

COMBINED WATT/VAR TRANSDUCER WVT-3

- 0.1 % ACCURACY
- 3-PHASE THREE-WIRE
- BI-DIRECTIONAL OUTPUT
- CURRENT & VOLTAGE OUTPUTS
- WIDE INPUT AND OUTPUT RANGES
- COMPLETE ISOLATION
- 3-YEAR WARRANTY



The WVT-3 combines Watt and Var transducers in one compact housing.

The unit provides two simultaneous proportional dc current outputs extracted from the voltage and current inputs and their relative phase angle.

The polarity of the watt output is positive for unity power factor; polarity for the var output is positive for the lagging power factor.

The WVT-3 can be calibrated to wide input ranges, as well as to wide output formats of currents or voltages.

Complete isolation between input signals, output currents and power supply sections, exceptional input to output high common mode rejection (CMR) and a high degree of filtering, provide a low ripple output current.

The WVT-3 interchangeable output module enables a wide selection of output formats without total unit calibration.

The advanced circuitry design makes the WVT-3 a top grade instrument, offering true 0.1% accuracy in Watt and Var.

The WVT-3 can be ordered in various combinations of input phases (one or three), outputs (watt and/or var) and energy flow direction monitoring formats.

The WVT-3 is housed in a polycarbonate plastic enclosure mounted on a standard DIN rail.

INPUTS

CONNECTION: 1 phase or 3 phase,
3 wire, unrestricted

POWER FACTOR: Unity - to, lead or lag, zero

POWER CALIBRATION SPAN: ± 170 to ± 8500 Watt/Var

OVER RANGE: +42% (at full accuracy)

ISOLATION:

2 KV RMS/1 minute (current input)

4KV RMS/1 minute (voltage and power inputs)

CURRENT

CURRENT SPANS: 1 - 5 Aac RMS (up to 10 Aac - optional)

CURRENT OVER RANGE: +20% (at full accuracy)

PEAK OVERLOAD:

40 Aac RMS, for 5 seconds every 10 minutes

Option: 50 Aac RMS for 30 seconds every 1 hour

VOLTAGE

VOLTAGE SPANS: 85 - 500 Vac

VOLTAGE OVER-RANGE: +20% (at full accuracy)

VOLTAGE OVERLOAD :

1.6 x [nominal rating] continuous, limited to 600 Vac

FREQUENCY

FREQUENCY RANGE: 45 - 440 Hz

FREQUENCY VARIATION EFFECT:

$< \pm 0.02\%/Hz$ (for Watt output)

POWER SUPPLY

SUPPLY RANGES:

115, 230 Vac - 15/+25% and Self-powered

Option: 380 Vac -15/+ 20%

POWER OVERLOAD:

Withstand 1.45x[nominal rating] continuous

BURDEN

INPUT CURRENT: 0.26 VA @ 5 Aac

INPUT VOLTAGE:

0.15 VA @ 150 Vac, 0.3 VA @ 300 Vac

SUPPLY:

2.4 - 2.6 VA @ 150/300 Vac at 20 mA output

OUTPUTS (Watt & Var)

OUTPUT CONFIGURATION:

Unipolar or bipolar current or voltage

OUTPUT SPANS: ± 1 to ± 20 mA, ± 1 to ± 10 Vdc

(Any special span available)

MAXIMUM OUTPUT LOAD: $R_{load} (K\Omega) = 16/I_{out} (mA)$

OUTPUT IMPEDANCE: $Z (K\Omega) = 0.1 * V_o (Vdc)$

LOAD VARIATION EFFECT: $< \pm 0.03\%$ (for full change)

RESPONSE TIME: < 200 msec (10- 90% of span)

ACCURACY:

$\pm 0.1\%$ of span typical for 5 - 140% range

TEMPERATURE

OPERATING: -5 to +65°C

STORAGE: -35 to +85°C

TEMPERATURE STABILITY: $< \pm 0.01\%$ of span/ $1^{\circ}K$

HUMIDITY: 5 - 95% relative, non condensed

HOUSING: Plastic Polycarbonate

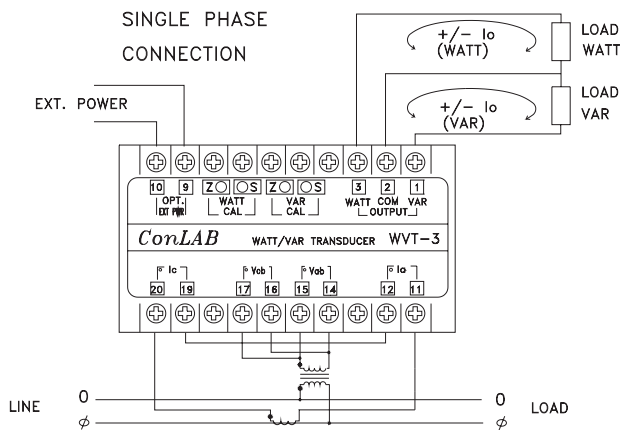
PROTECTION LEVEL:

Box: According to IP-40

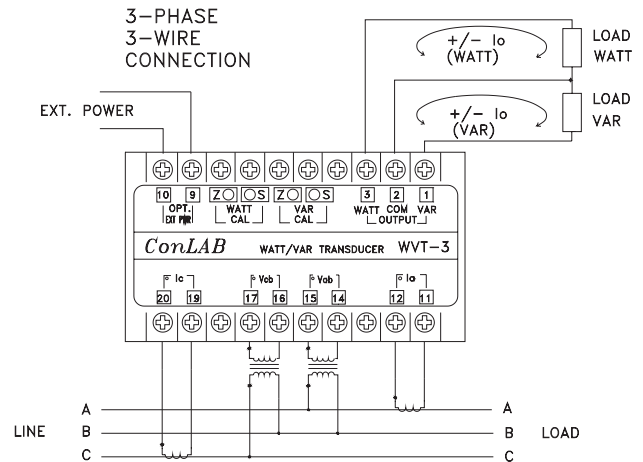
Terminals: According to IP-20

WEIGHT: 0.6 Kg

CONNECTION DIAGRAM



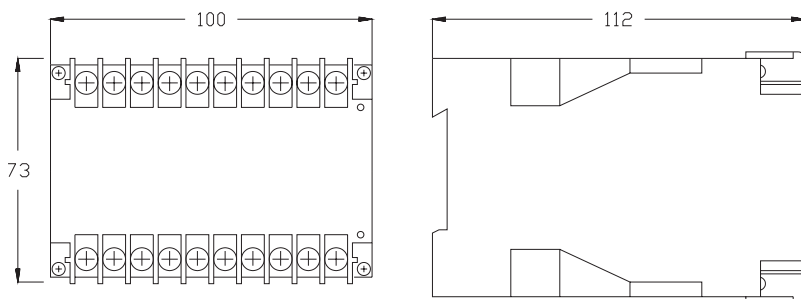
CONNECTION DIAGRAM



ORDERING INFORMATION

WVT-3	-P3	-S	-F1	-V2	-I2	-A	-B	-P2	
MODEL	P1: 1PH P3: 3PH	S: Self Power A: 115 Vac B: 230 Vac	F1: 50 Hz F2: 60 Hz F3: 400 Hz	V1: 115 Vac V2: 230 Vac V3: 380 Vac	11: 0...1 Aac 12: 0...2 Aac 13: 0...3 Aac 14: 0...5 Aac	A: W&V B: W C: V	B: Bi-Polar U: Uni-Polar	P1: 0...±1mA P2: 0...±5mA P3: 0...±10mA P4: 0...±20mA P5: 4...±20mA P6: 4...±12mA	P7: ±0-1V P8: ±0-5V P9: ±0-10V P10: 1-5V P11: 2-10V

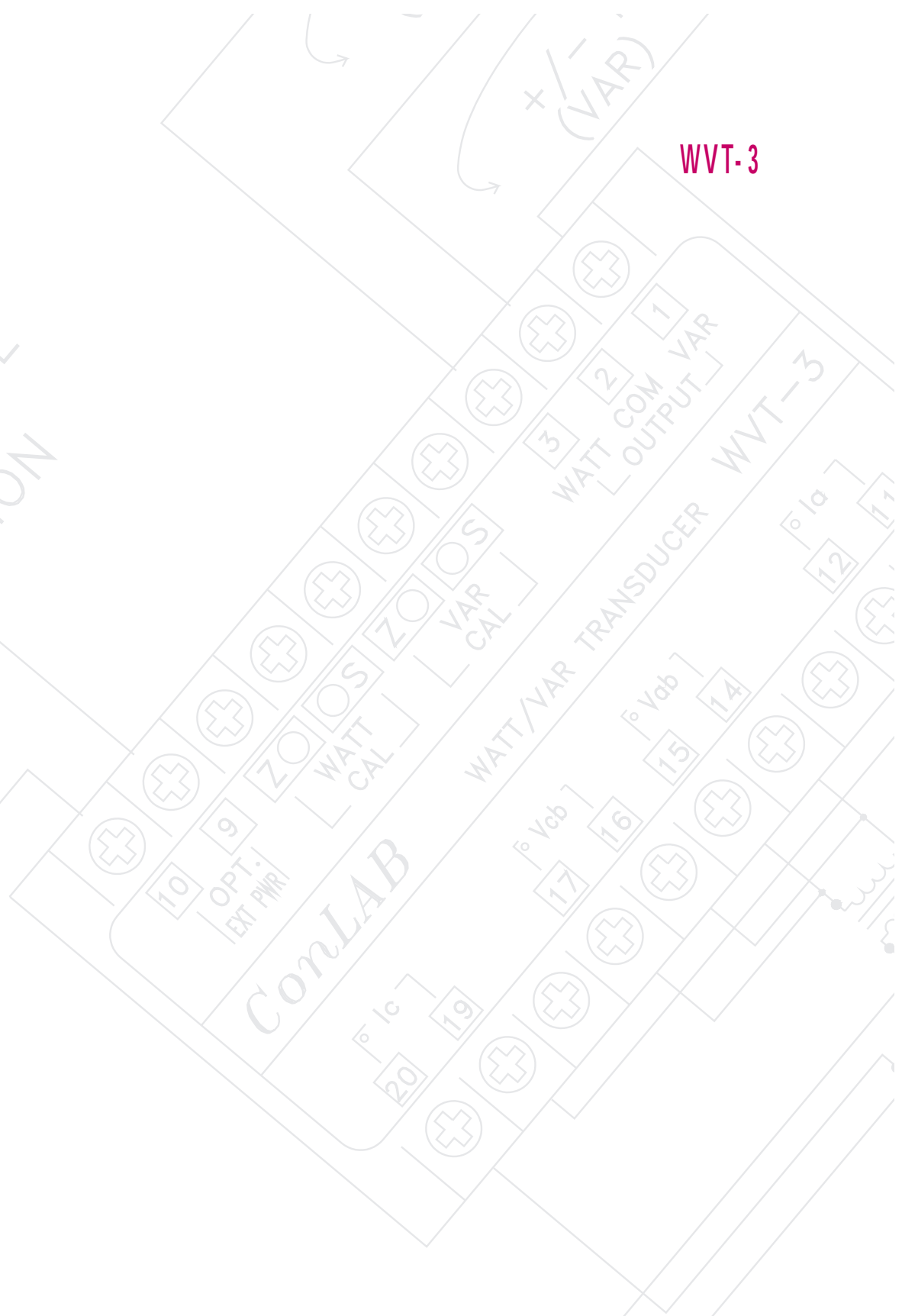
DIMENSIONS (mm)



WVT-3

SINGLE PHASE
CONNECTION

EXT. POWER



data subject to change without notice

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ConLAB
Control Laboratories Ltd.

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