

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 transformers
- 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

Accessory (optional)

VarioPass3 USB-Schnittstellenadapter
AD-Studio Konfigurationssoftware



Information**Downloads**Tender text [lu50gt.zip](#)**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.

Block and wiring diagram

Dimensions

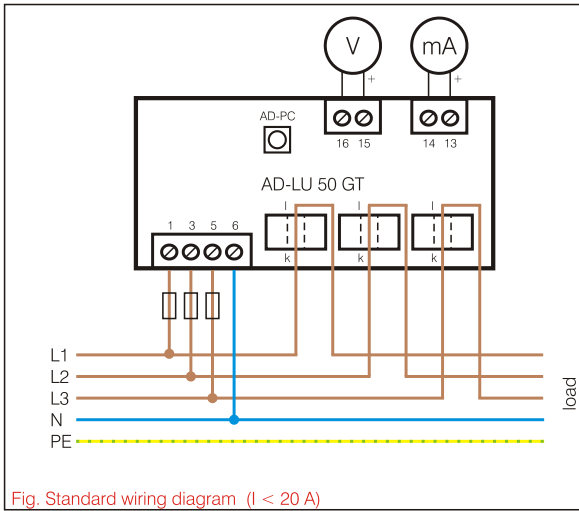


Fig. Standard wiring diagram (I < 20 A)

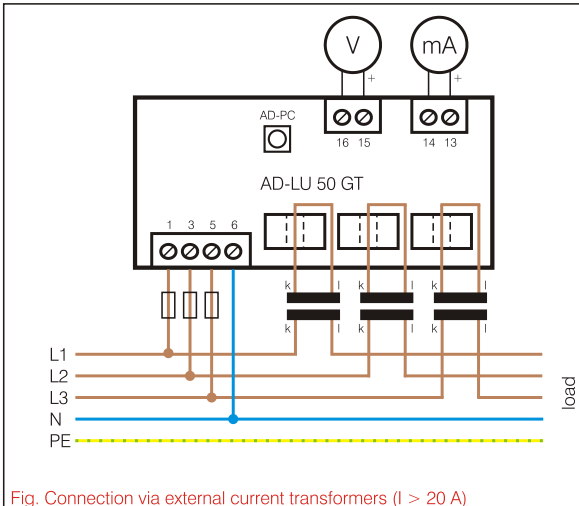


Fig. Connection via external current transformers (I > 20 A)

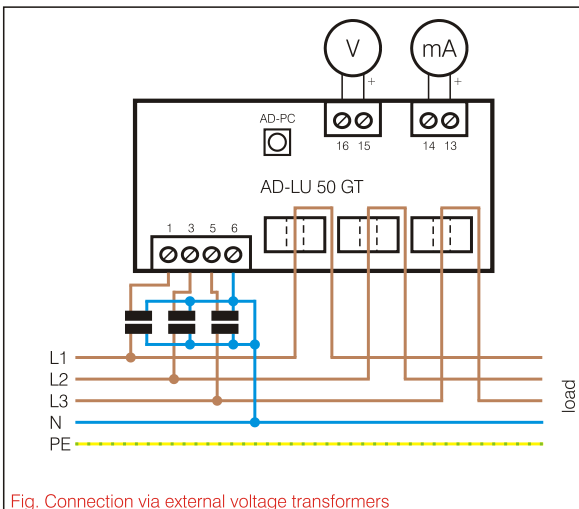
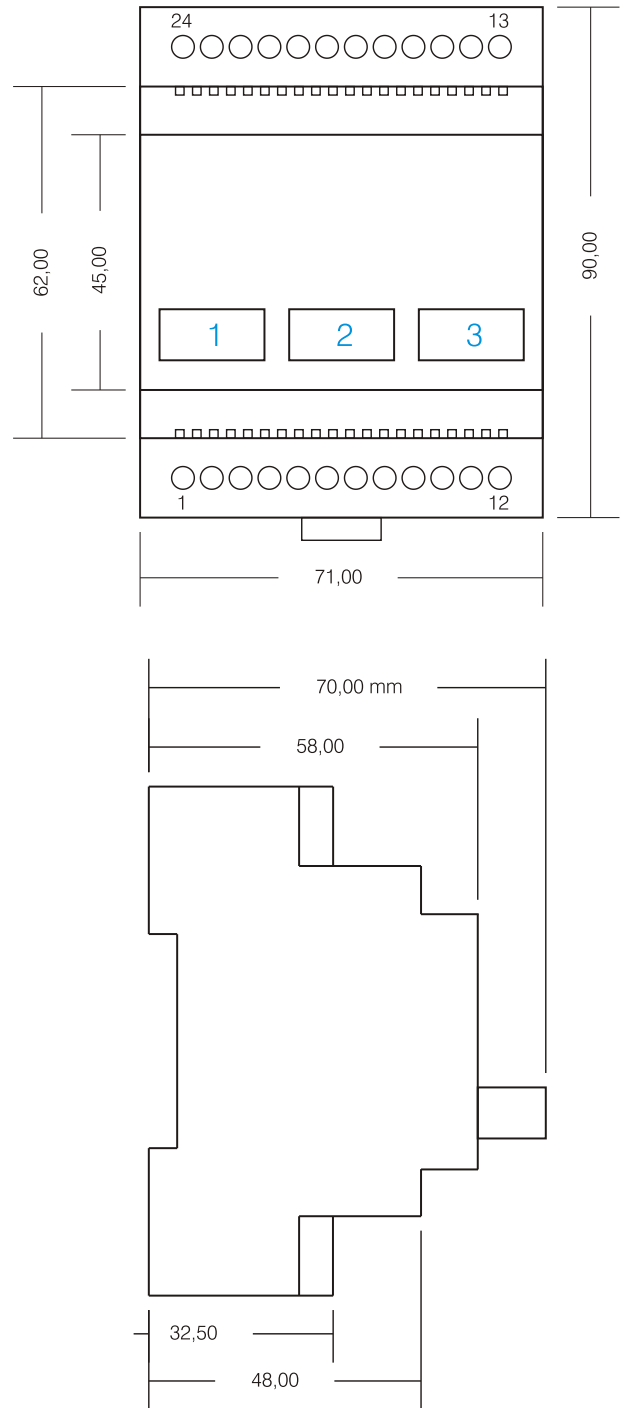


Fig. Connection via external voltage transformers



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.