WDI

Active current transformer

Open loop current transformers

The WDI current sensor is an open loop current transformer designed for measuring direct and alternating currents. The primary current generates a magnetic flux and this is evaluated by means of a magnetic circuit and Hall sensor in the air gap.

The signal from the Hall sensor is processed by an electronic circuit and an exact representation of the primary current is output as a voltage.

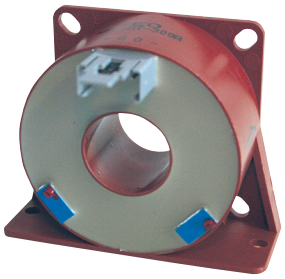
Advantages (electrical)

- Measurement of direct and alternating currents
- Voltage output
- Low power consumption
- No additional losses in the measuring circuit
- High-quality UL listed insulating materials (e.g. UL94-V0)
- Safe electrically isolated primary and secondary circuits
- Good price/performance ratio

Advantages (mechanical)

- Low weight
- Assembly-friendly design
- Connections: clamps, plugs, flat-cable plugs or cables
- Wide range of housings with various push- through openings

WDI



Technical data

WDI					
Type			**25**	**150**	**300**
Primary rated current [A]	îPN	Peak	25	150	300
Max. Primary rated current [A]	îmaxPN	Peak	0 - ±30	0 - ±180	0 - ±360
Max. admissible output current [mA]	îoutPN		±5	±5	±5
Load resistance minimal [kΩ]	RBmin	±15 Vdc	±30A peak=2	±150A peak=2	±300A peak=2
				±180A peak=2	±360A peak=2
Load resistance maximal [kΩ]	RBmax	±15 Vdc	±30A peak=10	±150A peak=2	±300A peak=2
				±180A peak=2	±360A peak=2
RMS Rated output voltage [V]	ÛaN	Peak	±10	±10	±10
Operation voltage [Vdc]	US	±5%	±15	±15	±15
No-load current [mA]	IBO	(@ ±15V) + IoutpN	9	9	9
Insulation test voltage [kV]	VP	r.m.s 50 Hz	3	3	3
Voltage drop [kV]	VW	1,2/50 µs	3	5	5
Accuracy 50 Hz [%]	FU	@IPN, TA=25°C	±0,6	±0,6	±0,6
Linearity error [%]	FLU	@TA=25°C	≤1,0	≤1,0	≤1,0
Offset voltage [mV]	Uo	@ IPN = 0, TA =25°C	20	20	20
Offset voltage drift [mV]	ΔUo	Io -25°C…+70°C	60	60	60
Temperature drift [%K]	%/ΔT		≤0,05	≤0,05	≤0,05
Response time [µs]	tr	@ 90% von IPN	<25	<25	<25
Frequency range [kHz]	f		(-3 dB) DC...10	(-3 dB) DC...10	(-3 dB) DC...10
Ambient temperature [°C]	TA		-25 to + 75	-0 to + 75	-0 to + 75
Storage temperature [°C]	Ts		-10 to + 85	-10 to + 85	-10 to + 85
Weight [kg]	m		0,075	0,075	0,075
Creepage distance [mm]	dCp		4	10	10
Clearance distance [mm]	dCi		3	9	9

Typical applications: Industry, renewable energy, railway engineering, energy, automation and building technology

Dimensions in mm

WDI												
Type	**PIN- Connection/ 4-pole**	**h [mm]**	**b [mm]**	**b1/b2 [mm]**	**t [mm]**	**DL [mm]**	**p/s [mm]**	**a/a1 [mm]**	**c1/c2 [mm]**	**f [mm]**	**e [mm]**	**l [mm]**
WDI 25	A; O, -U; +U	39	39	-	26,5	10	-	3 x 10/6,5	25/6,5	M4	-	9
WDI 150	A; O, -U; +U	55	-	55/68	26	20,2	45/45	60/--	13,0/--	4,3	6,0 x 4,0	23
WDI 300	A; O, -U; +U	55	-	55/68	26	20,2	45/45	60/--	13,0/--	4,3	6,0 x 4,0	23