

DC Current transducer DF-C10

For the electronic measurement of low DC currents, with galvanic isolation between the primary (High power) and the secondary circuits (Electronic circuit)

$$I_{PN} = 10..500\text{mA}$$

Preliminary

Electrical data

Primary nominal current	Primary current range	Analogue Output signal	Type
I_{PN} (mA.t)	I_P (mA.t)	V_{OUT} (V)	
10	16	0-10	DF 0.01 C10
20	38	0-10	DF 0.02 C10
50	80	0-10	DF 0.05 C10
100	160	0-10	DF 0.1 C10
300	480	0-10	DF 0.3 C10
500	800	0-10	DF 0.5 C10

I_{OC}	Overload capacity	30	A.t
V_{OUT}	Analog Output signal @ $\pm I_{PN}$	± 10	V
V_C	Supply voltage	$\pm 12...15$	VDC
I_C	Current consumption (max)	20	mA
R_L	Load resistance	≥ 2	k Ω
V_d	Isolation test voltage ¹⁾	5000	VAC



Features

- DC Measurement
- Low current transducer
- Panel mounting
- Bipolar voltage supply
- Extended measuring range

Advantages

- Large aperture
- Good performances in harsh EMC environment
- High isolation between primary and secondary circuits
- Easy to mount
- Bipolar
- No insertion losses

Accuracy-Dynamic performance data

X	Accuracy ²⁾ of reading @ $\pm 12\text{V}$, $T_A = 25^\circ\text{C}$	± 4	%
ϵ_L	Linearity ²⁾ of I_{PN}	± 0.8	%
V_{OE}	Electrical Offset Voltage @ $T_A = 25^\circ\text{C}$ @ $I_P = 0$	± 50	mV
V_{OT}	Thermal drift of V_{OE} @ $0..+70^\circ$	± 100	mV
t_r	Response time @ 90% of I_{PN}	< 140	mS

General data

T_A	Ambient operating temperature	$0..+70$	$^\circ\text{C}$
T_S	Ambient storage temperature	$-25..+85$	$^\circ\text{C}$
m	Mass	140	g
	Standard	TBD	

Applications

- DC leakage current measurement
- Differential current measurement in DC applications
- Low DC current measurement

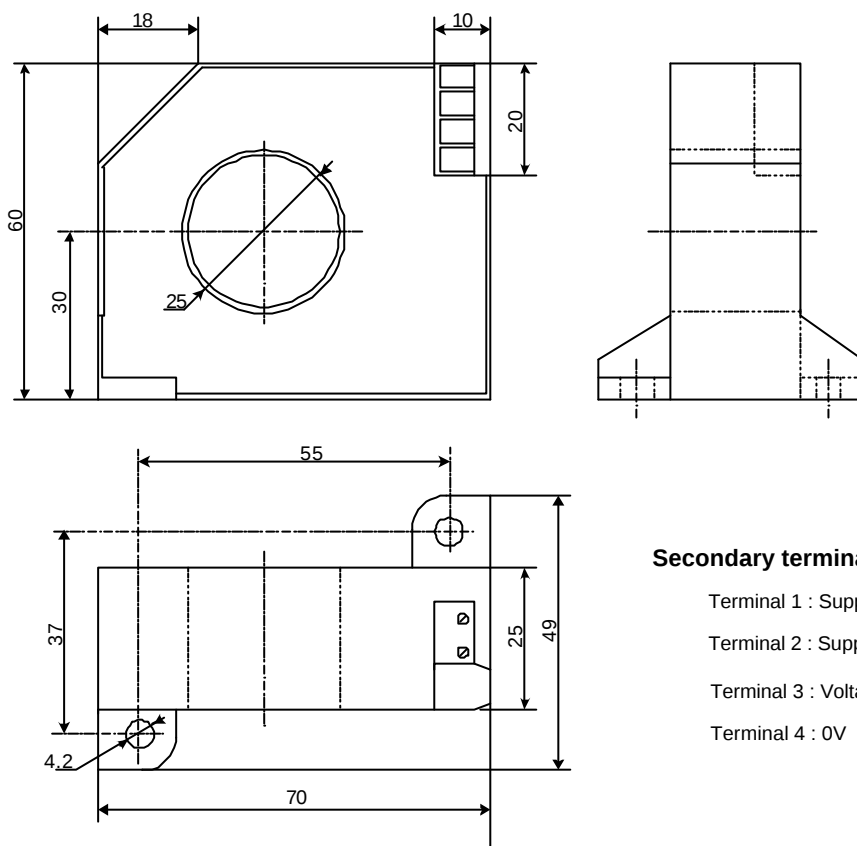
Options on request

- DIN mounting

Notes: ¹⁾ Between primary and secondary
²⁾ Excludes the electrical offset

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Dimensions DF-C10 (unit : mm, 1mm = 0.0394 inch)



Secondary terminals

- Terminal 1 : Supply voltage +12...+15VDC
- Terminal 2 : Supply voltage -12...-15VDC
- Terminal 3 : Voltage output V_s
- Terminal 4 : 0V

Mechanical characteristics

- General tolerance ± 1 mm
- Primary aperture $\varnothing 25$ mm
- Secondary connection Finger safe terminals
- Panel mounting 2 holes $\varnothing 4.2$ mm
- (Distance between holes 38 mm x 55 mm)

Remarks

- The temperature of the primary bar can not exceed 90°C.

Output Voltage / Primary Current

