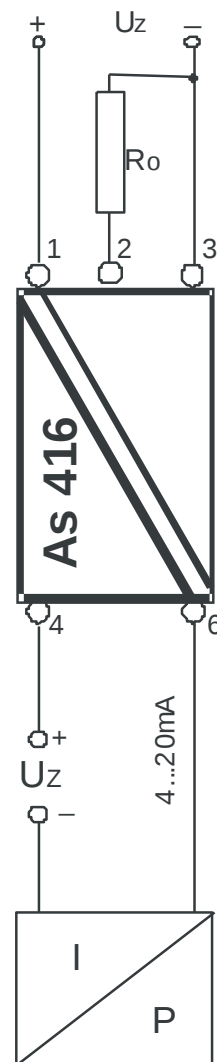
3. **Conversion accuracy:**
 - a. basic error - $< 0.2\%$
 - b. nonlinearity error - $< 0.02\%$
 - c. error due to ambient temperature changes - $< 0.0075\%/^{\circ}\text{C}$
 - d. error due to power supply changes - $< 0.005\%/V$
 - e. error due to load changes - $< 0.05\%/k\Omega$
4. **Housing protection level** - IP40
5. **Operating conditions**
 - Ambient temperature - storing: $-30^{\circ}\text{C} \dots +60^{\circ}\text{C}$
 - Ambient temperature - working: $-25^{\circ}\text{C} \dots +60^{\circ}\text{C}$
 - Relative humidity: max 90%, no water vapor condensation
 - Ambient atmosphere: free from dust and aggressive fumes
6. **Mounting** - on rail TS35
7. **Breakdown voltage** - $5 \text{ kVrms acc. UL1577}$

DIMENSIONS



CONNECTION DIAGRAM

VERSION WITH THREE-WIRE OUTPUT



HOW TO CONNECT ELECTRIC SIGNALS

For connection to the separator use cables with cross-section of 0,5...1,5mm²

NOTE:

For voltage version with too high voltage dropout on connection cable to terminal U_z (1) may be used additional cable separating supply grounding from signal grounding.

HOW TO ORDER

SEPARATOR As 416 – X

Output signal

1 - 0 ÷ 10V

2 - 2 ÷ 10V

3 - 0 ÷ 5V

4 - 1 ÷ 5V

Other versions after agreement with manufacturer .

Production and distribution:

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

Edition 07/2024