DAT 25
POWER-LINE TRANSDUCERS

T25-PA..

PHASE ANGLE

The zero-crossing detector modulation conversion principle is used to produce a corresponding linear DC output signal proportional to phase angle of the power system. The transducers can be use in a single or three phase system.

Model

T25-PA10 - Single phase Phase Angle transducer
T25-PA12 - Three phase Phase Angle transducer

General Specifications

Test voltage
4kV AC rms 1min between terminal/case
2kV AC rms 1min between
input/output/auxillary according to IEC801-4

Impulse test
5kV, 1.2/50μs according to IEC 255-4

Noise test
2.5kV, 1MHz according to IEC 255-22-1

Radio Screening
RFI degree complies with VDE0875

Working condition
-5 °C to 60 °C, 20-99% RH
non condensing

Storage condition
-20 °C to 70 °C, 20-99% RH
non condensing

Humidity
JWE operation class according to
DIN 40040

Stability
100 ppm/°C, < ± 0.2% drift per year,
non cumulative

Magnetic effect
<0.05% change 1M centre 100AT,
synchronized with line frequency

Aux power effect
<0.005% per volt change

Technical Specifications

Input

Voltage
120V, 240V or 415V, ± 25%

Burden
0.2VA

permissible overload
1.25 X rated voltage continuous

Current

1A, 5A

Burden
0.3VA typically

Permissible overload
2 X rated cotinuous,
10 X rated - 10secs,
25 X rated - 2secs,
50 X rated - 1sec.

Frequency
50 or 60 Hz, ± 2hz

Measuring range
± 30°, ± 60°, ± 90°, ± 80° & 0-360°

Output

Output ranges
0 ... 1 mA into 0-10kΩ
0 ... 5 mA into 0-2kΩ
0 ... 10mA into 0-1kΩ
0 ... 20 mA into 0-500Ω
4 ... 20 mA into 0-500Ω

0 ... 1V, min 200Ω
0 ... 5V, min 1kΩ
0 ... 10V, min 2kΩ
1 ... 5V, min 1kΩ
2 ... 10V, min 2kΩ
(other ranges on request)

Accuracy (23 ± 5 °C)
± 0.2% RO according to IEC 688-1

Output load
current - 10V drop max.
voltage - 5mA drive max.

Ripple Factor
less than 0.5% p-p

Response time
<400ms

Output Adjustment
span & zero adjustments where applicable

Auxillary Power Supply

Standard Range
110V, 220V ± 20%
50/60Hz, <3.5VA

Options
self power and other AC power supplies up to 440V ac on request. DC powered models available at additional costs

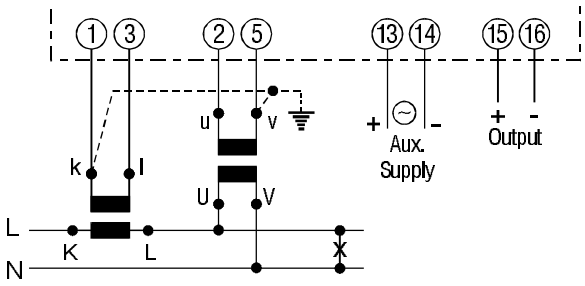
Physical Specifications

Dimensions
100W x 78H x 116D mm

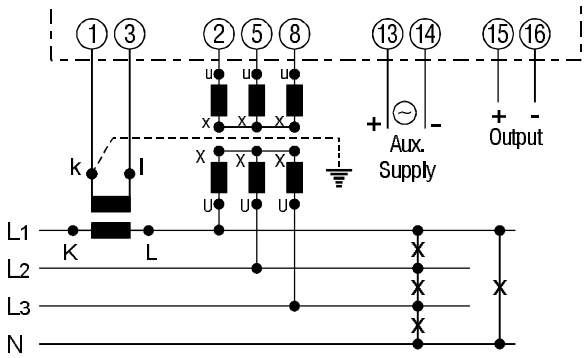
Enclosure code
IP 50 (case)
IP 30 (terminal)
according to IEC 529/DIN40050

Wiring Connections

T25-PA..



Single Phase ~ T25-PA10



3Phase ~ T25-PA20

★ Voltage Transformers & Auxillary Power Supply are shown where applicable.

★ Current Transformer's primary windings are designated in capital K & L which are also commonly represented as P1 & P2 respectively. Its secondary windings are termed k & l which are respectively similar to S1 & S2.

★ Output signal is connected to the 144mm meter scaled to read the Power factor.

Dimensional Drawings