INTRINSICALLY-SAFE DC CURRENT TRANSDUCER MODEL ISC-

DESCRIPTION

The ISC current transducer provides a Hall-Effect sensor with an integrated signal conditioner. All units are packaged in a split-core configuration for ease of installation. Application flexibility is provided by a wide variety of input current ranges and output signal types.

Units meet the requirements of ATEX Directive 94/9/EC and UL/CUL Intrinsically Safe regulations. These standards are specifically related to the requirements for hazardous location installations in North America and the European Union (EU) but are widely accepted throughout the world. When used with appropriate safety barriers these units are recommended for installation in hazardous locations such as offshore platforms and petrochemical plants.



FEATURES

- · Hall-Effect Current Sensor with Output Amplifier.
- · Split-Core
- UL/CUL Intrinsically Safe Certification.
- Meets Requirements of ATEX Directive 94/9/EC

APPLICATIONS

- Current Sensing
- Torque Measurements
- Hazardous Locations such as Offshore Platforms and Petrochemical Plants

5 YEAR WARRANTY

Intrinsically Safe Current Transducer meets the following standards:





SPECIFICATIONS

INPUT

Current	See Table
Linear Range	0 to F.S. input
Over-current(without damage)	10 X rating
Bandwidth(±1dB)	dc to 1kHz

DIELECTRIC TEST

INSTRUMENT POWER

Bus Through Window to Output......5kVac

Nominal......24Vdc

ORDERING INFORMATION

Example: Input 0-1000Adc Output 0-2.9Vdc ISC-102

Range		14 to 30Vdc
OUTPUT		
Signal		See Table
	Voltage models	

Signal		
Loading	.Voltage models	≥100kΩ
	Current models	≤ 250Ω
Response Time	.(to 90%)	≤1ms
Offset		≤1% F.S.

ACCURACY & LINEARITY.	±2% F.S.
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TEMPERATURE

INPUT	MODEL ISC-			
DC AMPS	0 - 2.9Vdc	0 - 5Vdc	0 - 10Vdc	4-20mAdc
*0 - 100A	101	101X5	101D	101E
0 - 200A	201	201X5	201D	201E
0 - 300A	301	301X5	301D	301E
0 - 400A	401	401X5	401D	401E
0 - 500A	501	501X5	501D	501E
0 - 600A	601	601X5	601D	601E
0 - 800A	801	801X5	801D	801E
0 - 1000A	102	102X5	102D	102E
0 - 1500A	152	152X5	152D	152E
0 - 2000A	202	202X5	202D	202E
0 - 2500A	252	252X5	252D	252E

^{*} Requires two turns through window.

PHYSICAL

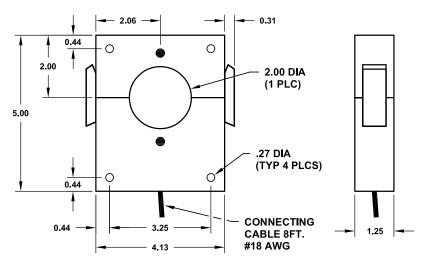
Net Weight2 lb

OHIO SEMITRONICS, INC. 4242 REYNOLDS DRIVE * HILLIARD, OHIO * 43026-1264 PHONE: (614) 777-1005 * FAX: (614) 777-4511 www.ohiosemitronics.com * 1-800-537-6732



INTRINSICALLY-SAFE CURRENT TRANSDUCER MODEL ISC-XXX

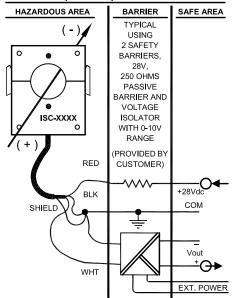
CASE DIMENSIONS



NOTE: ALL DIMENSIONS IN INCHES.

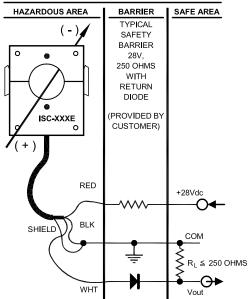
CONNECTION DIAGRAMS

TYPICAL CONNECTION WITH 0 - (2.9/5/10) VOLT OUTPUT



Supply: Red (+), Black Ui, Vmax 30Vdc 36mA li, Imax Ρí, Pmax 1.1W Ci 0µF Li : 0mH

TYPICAL CONNECTION WITH 4-20mA OUTPUT



Signal: White (+), Black Ui, Vmax : 10Vd : 10Vdc li, Imax 29mA Ρi, Pmax : 0.21W Ci : 60nF : 0mH

WARNING:

- 1. Do Not use in environments where ethers are present.
- 2. Clean only with a damp cloth to prevent the possibility of electric discharge.

Reference also Control Drawing B901-226

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NOTE œ 6 Ç ယ Ņ WHERE MULTIPLE CIRCUITS EXTEND FROM THE SAME PIECE OF INTRINSICALLY SAFE EQUIPMENT TO ASSOCIATED APPARATUS, THEY MUST BE INSTALLED IN SEPARATE CABLES OR IN ONE CABLE WHICH HAS SUITABLE INSULATION. CABLE CAPACITANCE (Cc) PLUS INTRINSICALLY SAFE EQUIPMENT CAPACITANCE (Ci) MUST BE LESS THAN THE MARKED CAPACITANCE (Ca). CABLE INDUCTANCE (Lc) PLUS INTRINSICALLY SAFE EQUIPMENT INDUCTANCE (LI) MUST BE LESS THAN THE MARKED INDUCTANCE (La) SHOWN ON THE BARRIER. SEE NOTE 5. THE MAXIMUM NONHAZARDOUS LOCATION VOLTAGE MUST BE NO GREATER BARRIERS MUST BE INSTALLED IN ACCORDANCE WITH BARRIER MANUFACTURE'S CONTROL DRAWING AND ARTICLE 504 OF THE NATIONAL ELECTRIC CODE INTRINSICALLY SAFE EQUIPMENT: SELECTED BARRIERS MUST BE THIRD PARTY APPROVED AS INTRINSICALLY SAFE FOR THE APPLICATION AND HAVE Voc NOT EXCEEDING Vmax. SEE NOTE 5. II, Imax = 36 mA
Pi, Pmax = 1.1 W
Ci = 0 uF
Li = 0 mH IF THE ELECTRICAL PARAMETERS OF THE CABLE ARE UNKNOWN, THE FOLLOWING lmax Ci + Cc LI + Lc VALUES MAY BE USED: THAN 250V RMS. Vmax **ENTITY PARAMETERS FOR SUPPLY:** UI, Vmax = 30 Vdc CAPACITANCE (Cc)
INDUCTANCE (Lc) Voc Isc Ca 60 pF/FT 0.20 uH/FT **ENTITY PARAMETERS FOR SIGNAL:** II, Imax = 29 mA
Pi, Pmax = 0.21 W
Ci = 60 nF
Li = 0 mH UI, Vmax = 10 Vdc FRACTIONS 1/32 CLASS I, DIVISION 1, GROUPS A,B,C, AND D HAZARDOUS LOCATIONS TRANSDUCER CURRENT APPROVAL BAF HECKED BY CHANGE NOTE 1, ADD "UI", "II", AND "P" SPEC L DATE 08/30/04 09/02/04 BLACK WHITE RED <u>|SO</u> ωä CODE IDENT NO. OHIO SEMITRONICS, INC. NON HAZARDOUS LOCATIONS CONTROL DRAWING ISC-XXX THIRD PARTY BARRIER LISTED B901-226 BAF