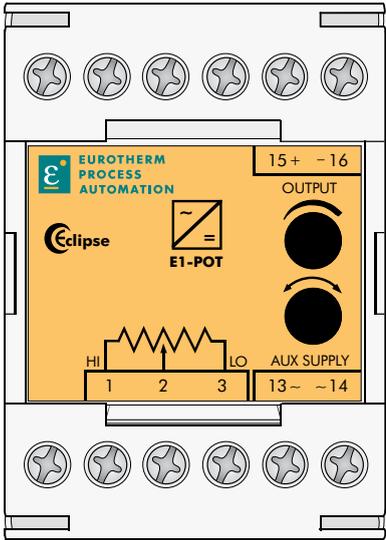




**EUROTHERM
PROCESS
AUTOMATION**

6000

SYSTEM

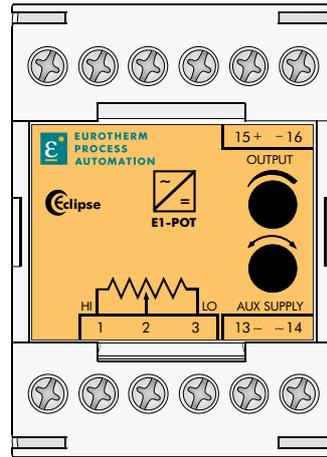


**Eclipse series
Potentiometer
and tap
positioner
transducers**

**Product
Specification**

ECLIPSE SERIES POTENTIOMETER AND TAP POSITION TRANSDUCER

- Fully isolated and CE compliant
- Current and voltage output options
- Wide auxiliary power supply range
- DIN rail mounting



INTRODUCTION

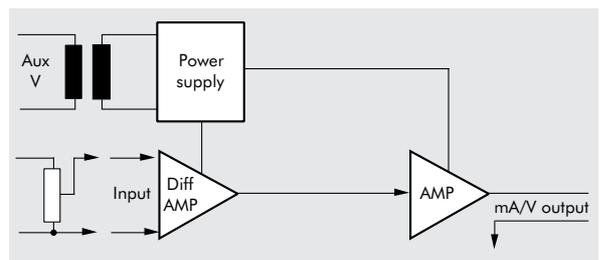
The potentiometer and tap position transducers are designed to convert the wiper position of a potentiometer or slidewire into an accurate proportional current or voltage output. The design allows for long input lead lengths. The variation in resistance associated with this can be calibrated out using a multiturn potentiometer to adjust the output to zero for minimum input position. Another multiturn potentiometer is located at the front of the unit to allow zero and span adjustments to be made.

The transducer may use any value of potentiometer between 470 ohm and 1M ohm and, owing to its current output capability, it can transmit the resultant signal over long distances.

The transducer may also be used to measure the tap position of a transformer.

FUNCTIONAL DESCRIPTION

The potentiometer low end and the wiper are fed to the input of a differential amplifier which detects the zero resistance between the potentiometer and wiper in the LOW position (relative HIGH position to FSD). Since the wiper position is independent of the potentiometer resistance, the input to the amplifier is directly proportional to the angular or mechanical position of the potentiometer.

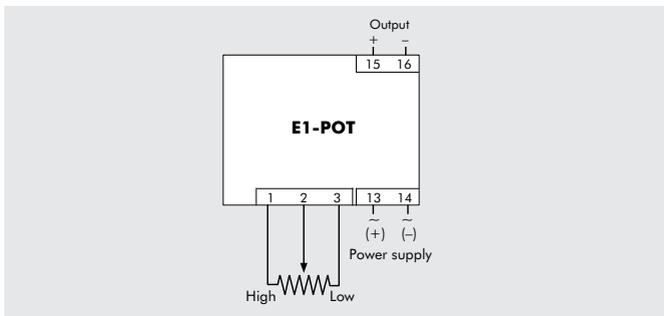


STANDARDS

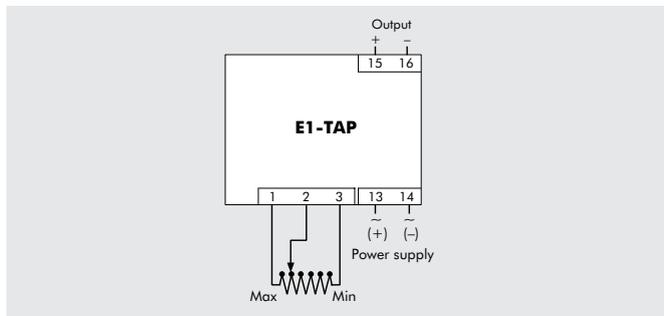
CE Conforms to EMC Directive 89/336/EEC amended by 93/68/EEC and Low Voltage Directive 72/23/EEC

BS EN 60688:1992	Designed to comply with Electrical measuring transducers for converting ac electrical quantities to analogue or digital signals.
IEC414:1979	Safety, high voltage insulation
IEC521:1988	Impulse voltage 5kV waveform 1,2/50uS
IEC255-21-1/3	High frequency disturbance 2.5kV common, 1kV series mode
EN50081-2	Emissions:- Industrial
EN50082-2	Immunity:- Industrial

CONNECTION AND INSTALLATION



Potentiometer transmitter



Tap position transmitter

WARNING: 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. The power supply should be fused.

SPECIFICATIONS

Inputs

Potentiometric:	470 to 1M Ω
Tap position:	15 or more 30 ohm taps 2 or more 400 ohm taps
Line resistance compensation:	Up to $\pm 8\%$ of total resistance
Power supply burden:	1.8VA

Outputs

	0-1mA into 10k Ω max
	0-10mA into 1k Ω max
	0-20mA into 500 Ω max
	4-20mA into 500 Ω max
	0-10V into 2k Ω max
Accuracy:	Class 0.5
Isolation test:	2kV (Aux to Ip/Op)

Drive capability

Current outputs:	20mA
Voltage outputs:	10V

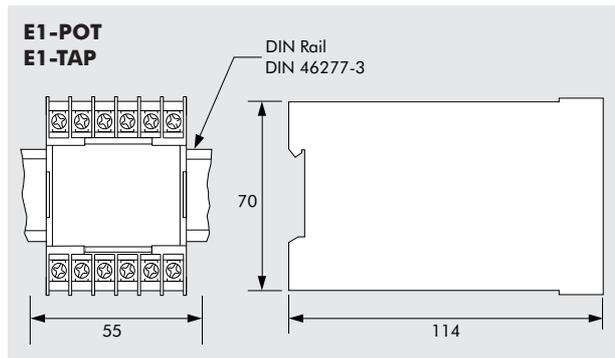
General specifications

Temperature range:	-10 to +60°C
Temperature drift:	0.002%/°C
Ripple:	<1% peak-to-peak
Stability:	$\pm 0.05\%$ per annum non-accumulative
Response:	0-90% in 300mS
Storage temperature:	-40 to 70°C
Humidity:	Up to 90% non-condensing

Mechanical

Weight:	300gm approx
Dimensions:	55W \times 70H \times 114D mm
Housing:	Moulded grey ABS plastic case self extinguishing to VDE0304 Degree 1, with moulded polycarbonate terminal assembly. The case is snap mounting on top-hat rail DIN 4677-3 (CENELEC EN 50-022)

HOUSING DETAILS



ORDERING INFORMATION

Potentiometer and tap position transducer

Base unit	O/P range & units	Power supply	Options
E1-POT	0-1mA	230V	-

Example

Base unit	Code	Power supply	Code
Potentiometer transducer	E1-POT	110V \pm 20%	110V
Tap position transducer	E1-TAP	230V \pm 20%	230V
		400V \pm 20%	400V

Output range and units	Code
0-1mA	0-1mA
0-10mA	0-10mA
0-20mA	0-20mA
4-20mA	4-20mA
0-10V	0-10V

Options
4kV isolation tested
24V DC power supply

EUROTHERM PROCESS AUTOMATION LIMITED

<http://www.eurotherm.co.uk>

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