

Current Transducers HY 5 to 25-P

For the electronic measurement of currents: DC, AC, pulsed, mixed, with a galvanic isolation between the primary circuit (high power) and the secondary circuit (electronic circuit).





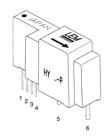
Electrical	data				
Primary nominal r.m.s. current $I_{PN}(A)$	Primary current measuring range I _P (A)	Primary conductor (mm)		Туре	
5	± 15	Ø 0.7		HY 5-F	•
10	±30	Ø 1.1		HY 10-F	•
12.5	± 37.5	Ø 1.4		HY 12-F	•
15	± 45	Ø 1.4		HY 15-F	•
20	± 60	2 x Ø 1.2 1)		HY 20-F	•
25	±75	2 x Ø 1.4 ¹⁾		HY 25-F)
v _c s	Supply voltage (± 5 %) ⁶⁾			±12 ±′	15 V
I _c C	Current consumption			±10	mA
Î _P C	Overload capability (1 ms)			50 x I _{PN}	
V _d F	R.m.s. voltage for AC isola	tion test, 50/60Hz	, 1 mn	2.5	kV
V _b	R.m.s. rated voltage, safe s	eparation		5002)	V
	solation resistance @ 500	VDC		> 1000	$M\Omega$
V _{OUT} C	Output voltage @ ± I _{PN} , R	= $10 \text{ k}\Omega$, $\mathbf{T}_{\Delta} = 25^{\circ}$	С	±4	V
R _{OUT} C	Output internal resistance			100	Ω
R _L L	oad resistance			> 1	kΩ
Accuracy	- Dynamic perform	ance data			
X A	Accuracy @ I _{PN} , T _A = 25°C	(without offset)		< ±1	%
e , L	inearity $^{3)}$ (0 $\pm I_{PN}$)			< ±1	% of \mathbf{I}_{PN}
V _{OE} E	Electrical offset voltage, T Hysteresis offset voltage @			< ±40	mV
а	fter an excursion of 1 x I_{PN}			< ±15	mV
V _{OT} T	Thermal drift of $\mathbf{V}_{\scriptscriptstyle{OE}}$	ı	typ.	±1.5	mV/K
	02		max.	±3	mV/K

TC € 。	Thermal drift of the gain (% of reading)	< ±0.1	%/K
t,	Response time @ 90% of I _P	< 3	μs
di/dt	di/dt accurately followed	> 50	A/µs
f	Frequency bandwidth 4) (-3 dB)	DC 50	kHz
Gene	eral data		
T _A	Ambient operating temperature	-10 +80	°C
T _s	Ambient storage temperature	-25 +85	°C
m	Mass	< 14	g
	Standards 5)	EN 50178	

Notes: 1) Conductor terminals are soldered together.

- 2) Pollution class 2, overvoltage category III.
- 3) Linearity data exclude the electrical offset.
- 4) Please refer to derating curves in the technical file to avoid excessive core heating at high frequency.
- 5) Please consult characterisation report for more technical details and application advice.
- ⁶⁾ Operating at ±12V ≤ Vc < ±15V will reduce measuring range.

 $I_{PN} = 5...25 A$



Features

- Hall effect measuring principle
- Galvanic isolation between primary and secondary circuit
- Isolation voltage 2500 V~
- Compact design for PCB mounting
- Low power consumption
- Extended measuring range (3 x I_{PN})
- Insulated plastic case recognized according to UL 94-V0.

Advantages

- Easy mounting
- Small size and space saving
- Only one design for wide current ratings range
- High immunity to external interference.

Applications

- General purpose inverters
- AC variable speed drives
- Static converters for DC motor drives
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS).

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