

Power Measuring Converter

AD-LU 410 GA
AD-LU 420 GA

Application:

Particularly in power plants, but also in many other switchgear areas, active and reactive power must be measured continuously for the optimisation of processes. With new power measuring converter of the series AD-LU 410/420 GA, effective components for the heavy current technology are available.

Due to unit specific adaptation, the converters are always adapted to the individual cases. The accurate power values and working impulses area available as standard signals for further processing.



Up to 4-lead systems, loads as required

The standard units are designed for an active or reactive power measuring a 4-lead alternating current network in heavy-current areas, the individual phases can be loaded as required. The output signal represents here the unit nominal output specified by the user, dependant on the current or voltage transformer used. The measuring converters are ready configured and can be used immediately.

Power intake or discharge

With the measuring converters of series AD-LU, not only the power discharge can be measured. Combined with a bipolar output, the power discharge as well as the power intake is shown.

For sinusoidal and non-sinusoidal signal sizes

Exact multipliers form the product of voltage and current (TDM procedure). It does not matter whether the signal sizes are sinusoidal or non-sinusoidal.

Bipolar analogue output

The galvanically separated output stage can also be design bipolar on request. Therefore, the power discharge or the power intake is recognisable direct at the prefix of the output signal. The output can be loaded with a load up to 800 Ohm, current limited and short circuit proof. Generously designed protection measures ensure a safe operation.

High accuracy

All input size are registered via precise and highly phase-true current an voltage transformers. The multiplier stage and the subsequent amplifier are aligned exactly to the user data and ensure class accuracy at any time, not only at reference conditions.

Optional working contact

At the additional contact output, work contact (kWh) can be output. The value of a working impulse will be adjusted to the application.

Specification

Active Power Measuring Converter AD-LU 410 GA
Reactive Power Measuring Converter AD-LU 420 GA

Inputs alternating current:

| | |
|--------------------------------|-------------------------------|
| - input | 1 A; 5 A |
| - power consumption | max. 0,3 VA each current path |
| - continuous overload capacity | 10 A |
| - impulse overload capacity | 100 A |

Inputs alternating voltage

| | |
|--------------------------------|----------------------|
| - input | max. 630 V |
| - power consumption | max. 0,2 VA je Phase |
| - continuous overload capacity | 1,2 x U_{nenn} |
| - impulse overload capacity | 2 x U_{nenn} |

Output current

| | |
|--------------------------|---|
| - open circuit voltage | <27 V |
| - terminal voltage ratio | max. +/- 24 mA, display of energy recovery possible |
| - current limiting | approx. 30 mA |
| - output burden | max. 800 Ohm |

Output voltage

| | |
|--------------------------|---|
| - short circuit current | max. 30 mA, continual |
| - terminal voltage ratio | max. +/-12 V, display of energy recovery possible |
| - output burden | min. 500 Ohm |

Errors, effects of influence

| | |
|-------------------------|---------------------------------------|
| - linearity errors | <0,1% (under reference conditions) |
| - temperature influence | approx. 0,3% over 50K |
| - frequency influence | approx. 0,5% by 30..40Hz |
| - phase angel influence | approx. 0,2% $0_{(cap.)}$ 1..0(ind.) |
| - warm up time | 30 min. |

Insulation voltages

| | |
|-----------------------|--------------|
| - input/output | 5 kV, 1 min. |
| - signal/power-supply | 5 kV, 1 min. |
| - EMC-check | EMC-conform |

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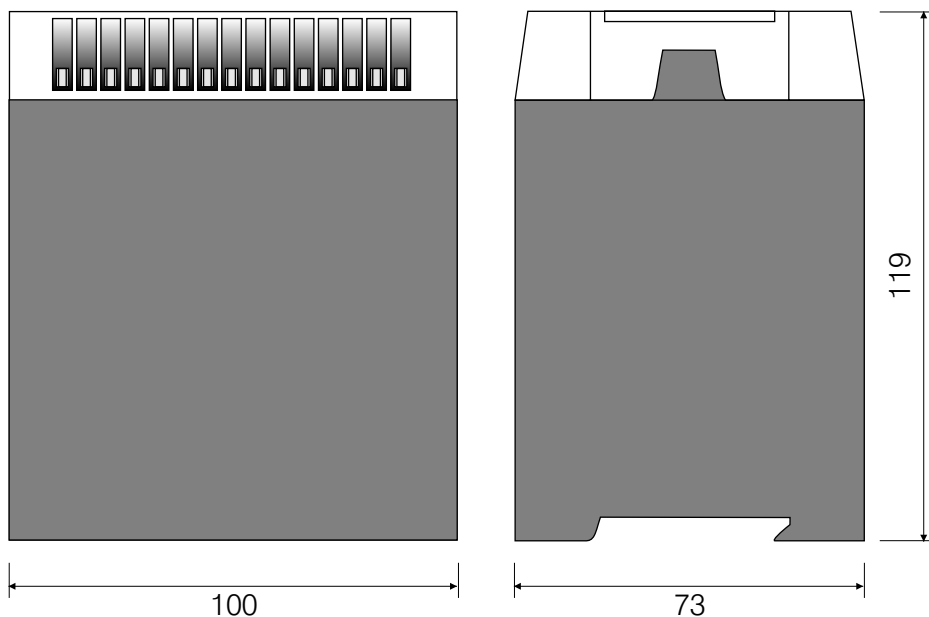
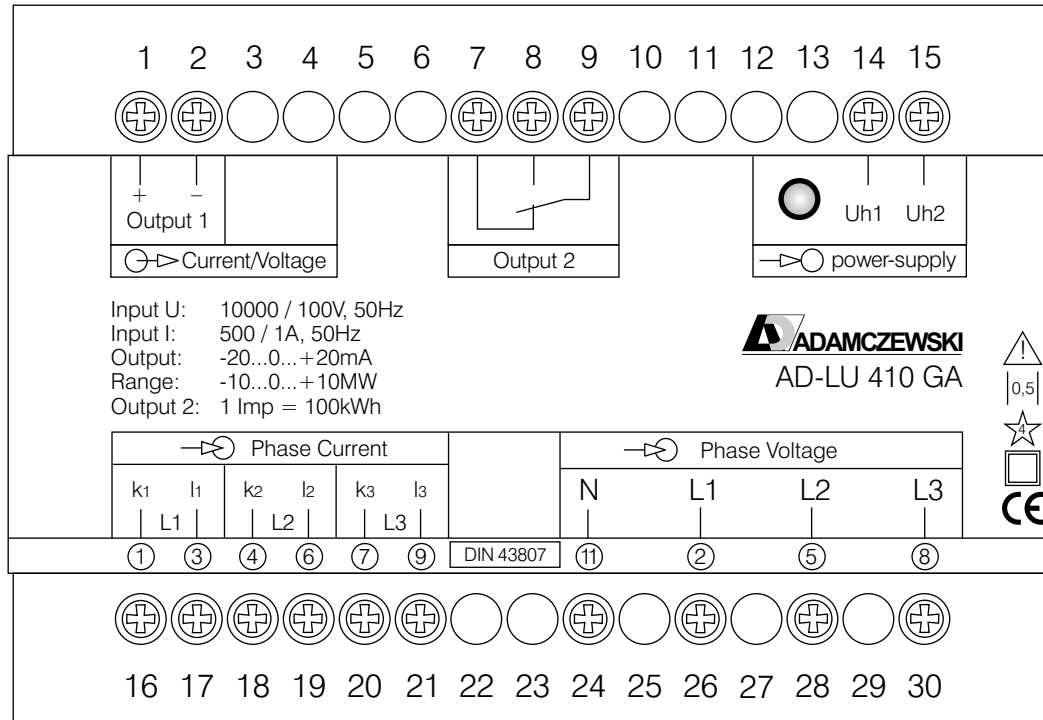
AD-LU 410 GA
AD-LU 420 GA

Connections and dimensions:

AD-LU 410 GA (active Power Measuring Converter)
AD-LU 420 GA (Reactive Power Measuring Converter)

weight: ca. 650 g
protection: IP 20
manner of fastening:
DIN rail 35mm (EN50022)

connection data:
fine-wire: 2,5 mm²
single-wire: 4,0 mm²



ADAMCZEWSKI
Elektronische Messtechnik GmbH

Felix-Wankel-Str. 13
Tel. +49 (0)7046-875
vertrieb@ad-messtechnik.de

74374 Zaberfeld
Fax +49 (0)7046-7678
www.adamczewski.com