

Interactive Catalog Replaces Catalog Pages

Honeywell Sensing and Control has replaced the PDF product catalog with the new **Interactive Catalog**. The **Interactive Catalog** is a power search tool that makes it easier to find product information. It includes more installation, application, and technical information than ever before.



**Click this icon to try the new
Interactive Catalog.**

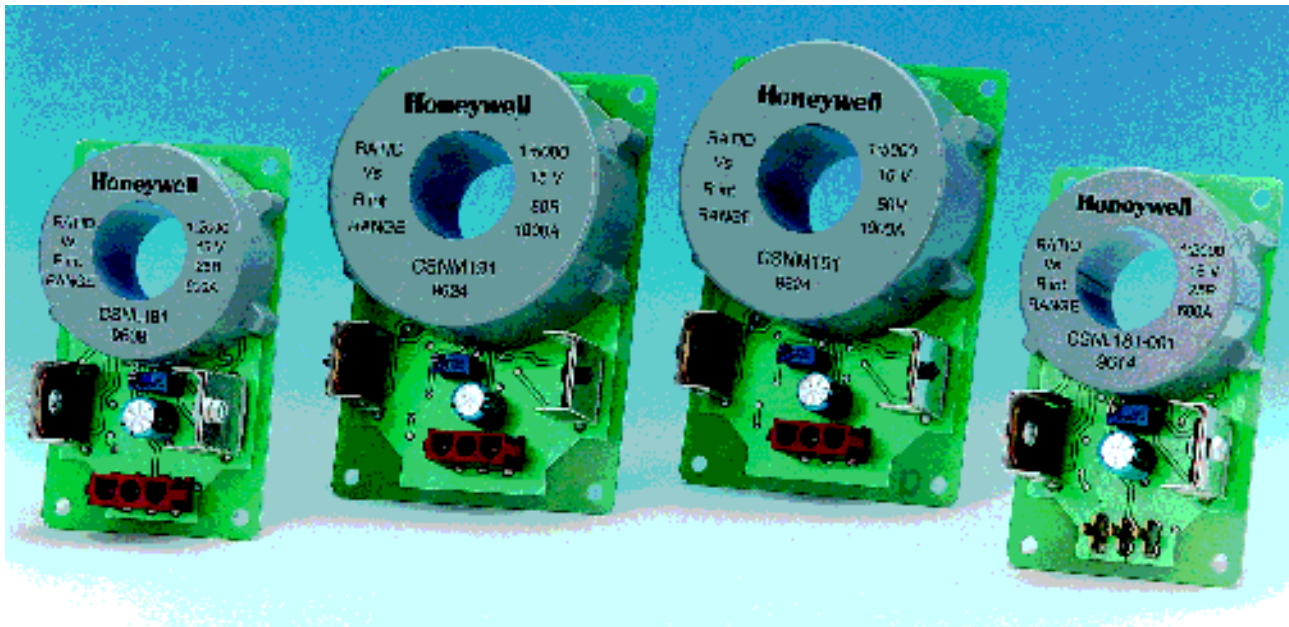
Sensing and Control

Honeywell Inc.

11 West Spring Street

Freeport, Illinois 61032

CSN Series Hall Effect Current Sensors



FEATURES

- Current sensing up to 1000A
- 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 new industrial current sensors extend Honeywell's closed loop current sensing capability. They offer increased current measuring capability up to 1000A 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

PERFORMANCE DATA

Definition

A current transducer based on the principle of magnetic compensation. It provides electronic measurement of DC, AC, pulsed currents and their combinations with galvanic isolation between the primary (high current) and secondary circuits.

Electrical Data

	CSNL181 - XXX	CSNM191 - XXX
Nominal current (In)	: 300 Arms	: 500 Arms
Measuring range	: 0 to ±600 A	: 0 to ±1000 A
Measuring Resistance (Rm)	: Rm min Rm max	: Rm min Rm max
with ±15V	at ±300 A.t max : 0 ohm 50 ohm at ±600 A.t max : 0 ohm 10 ohm	at ±500 A.t max : 0 ohm 50 ohm at ±1000 A.t max : 0 ohm 5 ohm
Nominal analogue output current	: 150 mA	: 100 mA
Turns Ratio	: 1/2000	: 1/5000
Overall accuracy at +25°C	: ±0.5% on In	: ±0.5% of In
Supply Voltage	: ±12V to 18V (±5%)	: ±12V to ±18V (±5%)
Isolation between primary and secondary	: 7.5 kV rms/50 Hz/1 min	: 6.0 kV rms/50 Hz/1 min

Accuracy - Dynamic Performance

Zero offset current at +25°C	: Max ±0.3 mA	: Max ±0.2 mA
Thermal drift of offset current, between 0°C to +70°C	: Typ ±0.3 mA; Max ±0.5 mA	: Typ ±0.2 mA; Max ±0.3 mA
Linearity	: better than ±0.1%	: better than ±0.1%
Response time	: better than 500nS	: better than 1µs
di/dt accurately followed	: better than 50 A/µs	: better than 50 A/µs
Bandwidth	: DC to 150 KHz	: DC to 100 KHz

General data

Operating temperature	: -40°C to +85°C (-40°F to +185°F)	: -40°C to +85°C (-40°F to +185°F)
Storage temperature	: -40°C to +90°C (-40°F to +194°F)	: -40°C to +90°C (-40°F to +194°F)
Current consumption	: Typ 14mA(±18V) + output current	: Typ 14mA(±18V) + output current
Secondary internal resistance	: 25 ohm (at 70°C)	: 50 ohm (at 70°C)
Sensor Housing	: Insulated plastic case (Bayblend FR1468)	: Insulated plastic case (Bayblend FR1468)
Signal sense	: a positive output current is obtained on terminal O/P when the primary current flows in the direction of the arrow	: a positive output current is obtained on terminal O/P when the primary current flows in the direction of the arrow
EMC	: EN50081-2, EN 50082-2	: EN50081-2, EN 50082-2

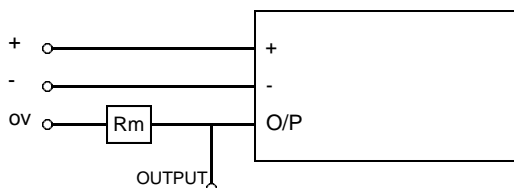
WARNING

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

Electrical Connection

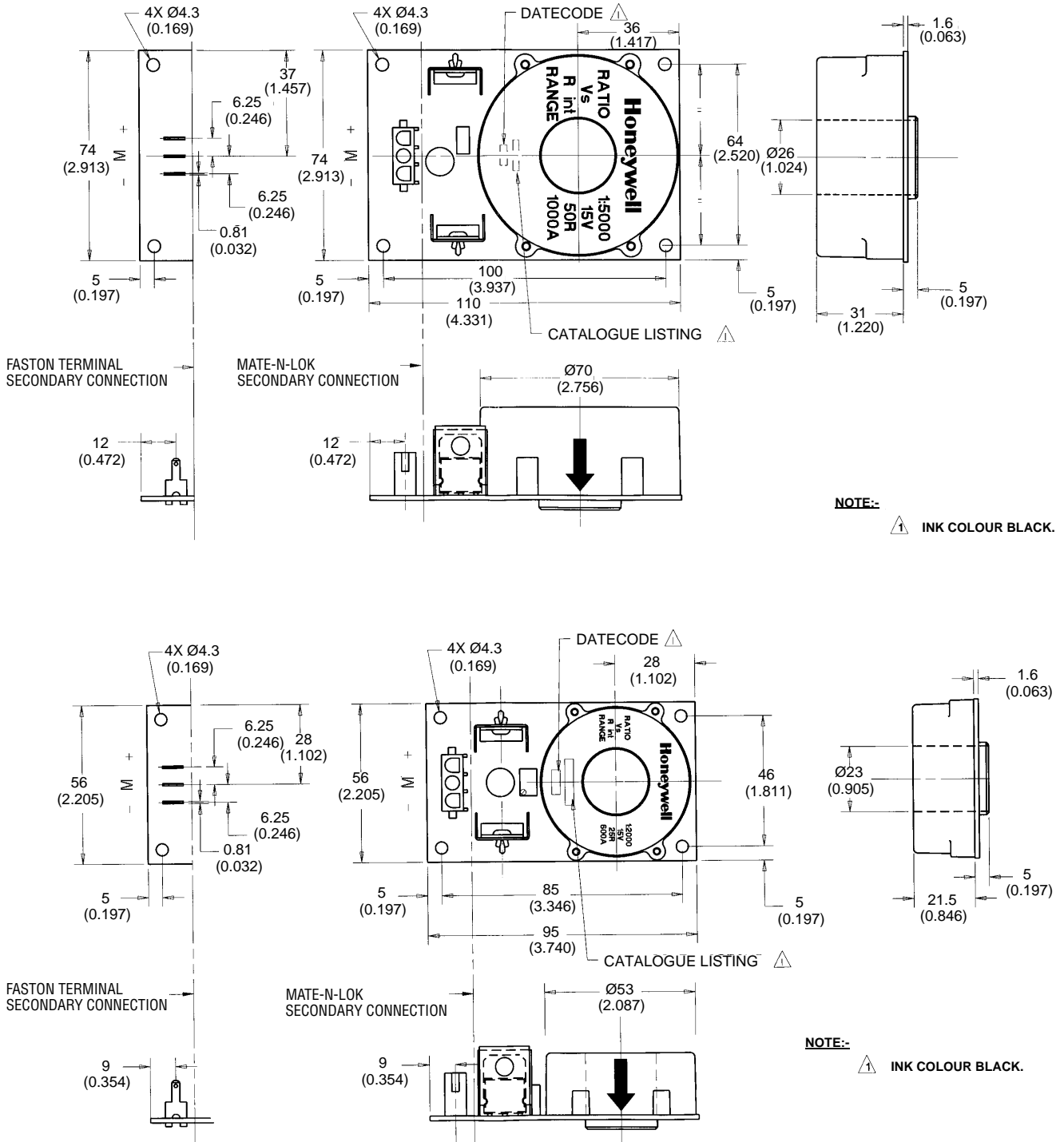


Termination

- 300A: Supply Voltage ±12V to ±18V
- 500A: Supply Voltage ±12V to ±18V
- O/P Measured output signal

CHARACTERISTICS		
Catalogue Listing	Secondary Connection	Conformal Coating
CSNL181	Amp 3-Way Pin Mate-N-Lok Connector	No
CSNL181-001	Amp Tab, 2.79(.110) Series Faston Terminal	No
CSNL181-002	Amp 3-Way Pin Mate-N-Lok Connector	Humiseal 1R32
CSNL181-003	Amp Tab, 2.79(.110) Series Faston Terminal	Humiseal 1R32
CSNM191	Amp 3-Way Pin Mate-N-Lok Connector	No
CSNM191-001	Amp Tab, 2.79(.110) Series Faston Terminal	No
CSNM191-002	Amp 3-Way Pin Mate-N-Lok Connector	Humiseal 1R32
CSNM191-003	Amp Tab, 2.79(.110) Series Faston Terminal	Humiseal 1R32

MOUNTING DIMENSIONS IN MM AND (INCHES)



**WARNING****MISUSE OF DOCUMENTATION**

- The information presented in this product sheet (or catalog) is for reference only. DO NOT USE this document as product installation information.
 - Complete installation, operation and maintenance information is to be referenced for each product.
- Failure to comply with these instructions could result in death or serious injury.**

Sales and Service

For more information:

WWW <http://www.honeywell.com/sensing/>E-mail info@micro.honeywell.com

or contact your local sales office

EUROPE**Austria**

Honeywell Austria GmbH
Phone: (43) 1-727-80-0
FAX: (43) 1-727-80-337

Belgium

Honeywell SA/NV
Phone: 32-2-728 2403
FAX: 32-2-728 2502

Bulgaria

Honeywell EOOD
Phone: (359) 2-79-40-27
Fax: (359) 2-79-40-90

Czech Republic

Honeywell spol. s r.o.
Phone: (420-2) 6112-3469/3424
Fax: (420-2) 6112 2691

Denmark

Honeywell A/S
Phone: 45 39-55-55-55
FAX: 45 39-55-55-58

Finland

Honeywell OY
Phone: (358) 9-3480101
FAX: (358) 9-34801375

France

Honeywell SA
Phone: (33) -1-60 19 82 68
FAX: (33) -1-60 19 81 73

Germany

Honeywell AG
Phone: 49-69-8064-444
FAX: 49-69-8064-442

Hungary

Honeywell Kft.
Phone: (36) 1-252-6363
FAX: (36) 1-252-1541

Italy

Honeywell S.p.A.
Phone: 39 (2) 92146 1
FAX: 39 (2) 92146 888

The Netherlands

Honeywell B.V.
Phone: (31) 20 565 6911
FAX: (31) 20 565 6600

Norway

Honeywell A/S
Phone: (47) 66 76 20 00
FAX: (47) 66 76 20 90

Poland

Honeywell Sp. zo.o
Phone: (48) 22 606 0900
FAX: (48) 22 640 0901

Portugal

Honeywell Portugal Lda
Phone: (351) 1 4172602
FAX: (351) 1 4172600

Romania

Honeywell Bucharest
Phone: (40) 1 2110076
FAX: (40) 1 2103375

Commonwealth of Independent States (CIS)

Honeywell-Sterch
Phone: (7-095) 141 5403
Fax: (7-095) 415 2976

Slovak Republic

Honeywell sro.
Phone: (421) 7 5247 403
(421) 7 5247 461/
445
FAX: (421) 7 5247 415

South Africa (Republic of)

Honeywell Southern
Honeywell S.A. Pty. Ltd
Phone: (27) 11 805-1201
Fax: (27) 11 315-2179

Spain

Honeywell S.A.
Phone: (34) 1-313 6100
FAX: (34) 1-313 6129

Sweden

Honeywell AB
Phone: (46) 8 775 55 00
FAX: (46) 8 775 56 00

Switzerland

Honeywell AG
Phone: (41) 1 839 25 25
FAX: (41) 1 831 03 14

Turkey

Honeywell AS
Emirhan Cad No 145
Barbaros Plaza C Blok Kat 18
80700 Dikilitas Istanbul
Tel: 90-212 227 4196
FAX: 90-212 259 0465

United Kingdom

Honeywell Control Systems Ltd
Phone: (44) 1344 656000
FAX: (44) 1344 656015

Mediterranean & African Distributors

Honeywell SpA
Phone: (39) 2 921 46 232
Fax: (39) 2 921 46 233

Middle East Headquarters

Honeywell Middle East Ltd.
Phone: (9712) 322530
Fax: (9712) 327718

ASIAPACIFIC**Australia**

Honeywell Limited
Phone: (61) 2-9353-7400
FAX: (61) 2-9353-7406
Toll Free 1300-36-39-36
Toll Free Fax: 1300-36-04-30

China - PRC

Honeywell China Ltd.
Phone: (86-10) 6595-6898
FAX: (86-10) 6591-3002

China - Hong Kong

Honeywell China Ltd.
Phone: (852) 2331-9133
FAX: (852) 2953-6767

India

Honeywell Inc.
Phone: (91) 22-204-5827
FAX: (91) 22-640-9513

Indonesia

Honeywell Indonesia
Phone: (622)1-521-3330
FAX: (622)1-384-8949

Japan

Yamatake-Honeywell Co., Ltd
Phone: (81) 466-20-2187
FAX: (81) 466-20-2309

South Korea

LG - Honeywell Co. Ltd
Phone: (822) 799-6011
FAX: (822) 792-9013

Malaysia

Honeywell Engineering Sdn Bhd
Phone: (603) 758-4988
FAX: (603) 758-8922

New Zealand

Honeywell Limited
Phone: (64-9) 623-5050
FAX: (64-9) 623-5060

Philippines

Yamatake-Honeywell
Phone: (63-2) 817-6452
FAX: (63-2) 817-6471

Singapore/SE Asia Regional Office

Honeywell Southeast Asia Pte. Ltd.
Phone: (65) 249-0341
FAX: (65) 445-3033

Taiwan

Honeywell Taiwan Ltd.
Phone: (886-2) 245-1000
FAX: (886-2) 245-3242

Thailand

Honeywell Systems Ltd.
Phone: (662) 693-3099
FAX: (662) 693-3085

NORTH AMERICA**Canada**

Honeywell Ltd
Phone: 1-800-737-3360
FAX: 1-800-565-4130

USA

MICRO SWITCH
Honeywell Inc
Phone: 1-800-537-6945
1-815-235-6847
FAX: 1-815-235-6545

LATIN AMERICA**Argentina**

Honeywell S.A.I.C.
Phone: (54-1) 383-9282
FAX: (54-1) 325-6470

Brazil

Honeywell do Brasil & Cia
Phone: (55-11) 865-2055
FAX: (55-11) 865-3894

Chile

Honeywell Chile, S.A.
Phone: (56-2) 233-0688
FAX: (56-2) 231-6679

Columbia

Honeywell Columbia, S.A.
Phone: (57-1) 623-3239/3051
FAX: (57-1) 623-3395

Ecuador

Honeywell S.A.
Phone: (593-2) 981-560/1
FAX: (593-2) 981-562

Mexico

Honeywell S.A. de C.V.
Phone: (52-5) 259-1966
FAX: (52-5) 570-2985

Puerto Rico

Honeywell Inc.
Phone: (809)792-7075
FAX: (809) 792-0053

Venezuela

Honeywell CA
Phone: (58-2) 238-0211
FAX: (58-2) 238-3391

This publication does not constitute a contract between Honeywell and its customers. The contents may be changed at any time without notice. It is the customer's responsibility to ensure safe operation and installation of the products. Detailed mounting drawings of all products illustrated are available on request.

© Honeywell 1997

Honeywell

Helping You Control Your World

Honeywell Control Systems Ltd.
Newhouse Industrial Estate
Motherwell ML1 5SB
Scotland, UK
Tel: (44) 1698 481400
Fax: (44) 1698 481014

100418-1-EN GLO 12/97

Printed in the United Kingdom