

3-Phase A.C. Current & Voltage Measurement

Features

- Measurement and display of voltages and currents in 3-phase A.C. mains
- Displays 15-minute averaged measurements (bimetallic function)
- Detects and saves peak values (drag pointer function)
- Automatically sequenced display of measured values
- 6 user-selectable standard current transformer ratios

Description

Typical A.C. power systems require either three ammeters (one per phase), or one ammeter with a phase-selector switch, plus at least one volt-meter. The **NETCONTROL** combines all these functions into a single panel instrument, which measures all phase currents and voltages, and displays them sequentially on its large LED display. Thus, a single 96 mm² panel instrument replaces several conventional meters, eliminates selector switches, and reduces panel space and wiring, while providing higher measurement accuracy.

NETCONTROL measures phase-to-phase and phase-to-neutral voltages, as well as phase currents. The values of measured currents and voltages, 15-minute averaged currents, and peak currents are displayed one after the other.

A version is available for operation with 100V input, using a step-down transformer, but displaying primary mains voltage.

The voltage measuring inputs are also used for the instrument's power supply, further simplifying wiring.

Standard current transformers can be directly connected to the instrument, since shunts are already built into the instrument. Six standard current transformer ratios in the range 10 A to 3000 A (see Ordering Guide on the next page) are pre-programmed in each instrument. Any one of these ratios can be selected by the user, using the front-panel key-switch. The ratio selection is protected against

power supply interruptions.

Two operating modes are selectable. In one mode the currents are measured immediately and displayed, while in the second mode the currents are averaged over 15-minute periods (analogous to bimetallic averaging ammeters).

NETCONTROL also records and displays peak values (analogous to drag pointer meters). The standard instrument is configured for 5A secondary current transformers, with 0.01 Ω shunts installed internally. Optionally, it is available for use with 1A secondary current transformers, with 0.05 Ω shunts.

Models and Ordering Data

NETCONTROL

Order per Ordering Guide on the next page. e.g.:

Netcontrol 400V_{AC} / Version 02 / 5A

Accessories:

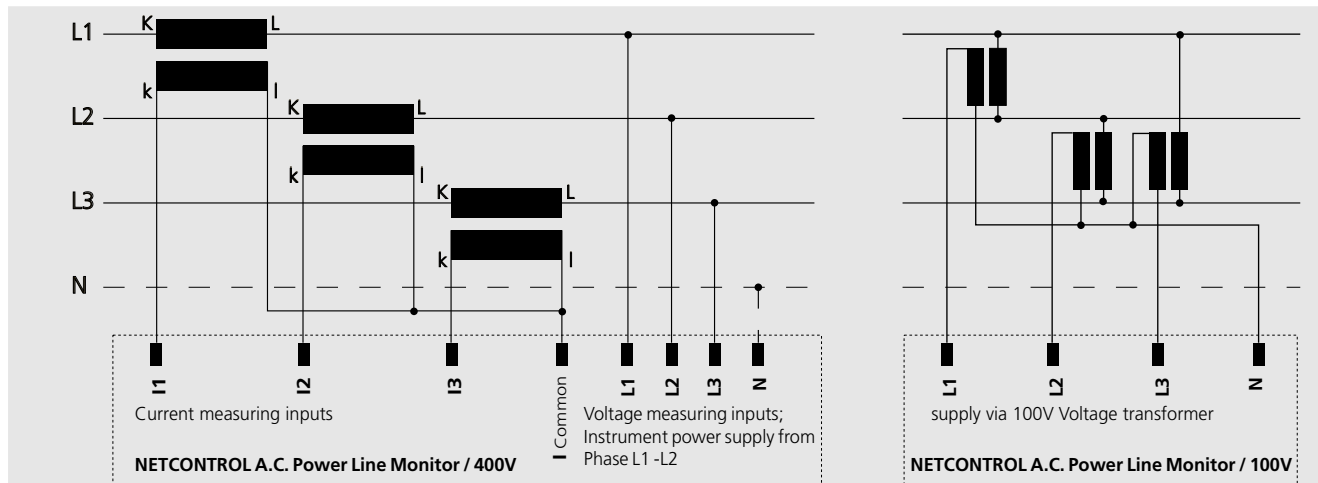
DIN rail mounting adaptor	95300026
EN 50022-35x7.5	
Protective hood IP65	91900552



Functions

- Measures phase-to-phase and phase-to-neutral voltages
- Phase current measurement using 5A (opt. 1A) secondary current transformers; 6 user-selectable transformer ratios
- Manual sequencing of phase voltage and current displays by key operation
- Automatic sequencing of phase voltage and current displays at 5-second intervals
- Large digital 7-segment LED display; red
- Digit height 14 mm
- Large illuminated symbols clearly indicate display mode/status
- 15-minute averaged current measurements (bimetallic function)
- Peak values detection and saving (drag pointer function)
- Low panel depth: 65 mm
- Reduces installation and wiring costs
- DIN 43700 standard panel mounting enclosure

Connection Diagramm



Ordering Guide

Current Transformer Ratios:

Nominal Primary Current Values (I_{AC})

01	100 / 200 / 300 / 500 / 800 / 1000
02	100 / 150 / 200 / 300 / 400 / 1000
03	200 / 300 / 400 / 600 / 1000 / 1600
04	200 / 300 / 400 / 600 / 1000 / 1200
05	100 / 300 / 600 / 800 / 1000 / 1200
06	200 / 400 / 600 / 800 / 1000 / 1200
07	100 / 150 / 250 / 300 / 400 / 1000
08	500 / 1000 / 1500 / 2000 / 2500 / 3000
09	200 / 300 / 400 / 500 / 600 / 800
10	10 / 15 / 30 / 50 / 80 / 100
11	200 / 300 / 600 / 800 / 1000 / 1250
12	500 / 1000 / 1600 / 2000 / 2500 / 3000

Standard secondary current: 5A

- Optionally, 1A secondary current compatible instruments may be ordered
- Please specify power system or instrument supply voltage (Instrument supply from phases L1-L2)
- Specify primary voltage for 100V operation through voltage transformer

Technical Data

Rated voltage	400 / 230 / 100 V _{AC}
Voltage range	0.8x to 1.1x nominal voltage (U_N)
Frequency range	50 / 60 Hz
Power consumption	ca. 3 VA
Input impedance	Voltage inp. 1M Ω
Current inputs	(Shunts) 0.01 Ω or (optionally) 0.05 Ω
Accuracy	Class 1
Temperature effect	<0,01% / K
Ambient temperature	+5 °C to +50 °C
Storage temperature	-20 °C to +70 °C
Creep and air paths	Group III per VDE 0110 Pollution level 2
Protection class	Front IP 20, Terminals IP 00 Per DIN VDE 0470-1 (11/92)
Measuring ranges:	
Voltage	0 to 600V _{AC} (or 0,8 x to 1,1 x U_N)
Current	0 to 5 A _{AC} through 0,01 Ω shunt 0 to 1 A _{AC} through 0,05 Ω shunt
Display range	0 to 9999
Digits	7-segment red LED, 14mm height
Connections	Plug-in spring-clamp con. (no screws)
Wire cross section	2,5 mm ² , fine-stranded wire; max. 7.0 mm, stripped
Weight	Approx. 300 g

Dimensions

