INTRINSICALLY-SAFE DC CURRENT TRANSUDER MODEL ISCTH

DESCRIPTION
The ISCTH 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 (see standards listing). 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

SPECIFICATIONS

INPUT
Current ................................ Linear .......................... See Table
Over-current ...................... Without Damage ........ 10X Rating
Frequency Range .......... (+1dB) .................. dc to 1kHz

DIELECTRIC TEST
Bus through Window to Output .................................. 5kVac

INSTRUMENT POWER
Nominal .................................................. 24Vdc
Range .................................................. 14-30Vdc
Max Current Draw ...................... 36mA

OUTPUT
Signal ........................................ (See Table)
Loading .................. Voltage Models .............. ≥100kΩ
.......................... Current Models .............. ≤250Ω
Response Time (to 90% F.S.) .................. <1ms
Offset ................................. ≤1% F.S.

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

TEMPERATURE
Operating Range .................. -10 to 60°C
Effect .......................... (-10°C ≤ Tamb ≤ 60°C) .......................... ±1% F.S.

PHYSICAL
Weight ........................................ 2 lbs.
Enclosure ..................... Noryl SE1X, Black

Intrinsically Safe Current Transducer
meets the following standards:

CE 0575
Ex ia IIC T4 Ga
DNV-2006-OSL-ATEX-0411X

UL/CUL CLI. Div1. Gr A, B, C. D
UL/CE 20BP

ORDERING INFORMATION
Example: Input 0-1000A
Output 0-10V
ISCTH/1000A/10/SC/24Vdc

ORDERING INFORMATION
Example: Input 200A
Output 4-20mA
ISCTH/200A/4-20/SC/24Vdc

ORDERING INFORMATION
Example: Input 800A
Output 0-5V
ISCTH/800A/5/SC/24Vdc

ORDERING INFORMATION
Example: Input ±0-500A
Bi-Directional Output 0-2.9V
ISCTH/500A/2.9/SC/24Vdc

For UK Sales, Support and Delivery:
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**INTRINSICALLY-SAFE DC CURRENT TRANSDUCER MODEL ISCTH**

**DIMENSIONS**

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

**TYPICAL CONNECTION WITH 4-20mA OUTPUT**

**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 0901-00226-B Rev C**

**Entity Parameters**

<table>
<thead>
<tr>
<th>Supply: Red(+), Black(-)</th>
<th>Signal: White(+), Black(-)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$U_i, V_{max}$</td>
<td>$U_i, V_{max}$</td>
</tr>
<tr>
<td>30Vdc</td>
<td>10Vdc</td>
</tr>
<tr>
<td>$I_i, I_{max}$</td>
<td>$I_i, I_{max}$</td>
</tr>
<tr>
<td>110mA</td>
<td>29mA</td>
</tr>
<tr>
<td>$P_i, P_{max}$</td>
<td>$P_i, P_{max}$</td>
</tr>
<tr>
<td>1.1W</td>
<td>0.21W</td>
</tr>
<tr>
<td>$C_i$</td>
<td>$C_i$</td>
</tr>
<tr>
<td>0μF</td>
<td>60nF</td>
</tr>
<tr>
<td>$L_i$</td>
<td>$L_i$</td>
</tr>
<tr>
<td>0mH</td>
<td>0mH</td>
</tr>
</tbody>
</table>

**NOTE:**
ALL DIMENSIONS ARE IN INCHES.
TOLERANCE ±0.03

**Dwg# 0902-00623-B Rev A**

**Powertek**

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DECLARATION OF CONFORMITY

DATE: June 02, 2014

EQUIPMENT: Intrinsically Safe Current Transducers

MODEL(s): ISC-xxx (D, E, X5) (Y03, Y04, Y23)

The above referenced equipment complies with the European Directive for operation in potentially explosive atmospheres. This is proven through compliance with all relevant sections of the specified Standards.

A Technical Construction File is available for review by designated bodies. An EC-Type Examination Certificate DNV-2006-OSL-ATEX-0411X, registration number 0575, has been issued by Det Norske Veritas (DNV), Veritasveien 1, 1363 Høvik, Norway.

DIRECTIVE: 94/9/EC, Equipment or protective systems intended for use in potentially explosive atmospheres (ATEX)

STANDARDS: EN 60079-0: 2012, Explosive atmospheres, Equipment - general requirements
EN 60079-11: 2012, Explosive atmospheres, Equipment - protection by intrinsic safety ("I")

MARKING: 0575 Ex II G Ex ia IIC T4 Ga

I hereby authorize the above defined marking to be applied to the referenced equipment.

SIGNATURE: Lewis J Miller, Vice-President of Engineering

Date 6/2/2014