

EA20 SERIES



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Split-Core Uni-Directional 4-20 mA Output DC Current Transducer

Installer's Specifications

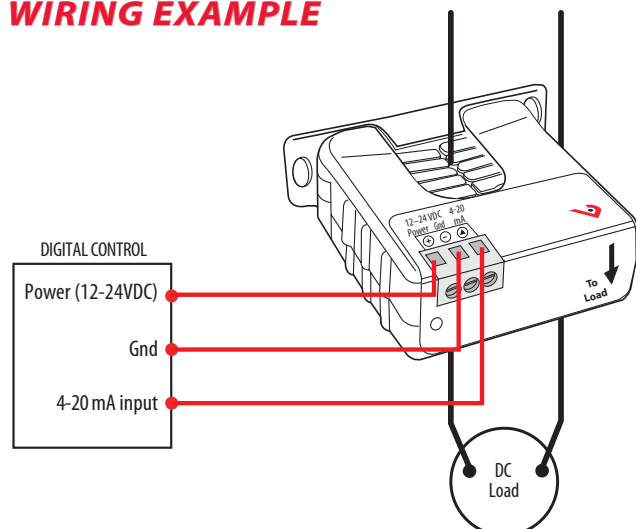
Technology	Exclusive Pulse Reset Technology™
Amperage Range for Stated Accuracy	0.5A to 100, 150, or 200ADC
Sensor Supply Voltage	12 to 24VDC (for currents over 120A, supply voltage must be at least 15V)
Supply Current	35mA to 110mA*
Insulation Class	1000VDC (insulated conductor)
Temperature Range	-30° to 60°C (-22° to 140°F)
Humidity Range	10-90% RH non-condensing
Output	4-20mA
Accuracy	±0.5% full scale, combined linearity, hysteresis, and repeatability
Withstand Current	Up to 25,000ADC continuous
Terminal Block Maximum Wire Size	14 AWG
Terminal Block Torque (nominal)	4 in-lbs (0.45 N-m)
Rated Altitude	2000 m
Pollution Degree	2
Installation Category	III

* At zero load current: 35 mA; at maximum load current: 55 mA to 110 mA, depending on supply voltage.

INSTALLATION

1. Disconnect and lock out power to the conductor to be monitored.
2. Choose a location for the sensor. The monitored conductor must pass through the iris, and the sensor must be at least 1/2" from any conductors, as enclosure can reach 87°C during operation (at 200A and 60°C ambient temperature). Use wire rated at a minimum of 90°C.
3. Install the adjustable mounting bracket to the back of the enclosure using the included screws.
4. Connect 12-24 VDC to the terminals marked Power (+) and Gnd (-).
5. Wire the mA output connections between the sensor and the controller.
6. Snap the sensor over the conductor to be monitored and clip the assembly to the mounting bracket.

WIRING EXAMPLE



⚠ DANGER ⚡

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Follow safe electrical work practices. See NFPA 70E in the USA, or applicable local codes.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Read, understand and follow the instructions before installing this product.
- Turn off all power supplying equipment before working on or inside the equipment.
- Use a properly rated voltage sensing device to confirm power is off.
DO NOT DEPEND ON THIS PRODUCT FOR VOLTAGE INDICATION
- Only install this product on insulated conductors.

Failure to follow these instructions will result in death or serious injury.

NOTICE

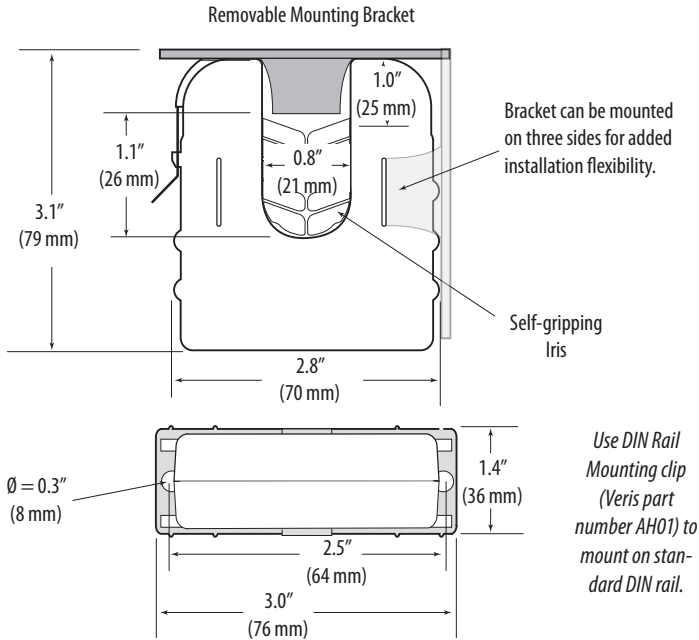
- This product is not intended for life or safety applications.
- Do not install this product in hazardous or classified locations.
- The installer is responsible for conformance to all applicable codes.
- Mount this product inside a suitable fire and electrical enclosure.

For use in a Pollution Degree 2 or better environment only. A Pollution Degree 2 environment must control conductive pollution and the possibility of condensation or high humidity. Consider the enclosure, the correct use of ventilation, thermal properties of the equipment, and the relationship with the environment. Installation category: CAT II or CAT III

PRODUCT IDENTIFICATION

MODEL	AMPERAGE RANGE (DC)
EA20BB010	0-100 A
EA20BB015	0-150 A
EA20BB020	0-200 A

DIMENSIONS



OPERATION

The EA20 Series of current-sensitive devices monitor DC current (amperage) in the conductor passing through. These units use Pulse Reset Technology™ with proven transducer circuitry to produce an output suitable for connection to energy management systems, building controllers, or other appropriate data acquisition equipment. The EA20 requires 12-24 VDC (see Specifications information) to generate its output. It comes factory calibrated at a fixed span for maximum accuracy (0-100 A, 0-150 A, or 0-200 A, depending on model, see Product Identification).

The EA20 Series is ideal for DC current monitoring where accuracy must be maintained in the presence of magnetic fields, current spikes, and high fault currents (e.g. solar panels, electroplating equipment).

The EA20 Series housing offers unprecedented mounting flexibility. The mounting bracket can be attached in three different places. Additionally, the bracket is compatible with the Veris AH01 DIN Rail clip, allowing DIN mounting.

LED INDICATOR BLINK CODES

LED Activity	Status Description
Single green	Normal operation
Double green	Over span
Red/green	Over limit
Solid red	Overload

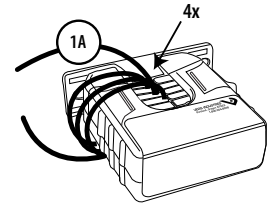
NOTES

Load Currents Less Than 2 A

Wrap the monitored conductor through the center window and around the sensor body to produce multiple turns. This increases the current measured by the transducer.

Program equipment to account for the extra turns, e.g., if four turns pass through the sensor (as shown) then divide the reading by 4.

Wrapping may reduce the sensor's accuracy.



CAUTION

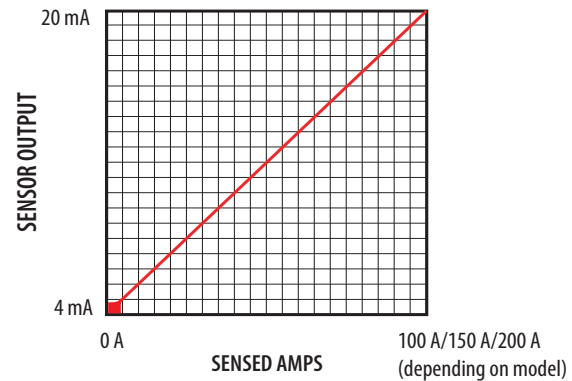
RISK OF EQUIPMENT DAMAGE

- Derate the product's maximum current for the number of turns through the sensing window using the following formula.
Rated Max. Amps ÷ Number of Turns = Max. monitored Amps
 e.g. : 100A ÷ 4 Turns = 25 Amps max. in monitored conductor
- Failure to follow these instructions can result in overheating and permanent equipment damage.

High Load Current Monitoring

Do not expose the EA20 to continuous current levels greater than the rated maximum current (brief current surges and fault currents should not adversely affect the EA20).

SCALING



TROUBLESHOOTING

Problem	Solution
The LED is off and no signal is produced	Verify that supply voltage is applied to PWR (+) and GND (-) terminals.
The LED is on solid and the output is at maximum	Verify that the unit is not attempting to monitor more than the maximum current range.