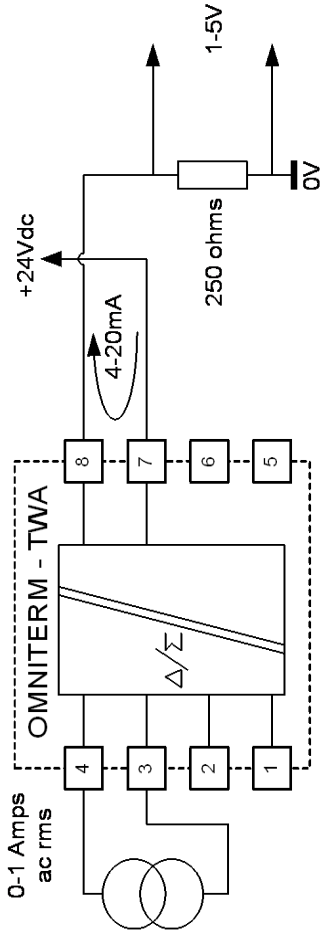
CONNECTION DIAGRAM



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INSTALLATION GUIDE

OMNITERM TWA Model C2405B

ACrms Voltage/Current Two-Wire Transmitter

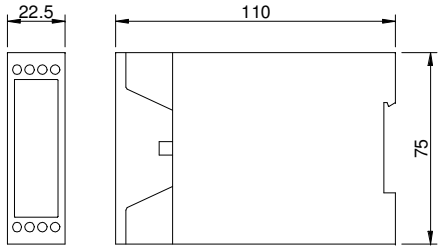
The OMNITERM TWA two-wire ac rms Voltage/Current Transmitter accepts an ac input signal from 0-300Vac or 0-5Amps ac , using advanced state-of-the-art digital measurement techniques, combined with extremely user friendly software configurability.

The TWA module draws its power from the 4-20mA output loop.
Full isolation (input/output) to 2500Vac ensures trouble-free accurate measurement. Mount the TWA close to the point of measurement for most accurate operation.

FEATURES

- **Measure true ACrms Voltage or current**
- **Easy User software configuration**
- **Input to Output isolation to 2500Vac**
- **Linearised temperature measurement**
- **9-33 Volt dc powered**
- **Wide operating temperature range**
- **Narrow 22.5mm housing width**
- **DIN Rail (35x7mm) or surface mounting**

MECHANICAL DETAILS



CONFIGURATION

Configuration is performed using the OMNISET Software Configuration Utility running on a Windows PC, using the programming socket in the front of the module.

The Configuration is downloaded to the TWA product using a Model C1168 Programming Cable available from OMNIFLEX.

Product Specifications

Unless otherwise stated, all specifications refer to Model C2405B

Power Supply

Supply Voltage	Loop powered from the output loop

Input

Number of Inputs	1
Type (select by connection)	0-5A ac rms or 0-300Vac rms
AC Current Input	
Input Impedance	50 milliohms maximum
Minimum Signal Span	0 – 0.5A rms
Maximum Signal Span	0 – 5A rms (continuous current)
Maximum Overload Current	50 Amp for 3 seconds
AC Voltage Input	
Input Impedance	200k minimum
Minimum Signal Span	0 – 30V rms
Maximum Signal Span	0 – 300V rms
Maximum Overload Voltage	500Vac for 1 second

Output

Output Current Range	4 -20mA
Minimum Supply Voltage	9Vdc
Maximum Supply Voltage	33Vdc
Maximum Load Resistance	100 ohms with 12Vdc supply min. 250 ohms with 15Vdc supply min. 500 ohms with 20Vdc supply min. 700 ohms with 24Vdc supply min. 1000 ohms with 30Vdc supply min.

Accuracy

Initial Error	< 0.25%
Non-Linearity	<0.1%
Distortion Error	< 1% for Crest Factor of 6
Temperature Drift	< 200ppm/°C of reading[1]

Environmental Conditions

Operating Temperature	-10°C – 60°C (+14°F – 140°F)
Storage Temperature	-25°C – 85°C (-13°F – 185°F)

Compliance with Standards

Safety	EN 60950:1995 ***Note** : When used with ac voltage inputs greater than 60V, additional safety precautions in installation and marking are required to comply with safety standards.*
Emissions	EN 55011:1997 Grp I, Cl A
Immunity – ESD & RF Fields	IEC 61000-4-2:2001, Lvl 3; IEC 61000-4-3:1995, Lvl 3
Immunity – Fast Transients	IEC 61000-4-4:2004 : 2 kV - DC power; 1 kV - I/O lines
Insulation	Basic Insulation between isolated circuits per IEC950
Insulation Test Voltage	Input/Output/Supply 100% tested to 2500Vac

Specifications continued…

Functional Safety to IEC 61508	Suitable for use in SIL 1 Applications. See Separate Reliability Datasheet RDC2405

Mechanical

Dimensions (W x H x D)	22.5mm x 75mm x 110mm
Mounting	DIN Rail EN5022-35 or screws to vertical surface
Housing	Shock Resistant ABS
Flammability	UL94-HB (housing) UL94-V0 (terminals)
Weight	Unpacked 130g approx.; Packed 160g approx.

Note:1 This parameter not 100% production tested

CONFIGURATION INSTRUCTIONS

The unit can be configured before or after installation.

To download configuration to the Omniterm TWA , ensure that the Omniterm TWA is powered. In the workshop, apply 24Vdc to terminals 7(+) and 8(-).

Use PC based OMNISET Configuration Software with TWA Template, and Model C1168 Programming Cable to set the all configuration parameters in the Omniterm TWA.

See Help in TWA Template for more detailed procedure.

APPLICATION EXAMPLE