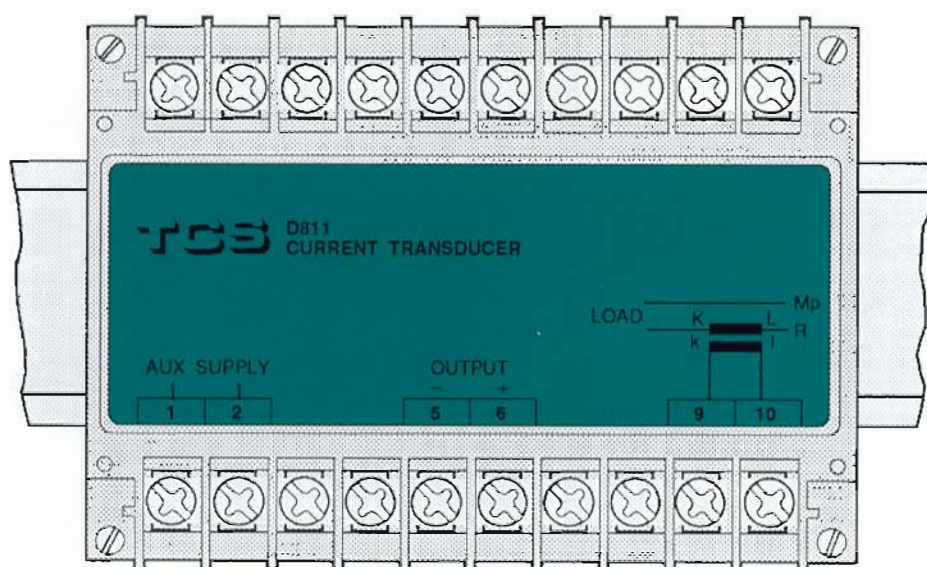




**EUROTHERM
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● **D810 series**

AC current transducers



**product
specification**

Star Features

- * Fully isolated
- * Self or auxiliary powered
- * Full range of outputs
- * Averaged or true RMS measurement

Introduction

The D810 series is a range of current transducers that convert an AC current into a standard DC signal. The current may be directly connected (up to 5A), or via a current transformer (1A or 5A). The DC output can be proportional to either the average value of the AC current or to the true rms value. The self-powered unit obtains its power from the AC line being monitored and

provides a range of zero-based current outputs. The auxiliary powered units have been designed so that outputs of 4-20mA or 0-10V may be used.

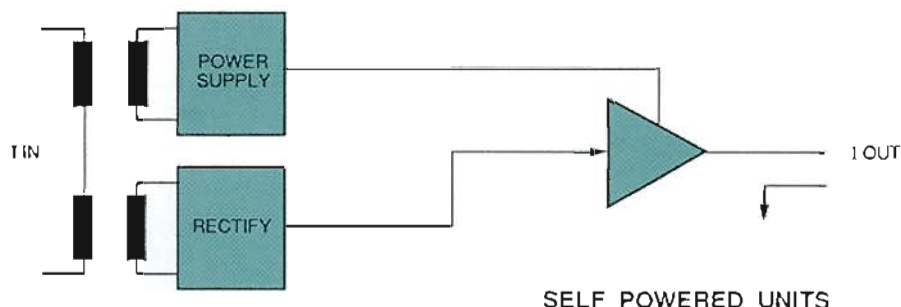
All these units are mounted in one of two housings. These housings are made from a flame-retardant polycarbonate case (DIN 43604) and may be mounted either on a DIN rail (DIN

46277) or to a wall or bulkhead. The 75mm housing is used for the single and dual channel self-powered, average sensing unit, whilst the three-channel average unit, the auxiliary powered units and the rms sensing transducers are all housed in the 100mm enclosure. Isolation to 2kV is built in providing a very versatile unit.

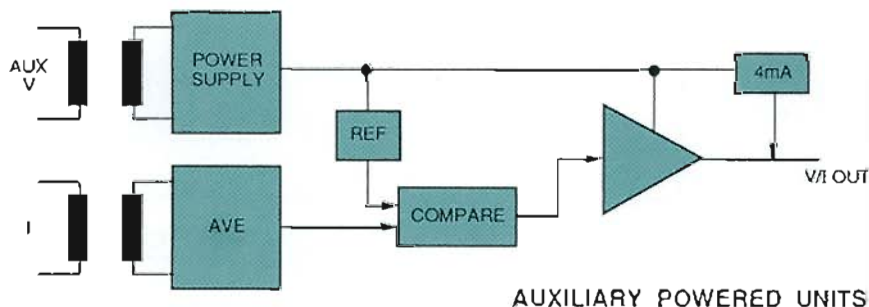
Functional Description

Average Sensing

The measured input is isolated and rectified to produce a proportional DC voltage. The amplifier, which is powered via an internal current transformer from the line being measured, provides the required output. These units are average sensing, rms calibrated and designed for use with sine waves having less than 1% distortion. The auxiliary powered units perform in an identical manner, except that power for the output amplifier is drawn from a separate circuit, allowing both voltage and 'live' zero outputs.



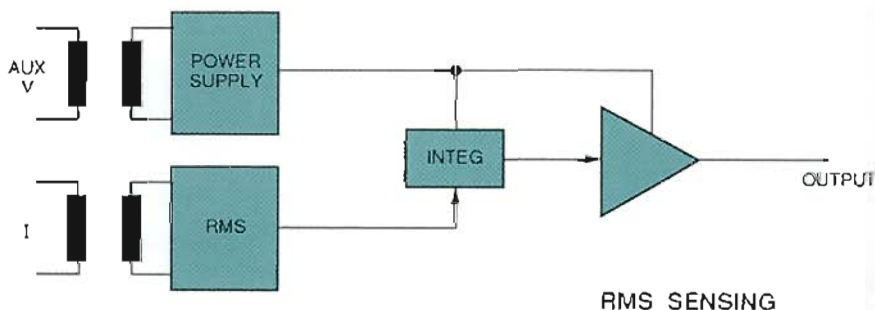
SELF POWERED UNITS



AUXILIARY POWERED UNITS

RMS Sensing

The measured input is directly applied to the rms converter section which produces a DC current output. This current is actively integrated and passed to the output amplifier which produces the required output. Owing to this true rms capability, badly distorted waveforms and those with harmonics and noise may be measured.

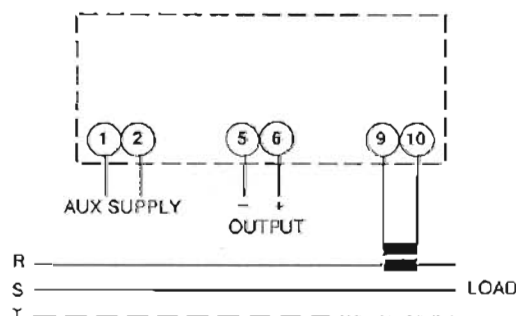


RMS SENSING

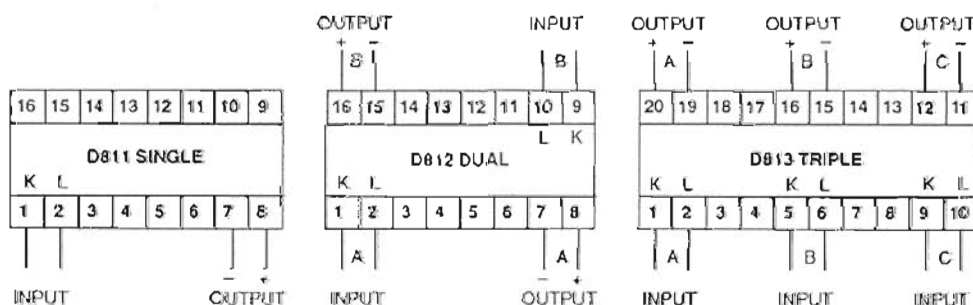
Specification

	SELF POWERED	AUXILIARY POWERED
INPUTS:	0-5A	0-1A 0-5A
OVERLOAD:	120% continuous	150% continuous
BURDEN:	3.5VA	0.6VA
NO. OF CIRCUITS:	1, 2 or 3	1
OUTPUTS:	0-1mA 0-5mA 0-10mA 0-20mA	0-1mA 0-5mA 0-10mA 0-20mA 4-20mA 0-10V
DRIVE CAPABILITY:		
Current	10V	10V
Voltage		20mA
ACCURACY:	Class 1.0%	Class 1.0%
TEMP. RANGE :	-10 to +50°C	-10 to +60°C
TEMP. DRIFT:	0.02%/°C (calc)	0.02%/°C (calc)
ISOLATION:	2kV	2kV
AUX. SUPPLY:		110V 240V 415V 330gm (1 circuit) 480gm (2 circuits) ± 20% 640 gm (3 circuits) 100mm
SUPPLY TOLERANCE:		
HOUSING:	75mm (1, 2 circuits) 100mm (3 circuits)	
WEIGHTS:	330gm (1 circuit) 480gm (2 circuits) 640gm (3 circuits)	385gm

Connection & Installation



AUXILIARY POWERED UNITS

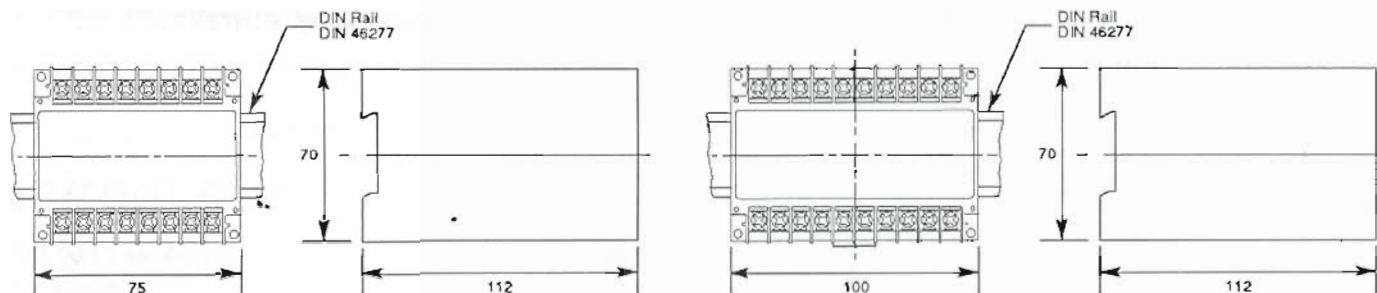


SELF POWERED UNITS

WARNING: Current Transformers MUST NOT be open circuited on load.

It is recommended that the transducer is housed in an enclosure (e.g. Control Panel) that does NOT allow unauthorised access as high voltages can be present on the terminals.

Housing Details



Dimensions in mm

Ordering Information

Description		Order Code
Current Transducer	-single measurement -dual measurement -triple measurement	D811 D812 D813
Measurement Type:	(a) RMS (aux powered only) (b) Average	RMS AVE
Input Range:	(a) 5A (All) (b) 1A (aux powered & rms only)	5Amps 1Amp
Auxiliary Supply (D811 only)		AUX
Range:	(a) 110V (b) 240V (c) 415V (d) Self powered	110V 240V 415V —
Output Type		OP
Output Range and Units:	(a) 0-1mA into 10K (b) 0-5mA into 2K (c) 0-10mA into 1K (d) 0-20mA into 500R (e) 4-20mA into 500R (f) 0-10V into 2K minimum NOTE (e) & (f) not available with self powered units.	0-1mA 0-5mA 0-10mA 0-20mA 4-20mA 0-10V
Labelling:	Blank Tagging	— T

Examples: D811/RMS/5Amps/AUX/240V/OP/4-20mA
D813/AVE/5Amps/-/OP/0-10mA/T

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Part Number HA 079974 U001



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