Power Measurement Transducer

AD-LU 50 GT

Description

The digital power measuring transducer AD-LU 50 GT measures all quantities of the three-phase network (current, voltage, energy, harmonics, phase angle, active power, reactive power, apparent power …) and converts these measuring values onto two freely scalable analogue outputs (20 mA / 10 V). The unit is therefore optimal suitable for integration in energy management systems. 3- or 4-wire systems can be measured. 4-wire networks can be loaded balanced or unbalanced, whereby 3-wire networks can only be measured balanced. The AD-LU 50 GT is supplied via its measuring voltage L1. The current measuring is carried out via the bar-type transformer mounted on the front. For measuring of high voltages or high currents, external transformers can be connected in series at any time. The AD-LU 50 GT can be read out and parameterised via the integral interface with the aid of the available AD-Studio. An LED at the front signals the operating condition. The compact type of construction and the high performance ability with simultaneous low energy consumption allows usage in almost any application.

Application

Typical usage in plant, machines or energy management systems for balancing and determination of energy distribution.



Specific characteristics

-
- compact design
- current measurement via clamp on current transfomrers
- supplied via its measuring voltage L1
- current and voltage output
- monitoring all variables of the three-phase network
- parameterization via AD-Studio

Business data

Order number

Power measurement transducer AD-LU 50 GT	AD-LU 50 GT

Accessory (optional)

VarioPass3	USB-Schnittstellenadapter
AD-Studio	Konfigurationssoftware

SALES & ADVICE
GRUBATEC MESS- UND REGELTECHNIK

MANUFACTURER
ADAMCZEWSKI Elektronische Messtechnik

Grubatec AG · Wölferstrasse 5 · CH-4414 Füllinsdorf
+41 55 617 00 80 · info@grubatec.ch · www.grubatec.ch

Subject to technical changes and printing errors.

Power Measurement Transducer

AD-LU 50 GT

Information

Downloads

Tender text	lu50gt.zip
Safety instructions	ad-safety-instructions.pdf

Technical specifications

Current-inputs (I1...I3)

Measuring ranges	0 ... 1 A AC; 0 ... 5 A AC; 0 ... 20 A AC
Max. conductor diameter	4,8 mm
Max. measurable harmonic	40

Voltage-inputs (L1...L3)

Measuring range	80 ... 253 V AC
Input resistance	> 900 kOhm

Output current

Output range	0/4 ... 20 mA
Max. load	400 Ohm
Resolution	11 Bit
Residual ripple	25 µAss

Output voltage

Output range	0/2 ... 10 V
Min. load	10 kOhm
Resolution	11 Bit
Residual ripple	30 mVss

Supply

Voltage range AC	80 ... 253 V AC, 50/60 Hz (see voltage-inputs)
Nominal voltage AC	230 V AC
Power consumption	max. 3,9 VA

Transfer behavior - in reference to the current value

Basic accuracy	< 0,5 % (class 0.5)
Temperature influence	80 ppm/K
Response time	< 0,5 s

Housing

Dimensions (WxHxD)	71x90x70 mm
Type of protection	IP 20
Connection method	screw clamp
Terminals, wire cross section	2,5 mm² flex wire / 4 mm² one wire
Bolting torque terminals	0,6 Nm
Skinning length	6 mm
Weight	~ 170 g
Manner of fastening	35 mm DIN rail 35mm

Environmental conditions

Ambient temperature	-10 ... 50 °C
Storage and transport	-10 ... 70 °C (no condensation)

EMC

Product family standard	EN 61326-1 [1]
Emitted interference	EN 55011, CISPR11 Cl. B, Gr. 1

Electrical safety requirements

Product family standard	EN 61010-1
Overvoltage category	II
Pollution degree	2
Safety measurement	EN 61010-2-030
Measurement category	CAT III

Galvanic isolation, test voltages

Power supply to analog outputs	4 kV, 50 Hz (1 min.)
Power supply to relay	4 kV, 50 Hz (1 min.)
Relay to analog outputs	4 kV, 50 Hz (1 min.)

Protection circuits

Input	electrical surge protection
Power supply	protection against over-temperature, over-voltage and over-current
Analog outputs	electrical surge protection

[1] During checking, slight signal deviations are possible.

SALES & ADVICE
GRUBATEC MESS- UND REGELTECHNIK

MANUFACTURER
ADAMCZEWSKI Elektronische Messtechnik

Grubatec AG · Wölferstrasse 5 · CH-4414 Füllinsdorf
+41 55 617 00 80 · info@grubatec.ch · www.grubatec.ch

Subject to technical changes and printing errors.

Power Measurement Transducer

AD-LU 50 GT

Block and wiring diagram

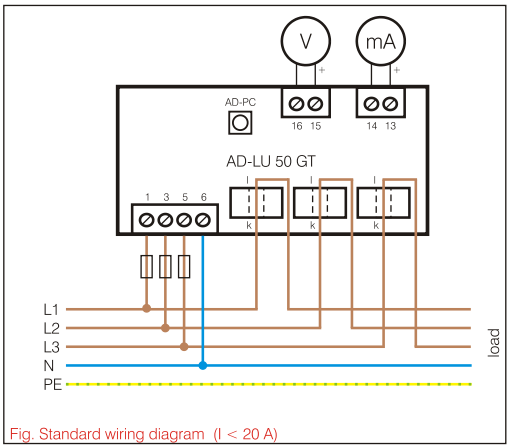


Fig. Standard wiring diagram (I < 20 A)

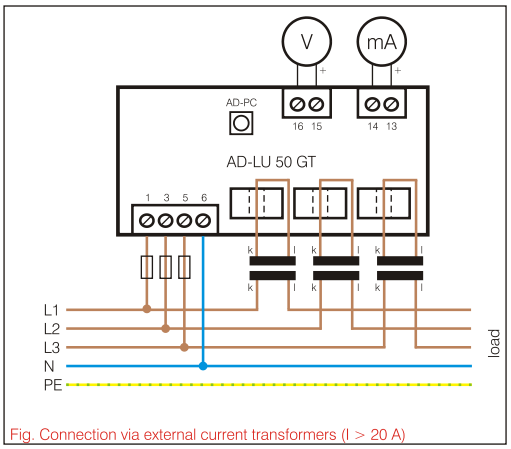


Fig. Connection via external current transformers (I > 20 A)

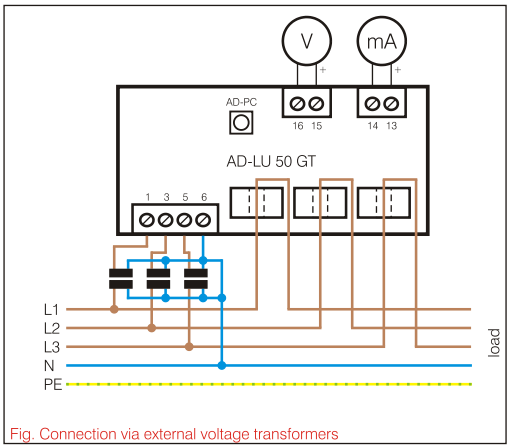
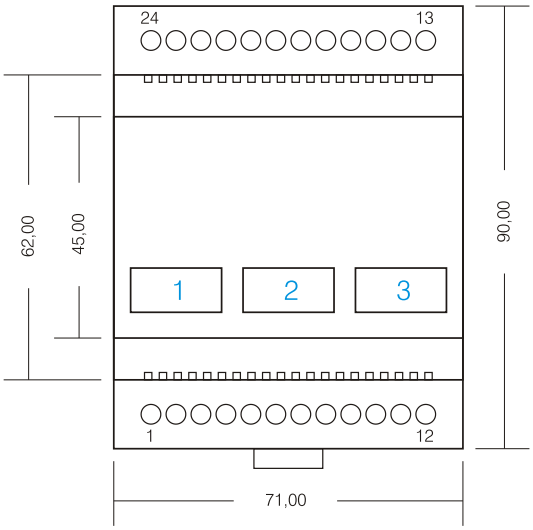
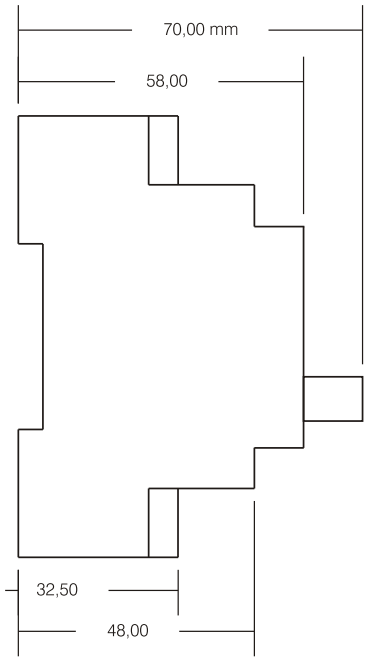


Fig. Connection via external voltage transformers

Dimensions





Hinweis:
Für die Messung symmetrischer Lasten kann das Gerät so umparametriert werden, dass nur ein Stromwandler für die Messung notwendig ist.
In diesem Fall bitte die Strommessung mit Stromwandler 1 auf Phase L1 durchführen.

SALES & ADVICE
GRUBATEC
MESS- UND REGELTECHNIK

MANUFACTURER
ADAMCZEWSKI
Elektronische Messtechnik

Grubatec AG · Wölferstrasse 5 · CH-4414 Füllinsdorf
+41 55 617 00 80 · info@grubatec.ch · www.grubatec.ch

Subject to technical changes and printing errors.