

CSNZ-904 Series

Split-Core Adjustable Set Point Digital Output Variable Frequency Drive Current Sensors



DESCRIPTION

The CSNZ-904 Series microprocessor-based current sensors provide a unique solution for monitoring the status of motors controlled by variable frequency drives (VFD). The CSNZ-904 Series stores the sensed amperage values for normal operation at various frequency ranges in non-volatile memory. This information allows the sensor to distinguish between a reduced amperage draw due to normal changes in the frequency and abnormal amperage drop due to belt loss, coupling shear or other mechanical failures.

FEATURES

- Amperage range of 3.5 A to 135 A, 20 Hz to 75 Hz
- 0.1 A at 30 Vac/dc output rating
- Self-adjusting trip set point
- 100% solid state
- Microprocessor-based
- Normal and alarm status LEDs
- Self-gripping mounting teeth
- Split-core design
- cULus approved

The self-adjusting trip set point is factory programmed to detect belt loss in undercurrent conditions. The sensor monitors both frequency and amperage, and automatically compensates for change effects associated with VFDs. There is no need to calibrate the CSNZ-904 Series in live starter enclosures.

Status LEDs indicate normal and alarm conditions. The split-core allows fast retrofit installation.

A DIN rail clip set (available separately) increases mounting flexibility.

NOTE: The CSNZ-904 Series is not intended for use in staged pump or variable inlet vane applications.

POTENTIAL APPLICATIONS

- Monitoring positive status on motors controlled by VFDs
- Replacement for pressure switches

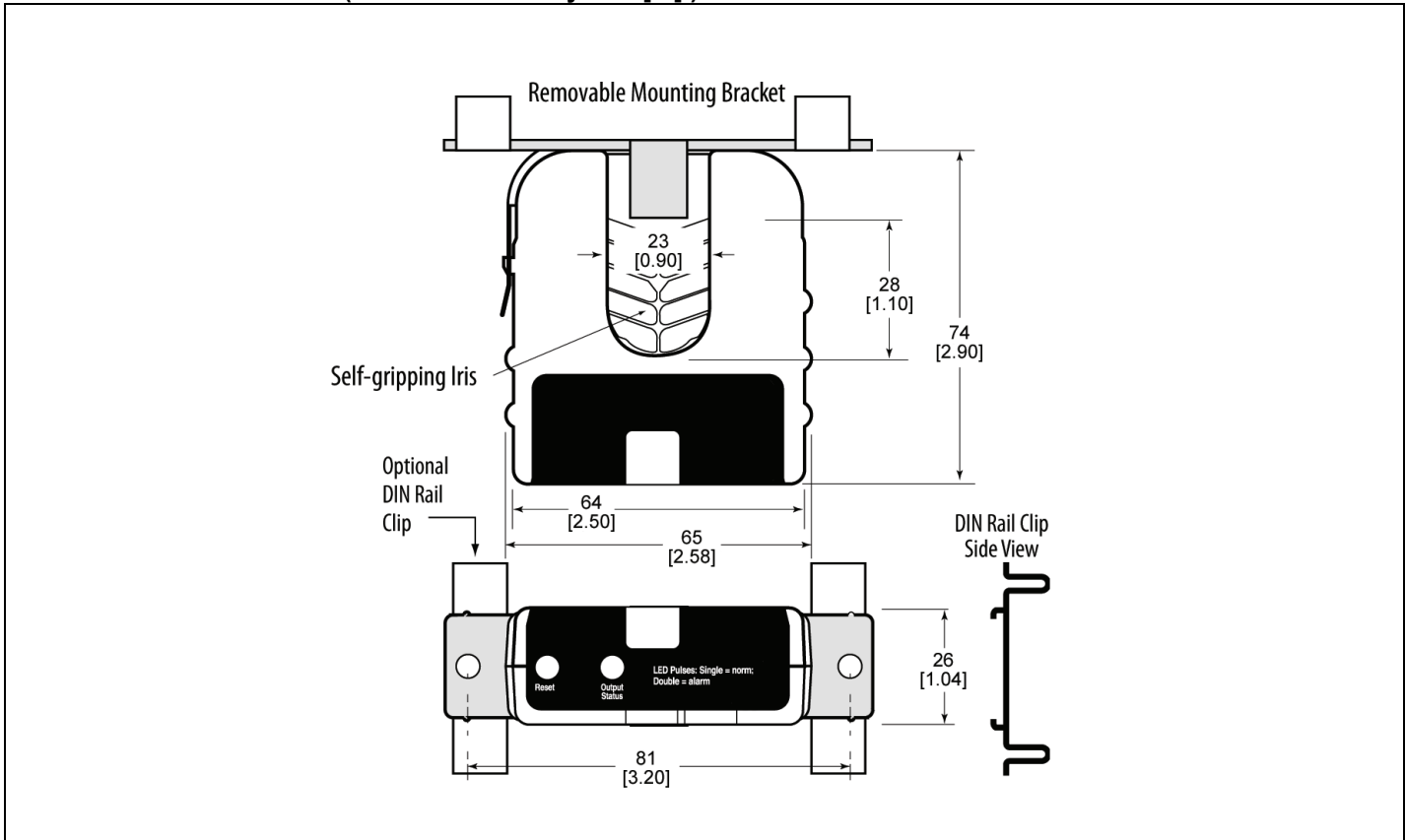
CSNZ-904 Series

SPECIFICATIONS

Characteristic	Parameter
Amperage range	3.5 A to 135 A (at all frequency levels)
Sensor power	induced
Status output rating	N.O. 0.1 A @30 Vac/dc (non-polarity sensitive)
Output	digital switch
Off state leakage	0 (open switch represents 1 + MOhm of resistance)
Insulation class	600 Vac rms (max. voltage when monitoring an uninsulated conductor)
Frequency range	on/off status only: 20 Hz to 34 Hz belt loss indication: 35 Hz to 75 Hz
Temperature range	-15 °C to 60 °C [5 °F to 140 °F]
Humidity range	0% to 95% non-condensing
Off delay	0 s to 2 min
Trip setpoint	self-calibrating/automatic setting
LED status*	single pulse = normal double pulse = alarm
Dimensions (L x W x H)	74 mm x 66 mm x 26 mm [2.90 in x 2.58 in x 1.04 in]
Sensor hole size (L x W)	28 mm x 23 mm [1.10 in x 0.90 in]
Approvals	cULus UL 508

*Do not use the LED indicators for evidence of applied voltage.

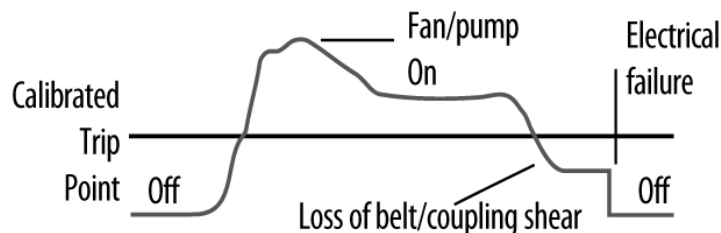
MOUNTING DIMENSIONS (For reference only mm/[in].)



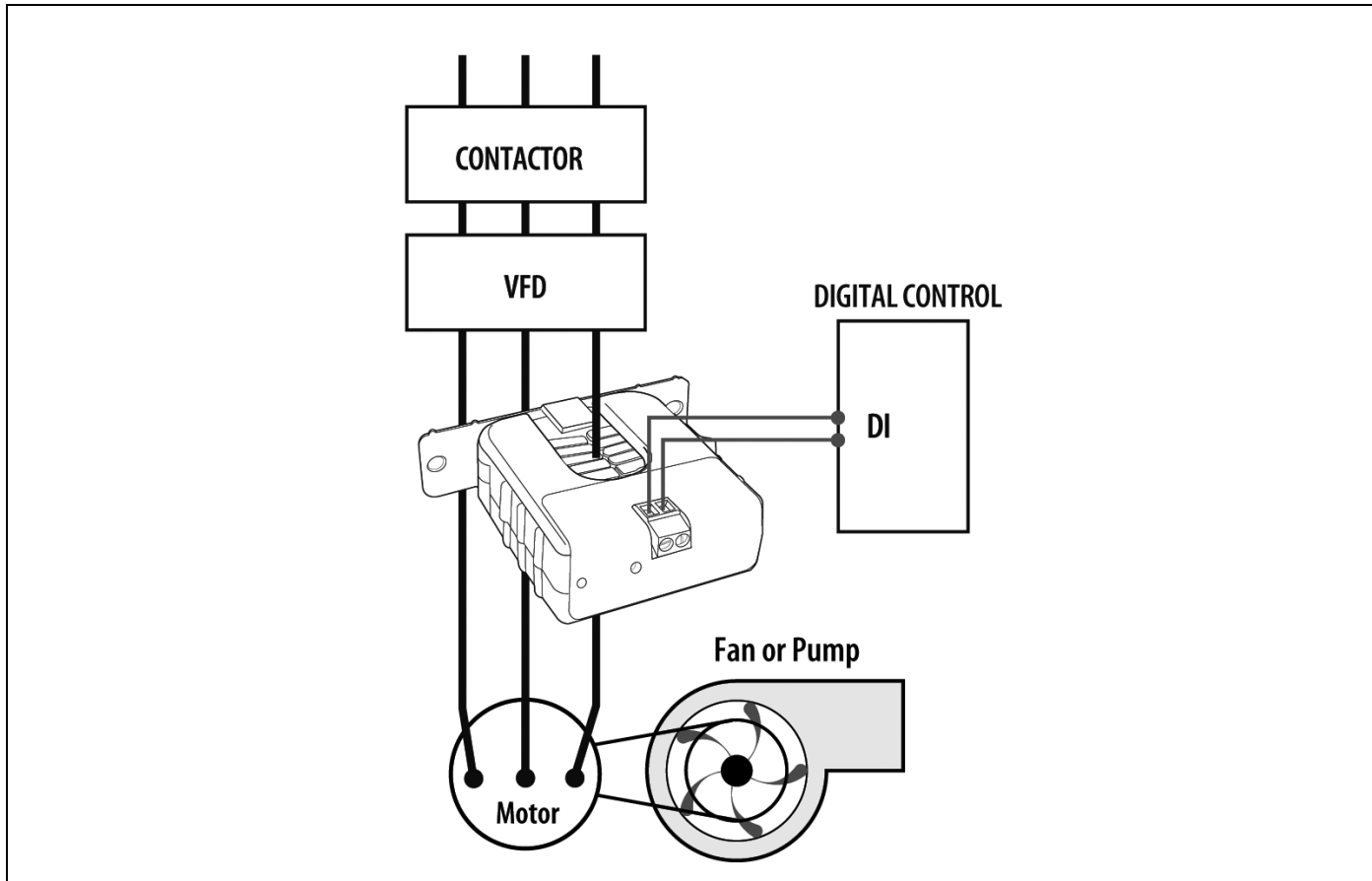
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BELT LOSS/COUPLING SHEAR DETECTION

The CSNZ-904 Series detects when drive belts slip, break or pump couplings shear by sensing a drop in current. A typical HVAC motor that loses its load has a current reduction draw of up to 50%.



APPLICATION/WIRING EXAMPLE



ORDER GUIDE

Catalog Listing	Description
CSNZ-904	Split-Core Adjustable Set Point Digital Output Variable Frequency Drive Current Sensor
AH01	DIN Rail Clip Set

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.

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

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

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

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