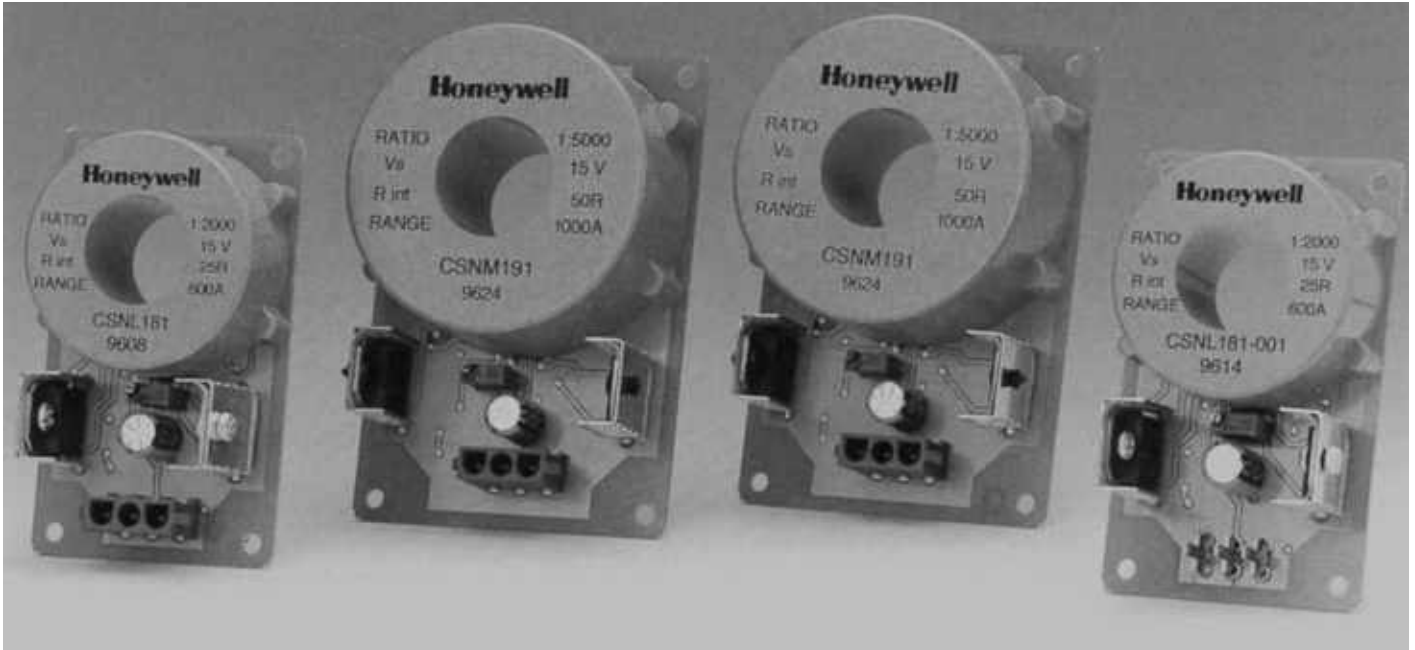


# Open frame style

## 300 and 500 A nominal rating



### Features

- Current sensing up to 1000 A
- Measures dc, ac and impulse currents
- Very fast response
- High overload capability
- Extended temperature range -40 °C to +85 °C
- Different termination styles
- Optional conformal coating

### Benefits

- Increased measuring range in compact package
- No restriction on input current waveform
- Output signal accurately tracks changes in input signal
- Sensor integrity unaffected
- Improved reliability
- Flexibility of connection style
- Provides additional protection to the sensors

### Description

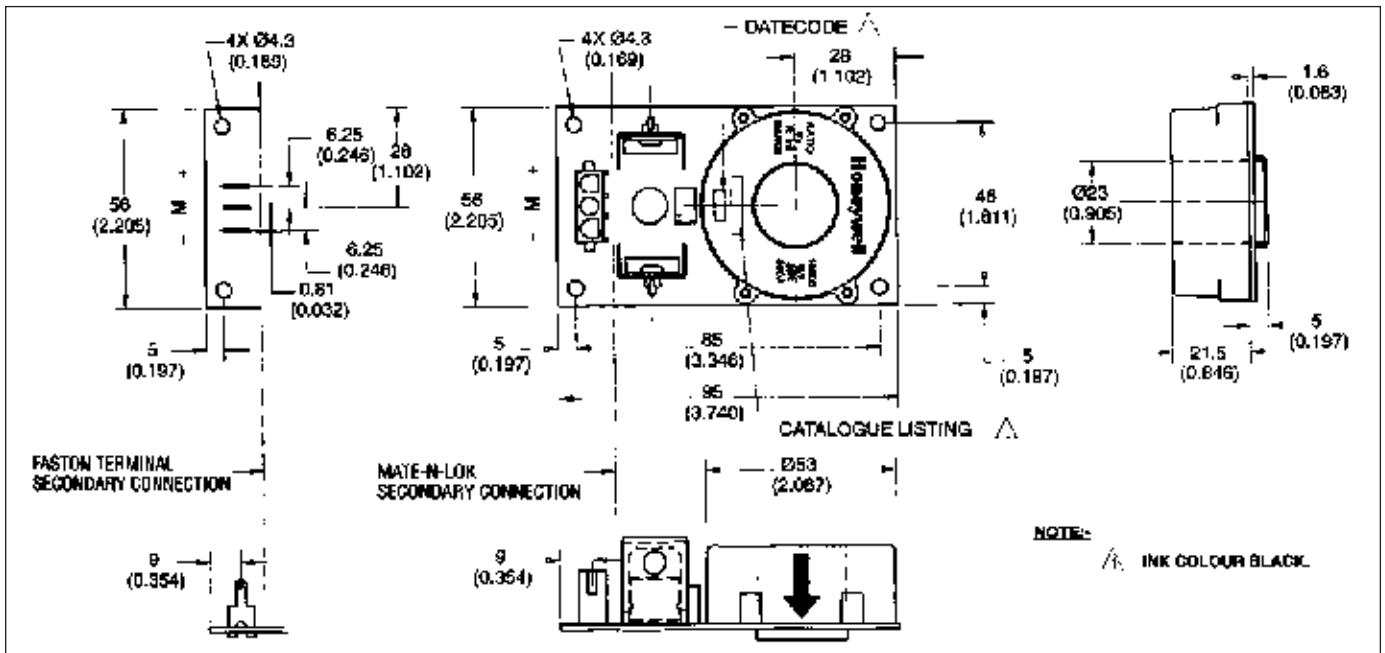
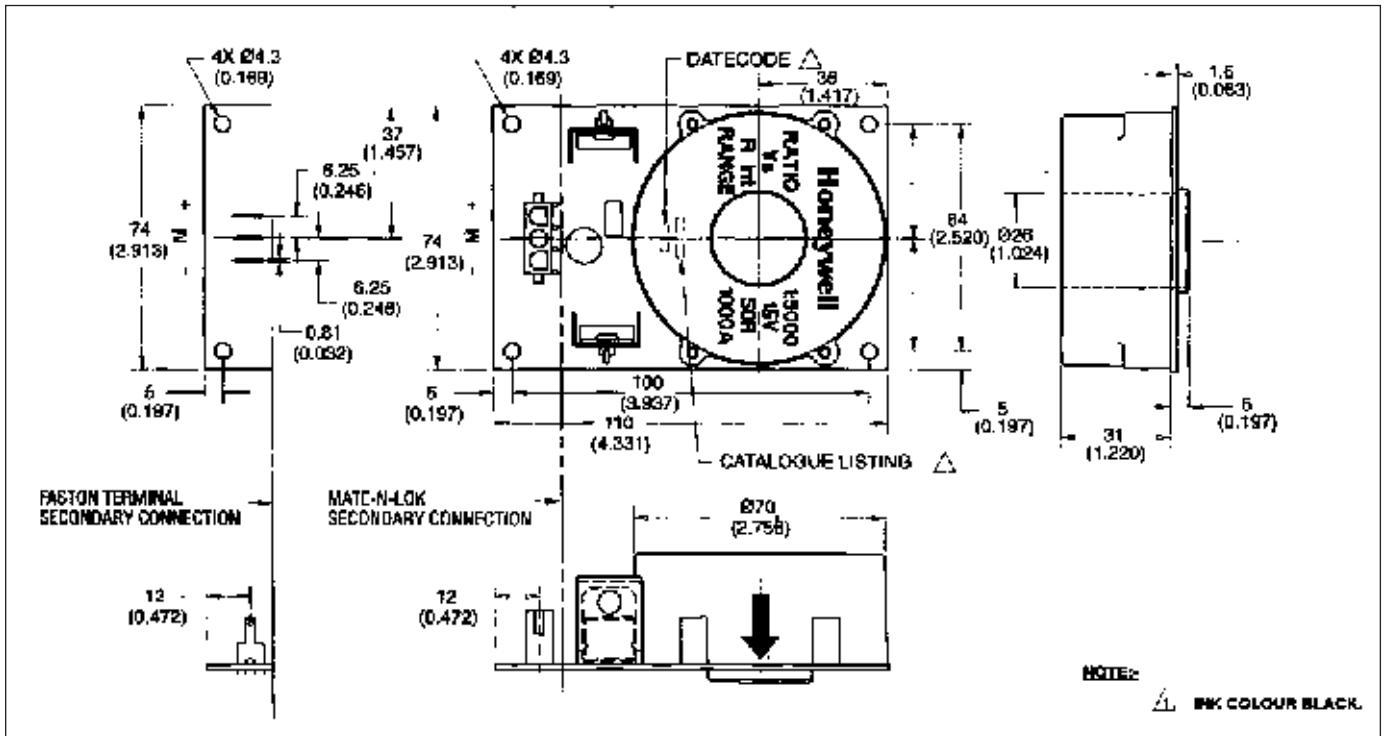
These industrial current sensors extend Honeywell's closed loop current sensing capability. They offer increased current measuring capability up to 1000 A over an extended temperature range of -40 °C to +85 °C and are available with different terminal options.

The sensors are closed loop devices based on the principle of the hall effect and null balance method. The output from the current sensor is the balancing current which is a perfect image of the primary current reduced by the number of secondary turns at any time. This current can be expressed as a voltage by passing it through a resistor.

### Typical applications

- Variable speed drives
- Overcurrent protection
- Power supplies
- Feedback control systems
- Robotics
- Welding equipment

## Mounting dimensions (in mm and inches)

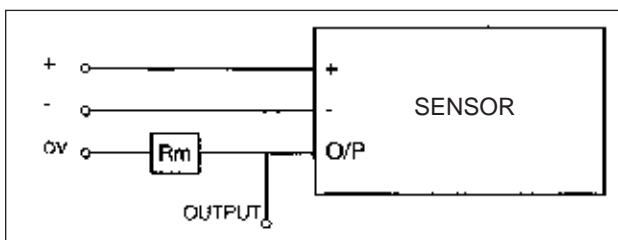


## Termination

300 A: Supply Voltage  $\pm 12$  V to  $\pm 18$  V (or  $\pm 24$  V)

500 A: Supply Voltage  $\pm 12$  V to  $\pm 18$  V

O/P Measured output signal



# Open frame style

## 300 and 500 A nominal rating

CATALOGUE LISTINGS	CSNL181	CSNL181-001	CSNL181-002 This listing is conformal coated.	CSNL181-003 This listing is conformal coated.
<b>ELECTRICAL DATA</b>				
<b>Nominal current (In)</b>	300 A rms	300 A rms	300 A rms	300 A rms
<b>Measuring range</b>	0 to ±600 A.t	0 to ±600 A.t	0 to ±600 A.t	0 to ±600 A.t
<b>Measuring resistance <sup>(1)</sup> with ±15 V at ± 500 A.t max at ± 1000 A.t max</b>	Rm min Rm max	Rm min Rm max	Rm min Rm max	Rm min Rm max
<b>with ±15 V at ± 300 A.t max at ± 600 A.t max</b>	0 Ohm 50 Ohm 0 Ohm 10 Ohm	0 Ohm 50 Ohm 0 Ohm 10 Ohm	0 Ohm 50 Ohm 0 Ohm 10 Ohm	0 Ohm 50 Ohm 0 Ohm 10 Ohm
<b>with ±24 V at ± 300 A.t max at ± 750 A.t max</b>				
<b>Nominal analogue output current</b>	150 mA	150 mA	150 mA	150 mA
<b>Turns ratio</b>	1 / 2000	1 / 2000	1 / 2000	1 / 2000
<b>Accuracy at +25 °C</b>	maximum ±0.5% of In	maximum ±0.5% of In	maximum ±0.5% of In	maximum ±0.5% of In
<b>Supply voltage</b>	±12 to ±18 Vdc (±5%)	±12 to ±18 Vdc (±5%)	±12 to ±18 Vdc (±5%)	±12 to ±18 Vdc (±5%)
<b>Galvanic isolation</b>	7.5 kV rms / 50 Hz / 1 min	7.5 kV rms / 50 Hz / 1 min	7.5 kV rms / 50 Hz / 1 min	7.5 kV rms / 50 Hz / 1 min
<b>ACCURACY - DYNAMIC PERFORMANCE</b>				
<b>Zero offset current at +25 °C</b>	better than ±0.3 mA	better than ±0.3 mA	better than ±0.3 mA	better than ±0.3 mA
<b>Thermal drift of offset current 0 °C to 70 °C</b>	better than ±0.5 mA	better than ±0.5 mA	better than ±0.5 mA	better than ±0.5 mA
<b>Linearity</b>	better than ±0.1%	better than ±0.1%	better than ±0.1%	better than ±0.1%
<b>Response time</b>	better than 500 ns	better than 500 ns	better than 500 ns	better than 500 ns
<b>dI/dt</b>	better than 50 A/us	better than 50 A/us	better than 50 A/us	better than 50 A/us
<b>Bandwidth</b>	dc to 150 kHz	dc to 150 kHz	dc to 150 kHz	dc to 150 kHz
<b>GENERAL DATA</b>				
<b>Operating temperature</b>	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C	-40 °C to +85 °C
<b>Storage temperature</b>	-40 °C to +90 °C	-40 °C to +90 °C	-40 °C to +90 °C	-40 °C to +90 °C
<b>Current consumption</b>	14 mA (±18 V) plus output current	14 mA (±18 V) plus output current	14 mA (±18 V) plus output current	14 mA (±18 V) plus output current
<b>Secondary internal resistance (at +70 °C)</b>	25 Ohm	25 Ohm	25 Ohm	25 Ohm
<b>Positive primary current</b>	In direction of arrow	In direction of arrow	In direction of arrow	In direction of arrow
<b>Toroid Housing</b>	Bayblend KU2-1468 (UL94-V0)	Bayblend KU2-1468 (UL94-V0)	Bayblend KU2-1468 (UL94-V0)	Bayblend KU2-1468 (UL94-V0)
<b>EMC</b>	EN 50082-2, EN 50081-2	EN 50082-2, EN 50081-2	EN 50082-2, EN 50081-2	EN 50082-2, EN 50081-2
<b>Connection to primary</b>	23 mm through hole	23 mm through hole	23 mm through hole	23 mm through hole
<b>Connection to secondary</b>	3 pin AMP Mate-N-Lok connector	3 x AMP Tab 2.79 (FASTON) terminals	3 pin AMP Mate-N-Lok connector	3 x AMP Tab 2.79 (FASTON) terminals

### Notes:

<sup>(1)</sup> Higher resistance (Rm) values can be used with reduced measuring range.

Supply voltage is ±15 V and temperature is +25 °C unless otherwise stated.

# Open frame style

## 300 and 500 A nominal rating

CATALOGUE LISTINGS	CSNL281-006	CSNM191	CSNM191-001	CSNM191-002 This listing is conformal coated.
<b>ELECTRICAL DATA</b> <b>Nominal current (In)</b> <b>Measuring range</b> <b>Measuring resistance <sup>[1]</sup></b> <b>with ±15 V at ± 500 A.t max</b> <b>at ± 1000 A.t max</b> <b>with ±15 V at ± 300 A.t max</b> <b>at ± 600 A.t max</b> <b>with ±24 V at ± 300 A.t max</b> <b>at ± 750 A.t max</b> <b>Nominal analogue output current</b> <b>Turns ratio</b> <b>Accuracy at +25 °C</b> <b>Supply voltage</b> <b>Galvanic isolation</b>	300 A rms 0 to ±750 A.t Rm min Rm max  20 Ohm 80 Ohm 20 Ohm 20 Ohm  150 mA 1 / 2000 maximum ±0.5% of In 24 Vdc (±5%) 7.5 kV rms / 50 Hz / 1 min	500 A rms 0 to ±1000 A.t Rm min Rm max 0 Ohm 50 Ohm 0 Ohm 5 Ohm  100 mA 1 / 5000 maximum ±0.5% of In ±12 to ±18 Vdc (±5%) 6 kV rms / 50 Hz / 1 min	500 A rms 0 to ±1000 A.t Rm min Rm max 0 Ohm 50 Ohm 0 Ohm 5 Ohm  100 mA 1 / 5000 maximum ±0.5% of In ±12 to ±18 Vdc (±5%) 6 kV rms / 50 Hz / 1 min	500 A rms 0 to ±1000 A.t Rm min Rm max 0 Ohm 50 Ohm 0 Ohm 5 Ohm  100 mA 1 / 5000 maximum ±0.5% of In ±12 to ±18 Vdc (±5%) 6 kV rms / 50 Hz / 1 min
<b>ACCURACY - DYNAMIC PERFORMANCE</b> <b>Zero offset current at +25 °C</b> <b>Thermal drift of offset current 0 °C to 70 °C</b> <b>Linearity</b> <b>Response time</b> <b>dI/dt</b> <b>Bandwidth</b>	better than ±0.3 mA  better than ±0.5 mA better than ±0.1% better than 1 us better than 50 A/us dc to 150 kHz	better than ±0.2 mA  better than ±0.3 mA better than ±0.1% better than 1 us better than 50 A/us dc to 100 kHz	better than ±0.2 mA  better than ±0.3 mA better than ±0.1% better than 1 us better than 50 A/us dc to 100 kHz	better than ±0.2 mA  better than ±0.3 mA better than ±0.1% better than 1 us better than 50 A/us dc to 100 kHz
<b>GENERAL DATA</b> <b>Operating temperature</b> <b>Storage temperature</b> <b>Current consumption</b> <b>Secondary internal resistance (at +70 °C)</b> <b>Positive primary current</b> <b>Toroid Housing</b> <b>EMC</b> <b>Connection to primary</b> <b>Connection to secondary</b>	-40 °C to +85 °C -40 °C to +90 °C 14 mA (±18 V) plus output current  25 Ohm In direction of arrow Bayblend KU2-1468 (UL94-V0) EN 50082-2, EN 50081-2 23 mm through hole 3 pin AMP Mate-N-Lok connector <sup>[2]</sup>	-40 °C to +85 °C -40 °C to +90 °C 14 mA (±18 V) plus output current  50 Ohm In direction of arrow Bayblend KU2-1468 (UL94-V0) EN 50082-2, EN 50081-2 26 mm through hole 3 pin AMP Mate-N-Lok connector	-40 °C to +85 °C -40 °C to +90 °C 14 mA (±18 V) plus output current  50 Ohm In direction of arrow Bayblend KU2-1468 (UL94-V0) EN 50082-2, EN 50081-2 23 mm through hole 3 x AMP Tab 2.79 (FASTON) terminals	-40 °C to +85 °C -40 °C to +90 °C 14 mA (±18 V) plus output current  50 Ohm In direction of arrow Bayblend KU2-1468 (UL94-V0) EN 50082-2, EN 50081-2 26 mm through hole 3 pin AMP Mate-N-Lok connector

**Notes:**

<sup>[1]</sup> Higher resistance (Rm) values can be used with reduced measuring range.

<sup>[2]</sup> Gold contacts.

Supply voltage is ±15 V and temperature is +25 °C unless otherwise stated.

# Open frame style

## 300 and 500 A nominal rating

<b>CATALOGUE LISTINGS</b>	<b>CSNM191-003</b> This listing is conformal coated.			
<b>ELECTRICAL DATA</b> <b>Nominal current (In)</b> <b>Measuring range</b> <b>Measuring resistance <sup>(1)</sup></b> <b>with ±15 V at ± 500 A.t max</b> <b>at ± 1000 A.t max</b> <b>with ±15 V at ± 300 A.t max</b> <b>at ± 600 A.t max</b> <b>with ±24 V at ± 300 A.t max</b> <b>at ± 750 A.t max</b> <b>Nominal analogue output current</b> <b>Turns ratio</b> <b>Accuracy at +25 °C</b> <b>Supply voltage</b> <b>Galvanic isolation</b>	500 A rms 0 to ±1000 A.t Rm min Rm max 0 Ohm 50 Ohm 0 Ohm 5 Ohm  100 mA 1 / 5000 maximum ±0.5% of In ±12 to ±18 Vdc (±5%) 6 kV rms / 50 Hz / 1 min			
<b>ACCURACY - DYNAMIC PERFORMANCE</b> <b>Zero offset current at +25 °C</b> <b>Thermal drift of offset current 0 °C to 70 °C</b> <b>Linearity</b> <b>Response time</b> <b>dI/dt</b> <b>Bandwidth</b>	better than ±0.2 mA  better than ±0.3 mA better than ±0.1% better than 1 us better than 50 A/us dc to 100 kHz			
<b>GENERAL DATA</b> <b>Operating temperature</b> <b>Storage temperature</b> <b>Current consumption</b> <b>Secondary internal resistance (at +70 °C)</b> <b>Positive primary current</b> <b>Toroid Housing</b> <b>EMC</b> <b>Connection to primary</b> <b>Connection to secondary</b>	-40 °C to +85 °C -40 °C to +90 °C 14 mA (±18 V) plus output current  50 Ohm In direction of arrow Bayblend KU2-1468 (UL94-V0) EN 50082-2, EN 50081-2 23 mm through hole 3 x AMP Tab 2.79 (FASTON) terminals			

**Notes:**

<sup>(1)</sup> Higher resistance (Rm) values can be used with reduced measuring range.

Supply voltage is ±15 V and temperature is +25 °C unless otherwise stated.