



#### Models Available

**EDCC** Auxiliary Powered DC Current

**EDCV** Auxiliary Powered DC Voltage

#### Product Features

- Isolated DC mA or DC voltage output
- Accuracy class 0.25
- Adjustable 'span' and 'zero'
- DIN rail mounting enclosure
- 4kV rms 50Hz 1 minute isolation between input / output / case / auxiliary
- Screw type terminals
- Fingerproof terminal cover included

## DC Current & Voltage Transducers

DC voltage transducers measure DC voltage directly and the DC current transducers measure DC currents up to 10 Amps directly. Higher currents can be measured using a shunt and a DC voltage transducer.

The transducers convert the DC voltage or current signal (or DC millivolt value from the shunt) to either a DC mA or DC voltage output which is directly proportional to the input signal value. All DC transducers are powered from a large choice of AC or DC auxiliary power options.

The DC transducers offer isolation between the DC input signal and the DC output which can be used to prevent earth loops. The 4kV isolated output signals can then be fed to analogue meters, digital meters, PLC's or building management systems.

### For converting DC signals to a proportional DC mA or DC voltage output

#### Specification

##### Reference Standard:

- IEC 688, BS 6253, VDE/VDI 2191

##### Accuracy:

- Class 0.25 ( $\pm 0.25\%$  f.s. max. error)

##### Input Current, $I_n$ :

- 0-1mA to 0-10A direct connected
- 50, 60, 75mV shunt operated

##### Input Voltage, $U_n$ :

- 0-20mV to 0-600V direct connected

##### Overload:

- $1.2 \times U_n$ ,  $2 \times I_n$  continuous
- $1.5 \times U_n$ ,  $30 \times I_n$  for 1 second

##### Working Range:

- 0 -  $120\% U_n$

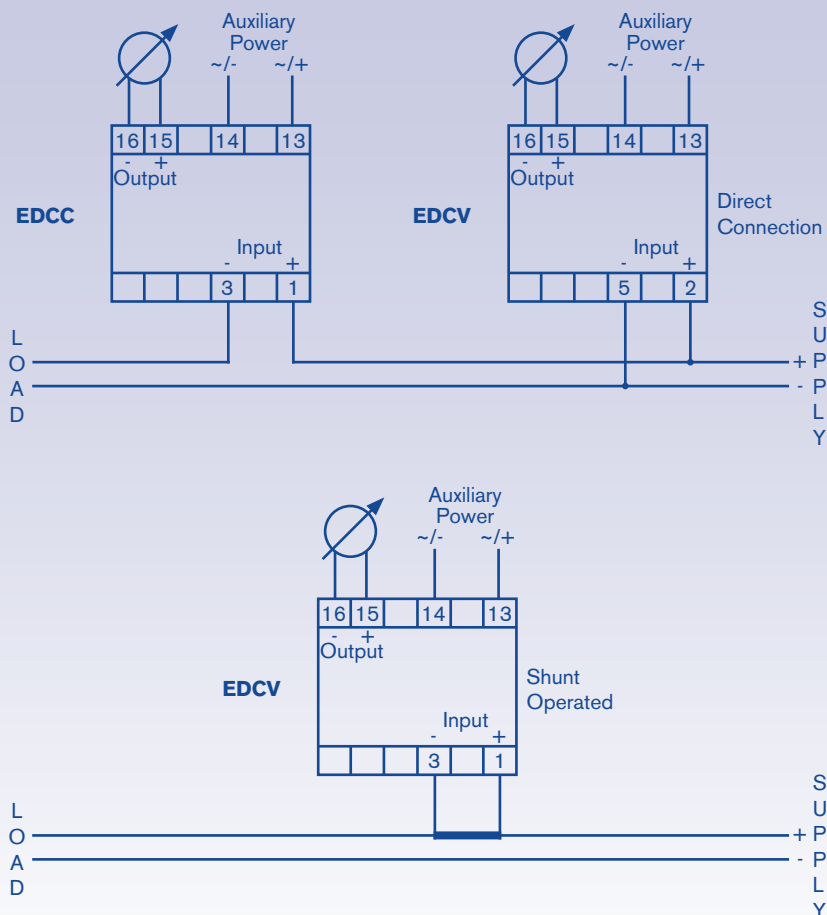
##### Burden:

- EDCC  $< 0.3VA$
- EDCV  $< 0.2VA$

##### Weight:

- EDCC, EDCV 600g

#### Connections



For pricing or any further information, please contact Omni Instruments Ltd.



Measurement and data acquisition solutions

#### Contact Details:

Tel: +44 1382 443000

Email: [info@omni.uk.com](mailto:info@omni.uk.com)

Website: [www.omniinstruments.co.uk](http://www.omniinstruments.co.uk)

#### Mailing Address:

Unit 1, 14 Nobel Road,

Wester Gourdie Industrial Estate,

Dundee, DD2 4UH.

## Ordering information

Model	Code	Description
	EDCC	Auxiliary Powered DC Current
	EDCV	Auxiliary Powered DC Voltage

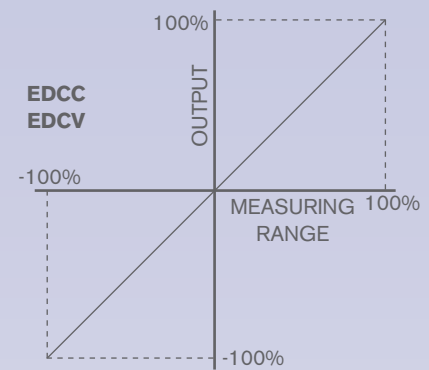
Input Voltage/Current	Code	Description
	CX	$\pm 1\text{mA}$ to $\pm 10\text{A}$ (specify)
	CA	4-20mA
	VX	$\pm 20\text{mV}$ to $\pm 600\text{V}$ (specify)

Auxiliary Power	Code	Description
	E1	110Vac ( $\pm 20\%$ )
	E2	230Vac ( $\pm 20\%$ )
	E3	415Vac ( $\pm 20\%$ )
	E4	63.5Vac ( $\pm 20\%$ )
	E5	24Vdc ( $\pm 20\%$ )
	E6	48Vdc ( $\pm 20\%$ )
	E7	110Vdc ( $\pm 20\%$ )

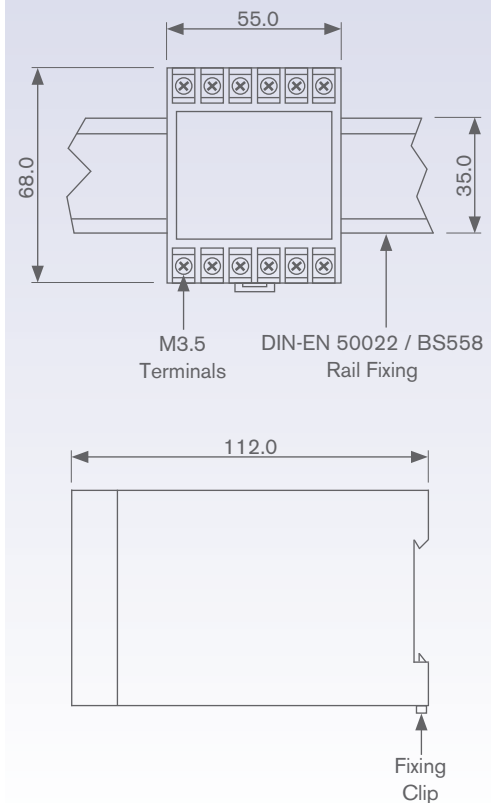
Output	Code	Description
	X1	$\pm 1\text{mA}$
	X2.5	$\pm 2.5\text{mA}$
	X5	$\pm 5\text{mA}$
	X10	$\pm 10\text{mA}$
	X10B	0-5-10mA
	X20	$\pm 20\text{mA}$
	XA	4-20mA
	XB	4-12-20mA
	XV	$\pm$ Voltage (specify up to 15Vdc)

**Example**      **EDCC - CX(5Adc) - E1 - XA**

## Function Graphs



## Dimensions



All dimensions in mm

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Website: [www.omniinstruments.co.uk](http://www.omniinstruments.co.uk)

**Mailing Address:** Unit 1, 14 Nobel Road,  
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Dundee, DD2 4UH.

# General Specification

## Output

Response Time:	< 400ms for 0-90% of input value
Warm Up Time:	< 15 minutes
Residual Output Ripple:	< 1% peak full scale
Long Term Drift:	±0.25% per year non-cumulative
Maximum Load:	1mA < 10kohm 2.5mA < 6kohm 5mA < 3kohm 10mA < 1.5kohm 20mA < 750ohm
Self powered voltage and current transducers have an adjustable span while all other units have an adjustable zero and span accessible from the front panel.	

## Auxiliary

AC:	110 / 230 / 415V (±20%) (others upon request)
DC:	24 / 48 / 110V (±20%)

## Environmental

Operating Temperature:	-20°C to 65°C
Storage Temperature:	-40°C to 75°C
Variation With Temperature:	±0.5% maximum
Relative Humidity:	0 - 95% non-condensing

## Burden

Input Circuits:	See individual specifications
Auxiliary Power Supply:	7VA combined Watt/Var transducers (4VA all other transducers)

## EMC Compliance

Directive 89/336/EEC:	Electrostatic discharge IEC801.2 (8kV) Electromagnetic fields IEC801.3 level 3 Fast transient bursts IEC801.4 level 4 Surge withstand IEC255-5
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## Enclosure

Enclosure:	Grey ABS plastic with finger proof terminal covers
Enclosure Code:	Case IP50, terminals IP10 to IEC529 and BS5490
Isolation:	4kV rms 50Hz 1min (to IEC 414) between input / output / case / AC auxiliary (2kV rms 50Hz 1 min for EK energy transducers) 1kVdc / 600Vac between Watt & Var outputs (EPQ units)
Mounting:	35mm DIN rail (DIN-EN 50022)
Markings:	CE marked

# Options

## Non Standard Calibration

All transducers are supplied calibrated to standard input values as detailed in the individual specifications, however non-standard calibration input values can be specified (subject to technical viability).

## Wide Output Adjust Switch on Power Transducers

All power transducers are available with a ten position switch accessible from the front panel which provides coarse adjustment of the output signal between 50% and 200% of the nominal.

## Calibration Certificate

Calibration certificates traceable to national standards can be supplied on all transducers.

## Conformal Coating

A conformal coating can be applied to the transducer circuitry during manufacture for transducers that will be operating in harsh environmental conditions.

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