HRS1000-I ... HRS2500-I industry current sensors

Technical data

Frame mounting

These sensors are designed to be fixed by the case.
They may be either horizontally or vertically mounted.
The secondary connection is made with a connector or cable.

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HRS1000-I-000
HRS1500-I-000

HRS2000-I-000
HRS2500-I-000

Ordering details

Nominal primary Current A r.m.s	Secondary current at IPN mA	Supply voltage VDC	Secondary connection	Type
1000	200	± 15...± 24V	Molex type 3 pins HE14	HRS1000-I-000
1000	200	± 15...± 24V	JST connector 3 pins	HRS1000-I-001
1000	200	± 15...± 24V	3 wires 200 mm	HRS1000-I-002
1000	200	± 15...± 24V	Minifit Jr 4 pins	HRS1000-I-005
1000	200	± 15...± 24V	Phoenix contact type 3 pins	HRS1000-I-006
1500	300	± 15...± 24V	Molex type 3 pins HE14	HRS1500-I-000
1500	300	± 15...± 24V	JST connector 3 pins	HRS1500-I-001
1500	300	± 15...± 24V	3 wires 200 mm	HRS1500-I-002
1500	300	± 15...± 24V	Minifit Jr 4 pins	HRS1500-I-005
1500	300	± 15...± 24V	Phoenix contact type 3 pins	HRS1500-I-006
2000	400	± 15...± 24V	Molex type 3 pins HE14	HRS2000-I-000
2000	400	± 15...± 24V	JST connector 3 pins	HRS2000-I-001
2000	400	± 15...± 24V	3 wires 200 mm	HRS2000-I-002
2000	400	± 15...± 24V	Minifit Jr 4 pins	HRS2000-I-005
2000	400	± 15...± 24V	Phoenix contact type 3 pins	HRS2000-I-006
2500	500	± 15...± 24V	Molex type 3 pins HE14	HRS2500-I-000
2500	500	± 15...± 24V	JST connector 3 pins	HRS2500-I-001
2500	500	± 15...± 24V	3 wires 200 mm	HRS2500-I-002
2500	500	± 15...± 24V	Minifit Jr 4 pins	HRS2500-I-005
2500	500	± 15...± 24V	Phoenix contact type 3 pins	HRS2500-I-006

HRS1000-I ... HRS2500-I industry current sensors

Technical data

Application

Sensors to measure DC, AC or pulsating currents with a galvanic insulation between primary and secondary circuits.

			HRS1000-I-XXX	HRS1500-I-XXX	HRS2000-I-XXX	HRS2500-I-XXX
Nominal primary current		A r.m.s	1000	1500	2000	2500
Measuring range	@± 24V (±5%), 15min/h	A	2700	3000	4000	4500
Not measurable overload	10ms/h	A	10 000	10 000	10 000	10 000
Max. measuring resistance (see datasheet for details)	@± 15V (±5%), 15min/h	Ω	0	0	0	0
Max. measuring resistance (see datasheet for details)	@± 24V (±5%), 15min/h	Ω	0	0	0	0
Min. measuring resistance (see datasheet for details)	@± 15V (±5%), 15min/h	Ω	0	0	0	0
Min. measuring resistance (see datasheet for details)	@± 24V (±5%), 15min/h	Ω	0	0	0	0
Turn number			5000	5000	5000	5000
Secondary current at INP		mA	200	300	400	500
Accuracy at IPN	@ +25°C	%	≤ ±0,25	≤ ±0,25	≤ ±0,25	≤ ±0,25
Accuracy at IPN	-40…-20°C, +70…85°C	%	≤ ±0,5	≤ ±0,5	≤ ±0,5	≤ ±0,5
Offset current	@+25°C	mA	≤ 0,2	≤ 0,2	≤ 0,2	≤ 0,2
Linearity		%	≤ 0,1	≤ 0,1	≤ 0,1	≤ 0,1
Thermal drift coefficient on offset		mA/K	≤ 0,025	≤ 0,025	≤ 0,025	≤ 0,025
Delay time		µs	≤ 1	≤ 1	≤ 1	≤ 1
Di / dt correctly followed		A/ µs	100	100	100	100
Bandwidth		kHz	≤ 100	≤ 100	≤ 100	≤ 100
Max no load consumption current		mA	≤ 25	≤ 25	≤ 25	≤ 25
Secondary resistance	@+85°C	Ω	≤ 46	≤ 46	≤ 30	≤ 30
Dielectric strength Primary/Secondary	@50Hz, 1min	kV	4	4	4	4
Supply voltage		V	±15…±24	±15…±24	±15…±24	±15…±24
Voltage drop		V	≤ 1,6	≤ 1,6	≤ 1,6	≤ 1,6
Mass		g	550	550	1500	1500
Operating temperature		°C	-40…+85	-40…+85	-40…+85	-40…+85
Storage temperature		°C	-50…+90	-50…+90	-50…+90	-50…+90

General data

– Plastic case and insulating resin are self-extinguishing
– Fixing holes in the case moulding for two positions at right angles
– Direction of the current: A primary current flowing in the direction of the arrow results in a positive secondary output current from terminal M.

Primary connection

Hole for primary conductor.
The temperature of the primary conductor in contact with the case must not exceed 100 °C.

Secondary connection

– Molex type HE14 connector
– JST connector (ref.: B3P-VH)
– 3 x 200 mm cables (cross section 0.38 mm^2).
- Molex Minifit connector (ref.: JR5566)
- Phoenix Contact type connector 3pts

Conformity

EN 61010-1
EN 61000-6-2, EN 61000-6-4

CE
UL
RoHS