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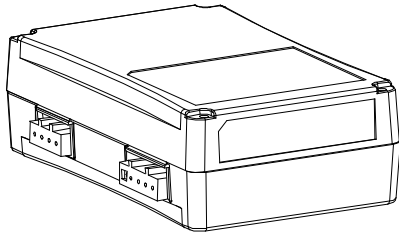
Описание на гальванический изолятор. Модель 162459-01



BENTLY
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162459-01 Trendmaster® Galvanic Isolator

Bently Nevada™ Asset Condition Monitoring



Description

The Trendmaster® Galvanic Isolator enables the Trendmaster system to connect to intrinsically safe transducer installations without the need for safety barriers or the need to specify, install and maintain a high integrity IS earth. The Trendmaster Galvanic Isolator provides an interface between Trendmaster scanning hardware, and all associated Transducer Interface Modules (TIMs and proTIMS) located in a hazardous area.

- The Trendmaster Galvanic Isolator is powered from an external power supply which enables several Galvanic Isolators to be connected in parallel to one TIM line from DSM or SPA.
- Each Galvanic Isolator can interface and power up to 254 proTIM (233 TIM) channels, depending on length of cable (500 ft.).

The ability to connect Galvanic Isolators in parallel allows connection of up to 254 proTIM or TIM channels total with maximum cable length (3500 ft.)

Specifications

All values are specified over the full operating temperature range unless stated otherwise. All voltages are specified with respect to COM. References to proTIMs relates to proTIM-R and proTIM-C. References to TIM and flexiTIMTM relate to the Trendmaster 2000 Transducer Interface Modules

External Power Input.

Nominal Input Voltage:

+24 V ± 5 %

Maximum Current Draw:

100 mA

Power Dissipation.

Including power supply to 32 proTIMs (64 TIMs) and associated transducers.

1.7 Watts @ +24 V, Typical

Environmental Specification

Operating Temperature range:

-20 to +70 °C

Storage Temperature Range:

-40 to +85 °C

Relative humidity:

100 % condensing, non-submerged, power on when installed in a weatherproof housing.

Electromagnetic Compatibility.

Emissions:

EN61000-6-4

Immunity:

EN 61000-6-2

Hazardous Area Approvals.

CSA (C/US):

A / Ex nA [ia] IIC

T4@ = -20°C ≤ Ta ≤ +70°C

Zone 2/ (0)

Exia Class 1, Groups A, B, C, D

CENELEC:

II (1)GD [EEx ia] IIC -20°C ≤ Ta ≤ +70°C

SIRA 02ATEX2215

II 3GD EEx nA IIC T4

SIRA 02ATEX4216X

Must be housed in NEMA type 4 or IP 54 weatherproof housing when installed in a Zone 2 Area.

Install per Control Drawing 166857 in a safe area, Division 2 / Zone 2 area.

0.33 megohm static dissipation resistor fitted within the Galvanic Isolator per EN60079-14

Certification Parameters.

Uo Total= 23.9 V

Uo PWR = 15 Vac

Uo Signal =12 Vac

Io PWR= 161 mA

Io Signal = 12 mA

Po Total = 555 Mw

Co = 126 nF

Lo/Ro = 21 μH/Ω

Ta = - 20 to + 70 °C

Physical.

Weight:

0.25 Kg (0.55 lb)

Dimensions:

94 mm x 150 mm x 45 mm

(3.7" x 5.9" x 1.77")

Mounting:

DIN Rail.

Specifications and Ordering Information
Part Number 162513-01
Rev. C (04/07)

ac Performance.**Accuracy:**

± 1 %

Noise Floor:

± 0.5% Trendmaster full-scale

Bandwidth

1 % dc to 10 kHz

ac Phase:

+ 3.0° @ 600 Hz absolute

± 1.5° @ 600 Hz unit-to-unit skew¹

¹For phase-critical measurements all measured signals should be connected through isolators to preserve phase.

dc Performance.**Accuracy:**

± 1 % or 15 mV whichever is the greater

Inputs.

Safe area connection to the following Trendmaster Host scanning hardware.

Dynamic Scanning Module (DSM):

149744

PCI Signal Processing Adapter (SPA):

147127

Wireless Remote Module:

145908-01

Maximum of Four Galvanic Isolators connected to each TIM line from DSM or SPA.

Ouputs:

Hazardous area connection to the following intrinsically Safe Transducer Interface Module types:

TIM.**flexiTIM™****proTIM - C****proTIM - R**

Number of TIMs.

The number of TIMs / proTIMs allowed per Galvanic Isolator output is determined by the maximum cable length connected to the Galvanic Isolator output and all the subsequent TIMs per the table below:

Table 1:

Max Cable Length	Max Number of flexiTIM, TIM channels	Max Number of proTIM-R or proTIM C channels
500 ft	233	254
1000 ft	199	236
1500 ft	170	205
2000 ft	145	177
2500 ft	122	153
3000 ft	102	131
3500 ft	84	112

Ordering Information**Trendmaster Galvanic Isolator.**

Including connectors required for installation.

162459-01

Accessories.

02200627

Power Supply

162222-01

Weatherproof Housing

164046

TIM Line Connector from SPA.

164045

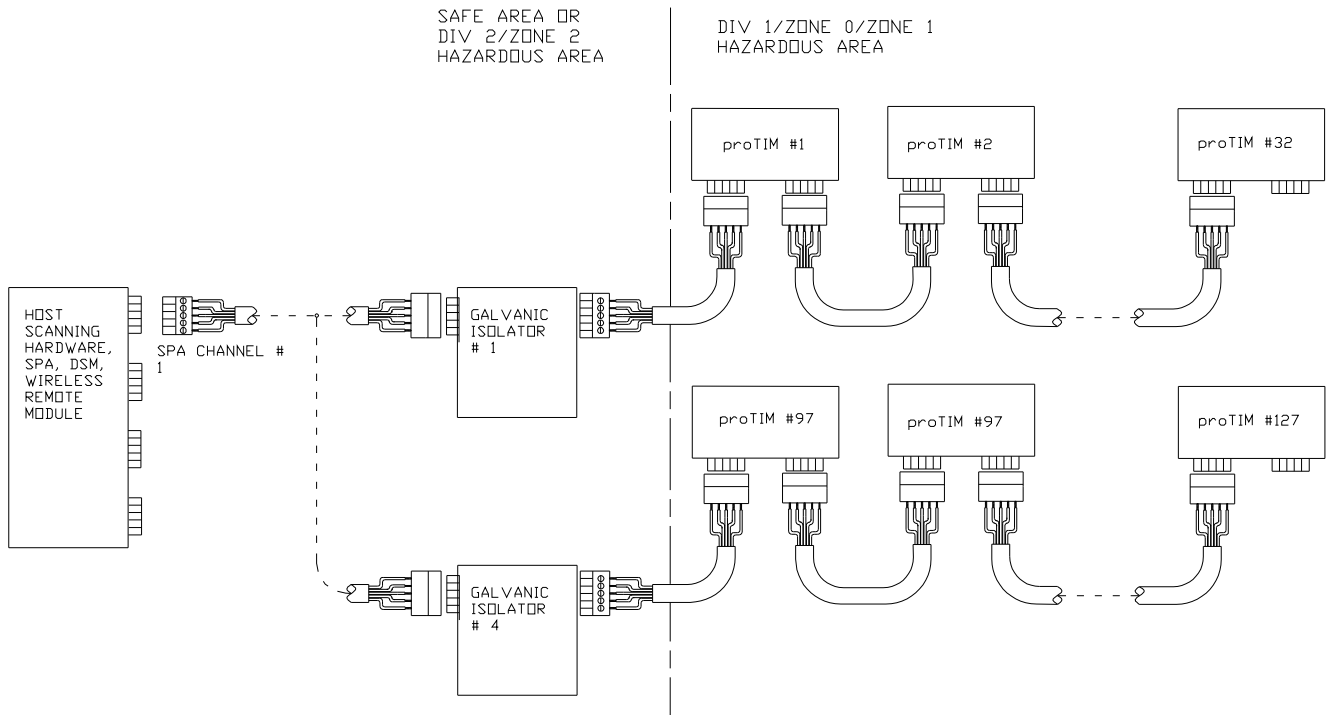
TIM line Connector to TIMs

164314

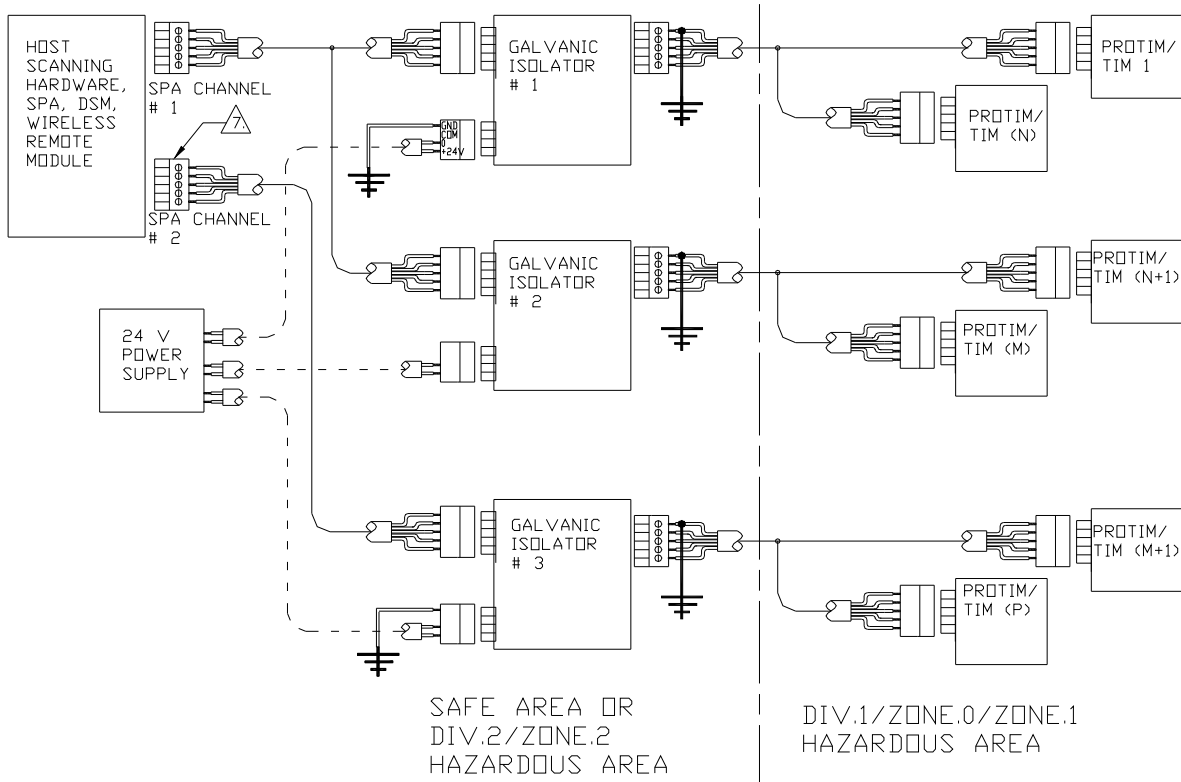
Power Supply Connector

System Installation.

Reference Table 1. and Control Drawing 162521 for the maximum number of proTIMs (TIMs) allowed per Galvanic Isolator output.



Grounding



- * Each SPA channel must connect to instrument ground at one Galvanic Isolator.
- * Each Galvanic Isolator's IS shield must connect to IS ground.
- * Refer to BN Documents 162521 and 166857 for more information.

Connector Pin Assignments

Pin #	Power Supply (SAFE)	TIM Line Connected to DSM or SPA (SAFE)	TIM Line Connected to TIMs or proTIMs (HAZ)
1	+24V	SHIELD	TIM SIG+ (GRN)
2	0V	SPA PWR (RED)	TIM SIG- (WHT)
3	GND	SPA COM (BLK)	TIM COM (BLK)
4	GND	SPA SIG- (WHT)	TIM PWR (RED)
5	N/A	SPA SIG+ (GRN)	SHIELD

Dimensional Drawings.

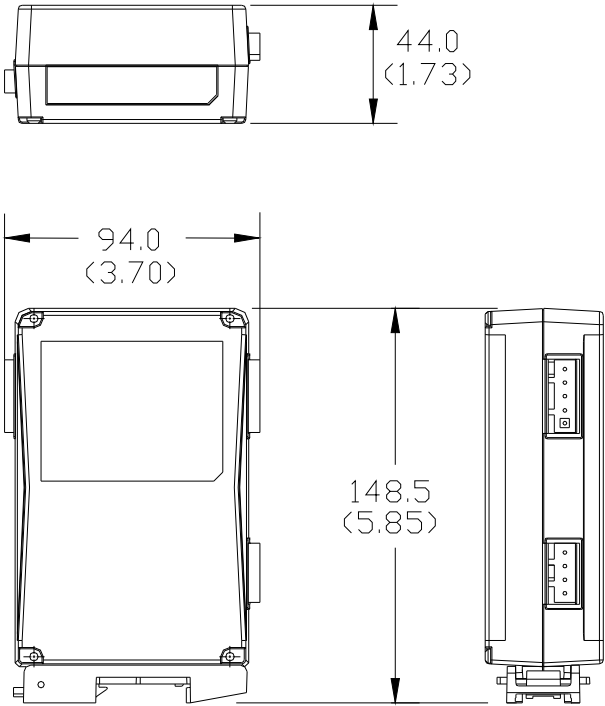


Figure 1: Trendmaster Galvanic Isolator.
Dimensions are in millimeters (inches)

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