

101284 Transducer Interface Module (TIM) Line Isolator

Bently Nevada™ Asset Condition Monitoring

Description

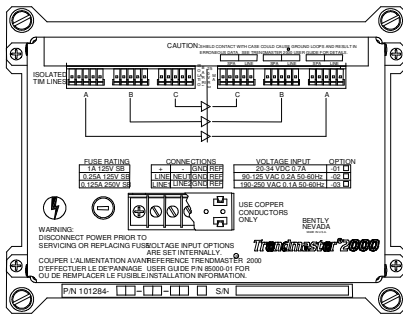
The 101284 TIM Line Isolator provides you with three galvanically-isolated Signal Processing Adaptor (SPA) lines for interfacing your Trendmaster® 2000 system directly to a continuous machinery protection system such as the Bently Nevada 3500 and 3300 Series. Galvanic isolation minimizes the possible occurrence of ground loops between the monitor rack and the Trendmaster 2000 System.

The TIM Line Isolator is used in conjunction with the following TIMs to collect dynamic and steady-state data:

101281-01 Rack Buffered Output TIM

101282-01 Buffered Keyphasor® TIM

85014-01 Process Variable TIM



Specifications

All specifications are at +25° C (+77° F) ambient temperature unless otherwise noted.

Electrical

TIM Line Isolator (101284):

Used with Trendmaster 2000 System to provide three (3) galvanically-isolated SPA (cable) lines to a 3500 and 3300 or similar rack.

Power Input:

Optionable:

+20 Vdc to +34 Vdc at 0.7 A maximum (fused at 1.0 A)

90 to 125 Vac, single phase, 50-60 Hz at 0.2 A maximum (fused at 0.25 A).

190 to 250 Vac, single phase, 50-60 Hz at 0.1 A maximum (fused at 0.125A).

Isolation Voltage Rating:

250 Vrms maximum.

Frequency Response:

0 Hz to 3000 Hz \pm 2%.

Relative Phase Response

0 to 3600 rpm:

<1 degree typical.

3600 to 180,000 rpm:

<5 degrees typical.

Environmental Limits

Operating Temperature:

0°C to +65°C (+32°F to +150°F).

Storage Temperature:

-40°C to +85°C (-40°F to +185°F).

Humidity:

Up to 90% relative humidity, noncondensing. Use of weatherproof housing recommended for environmental protection.

Physical

TIM Line Isolator (without optional housing)

Size

Height:

138 mm (5.42 in) typical.

Depth:

227 mm (8.94 in) typical.

Width:

175 mm (6.88 in) typical.

Weight:

2000 grams (70.5 ounces).

Mounting:

Four 10-32 captive screws are provided on the TIM Line Isolator for direct mounting in control room or covered applications. For weatherproof applications, the TIM Line Isolator can be mounted in optional housings.

Electromagnetic Compatibility

Radiated Emissions:

EN 55022 (1994), Class A.

Electrostatic Discharge:

IEC 1000-4-2 (1994), Criteria A.

Radiated Susceptibility:

ENV 50140 (1993), Criteria A.

**Conducted
Susceptibility:**

ENV 50141 (1993), Criteria A.

**Electrical Fast
Transient:**

IEC 1000-4-4 (1994), Criteria A.

**Surge
Capability:**

ENV 50142 (1994), Criteria A.

Magnetic Field:

EN 61000-4-8 (1994), Criteria A.

Hazardous Area Approvals

For applications in which monitor racks are installed in areas classified as hazardous, the 101284 is approved by the North American agency for use in areas classified as:

Ta = 65°C

Class 1, Division 2

Groups A, B, C & D

T4 at Ta = 65°C

Refer to drawing 86175 for installation guidelines.

Ordering Information

101284-AXX-BXX-CXX

Option Descriptions

A: Input Voltage Option

01 +20 to +34 Vdc

02 90 to 125 Vac, 50-60 Hz

03 190 to 250 Vac, 50-60 Hz

B: Agency Approval Option

00 Not Required

01 CSA/NRTL/C

C: Weatherproof Housing Option

00 Not Required

01 Polyester Housing

02 Stainless Steel Housing

Accessories

02173007

Bulk cable; 2-conductor, twisted, shielded; 22 AWG (0.65 mm²) cable without connectors or terminal lugs. Specify number of feet required.

01659006

Terminal lugs; 14-16 AWG (1.3-1.65 mm²); for connecting power input wiring.

Typical field wiring diagrams

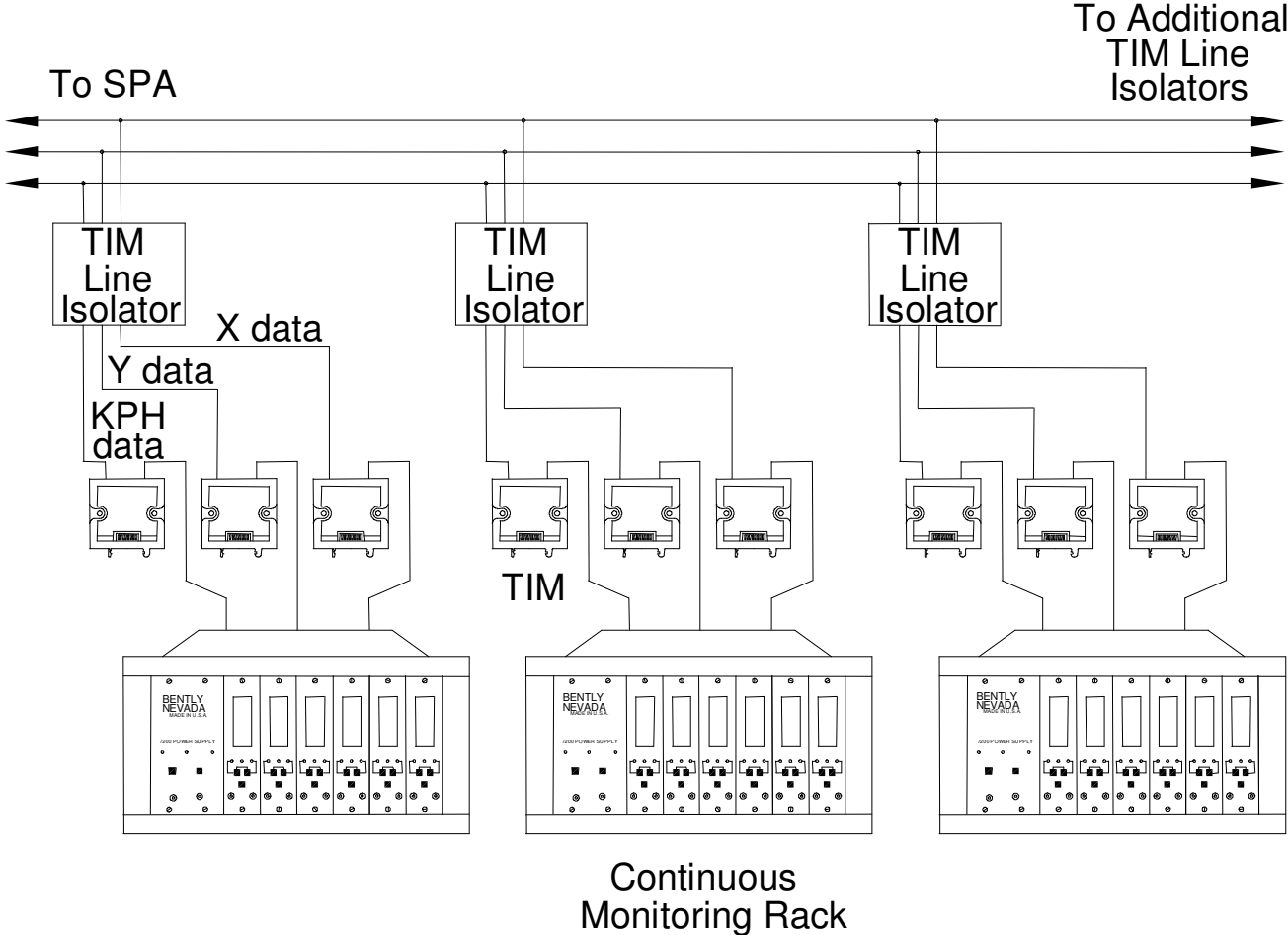
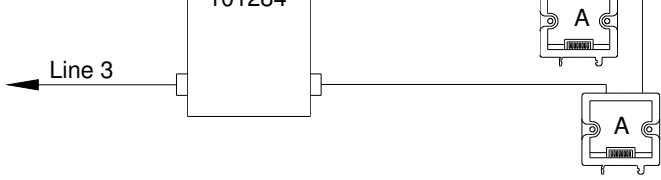
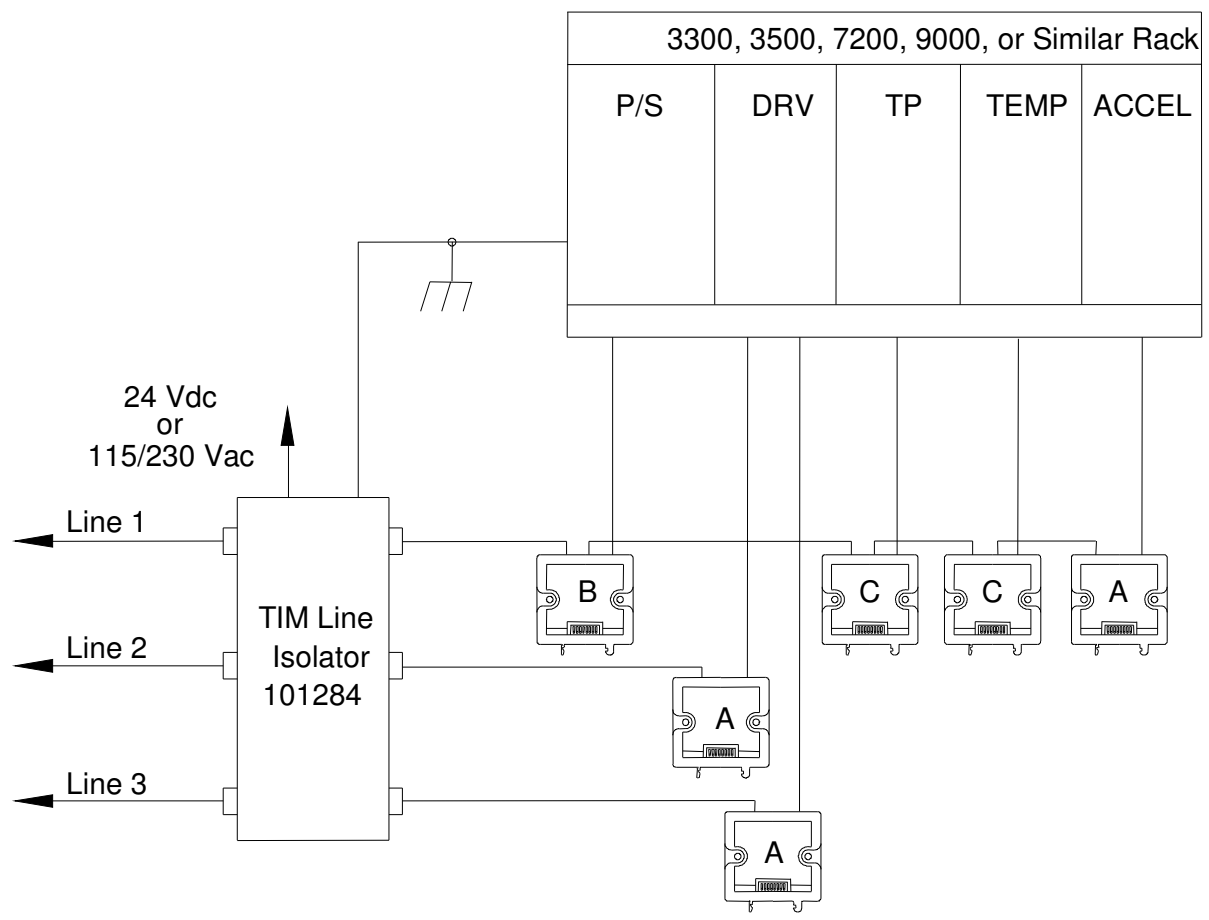


Figure 1: Typical layout for installation of multiple TIM Line Isolators



A = 101281-01 Rack Buffered Output TIM



A = 101281-01 Rack Buffered Output TIM
 B = 101282-01 Buffered Keyphasor[®] TIM
 C = 85014-01 PV TIM

Figure 2: Typical connection of TIM Line Isolator and TIMs to monitor rack

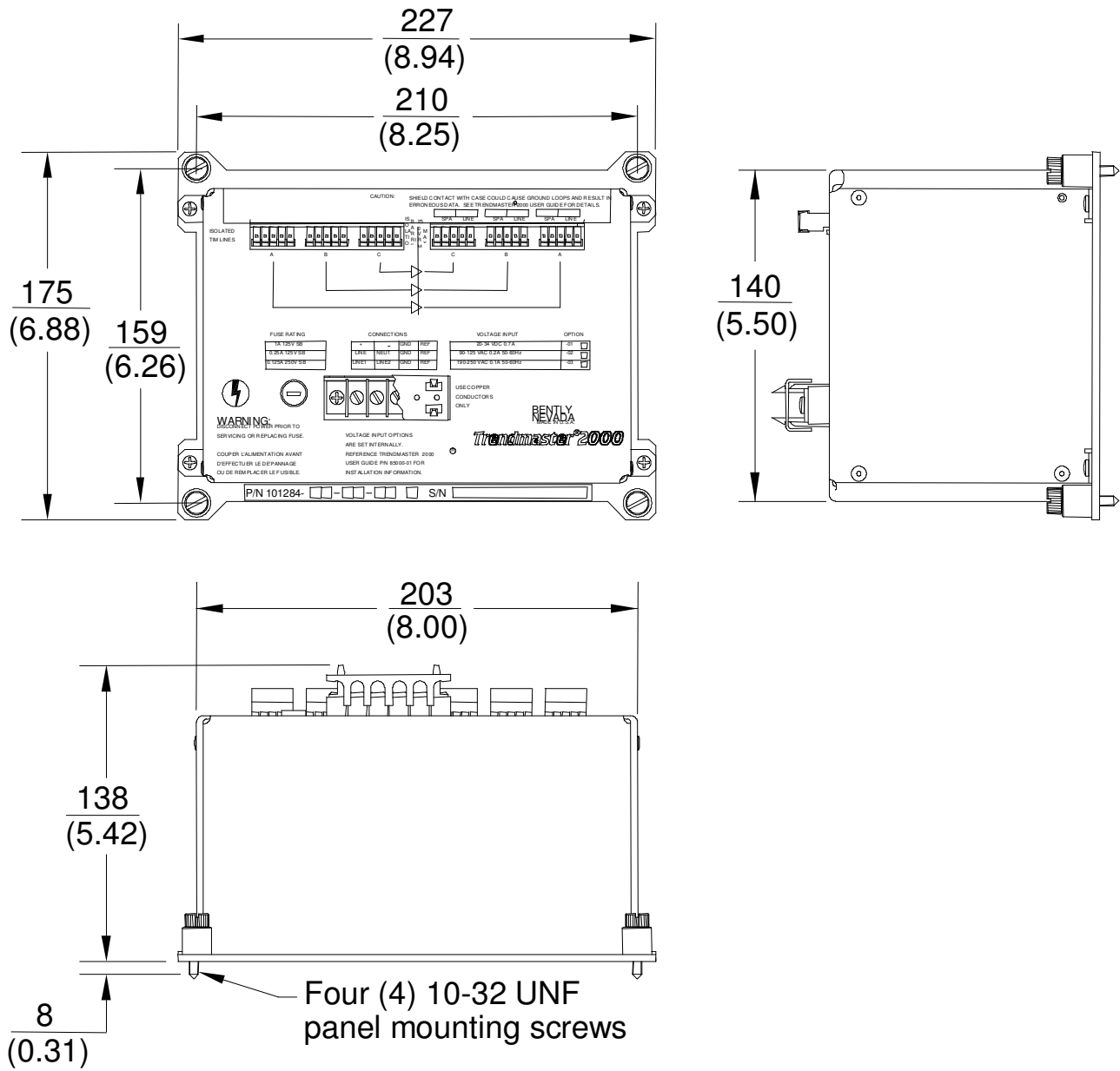


Figure 3: TIM Line Isolator
Dimensions are in millimetres (inches)

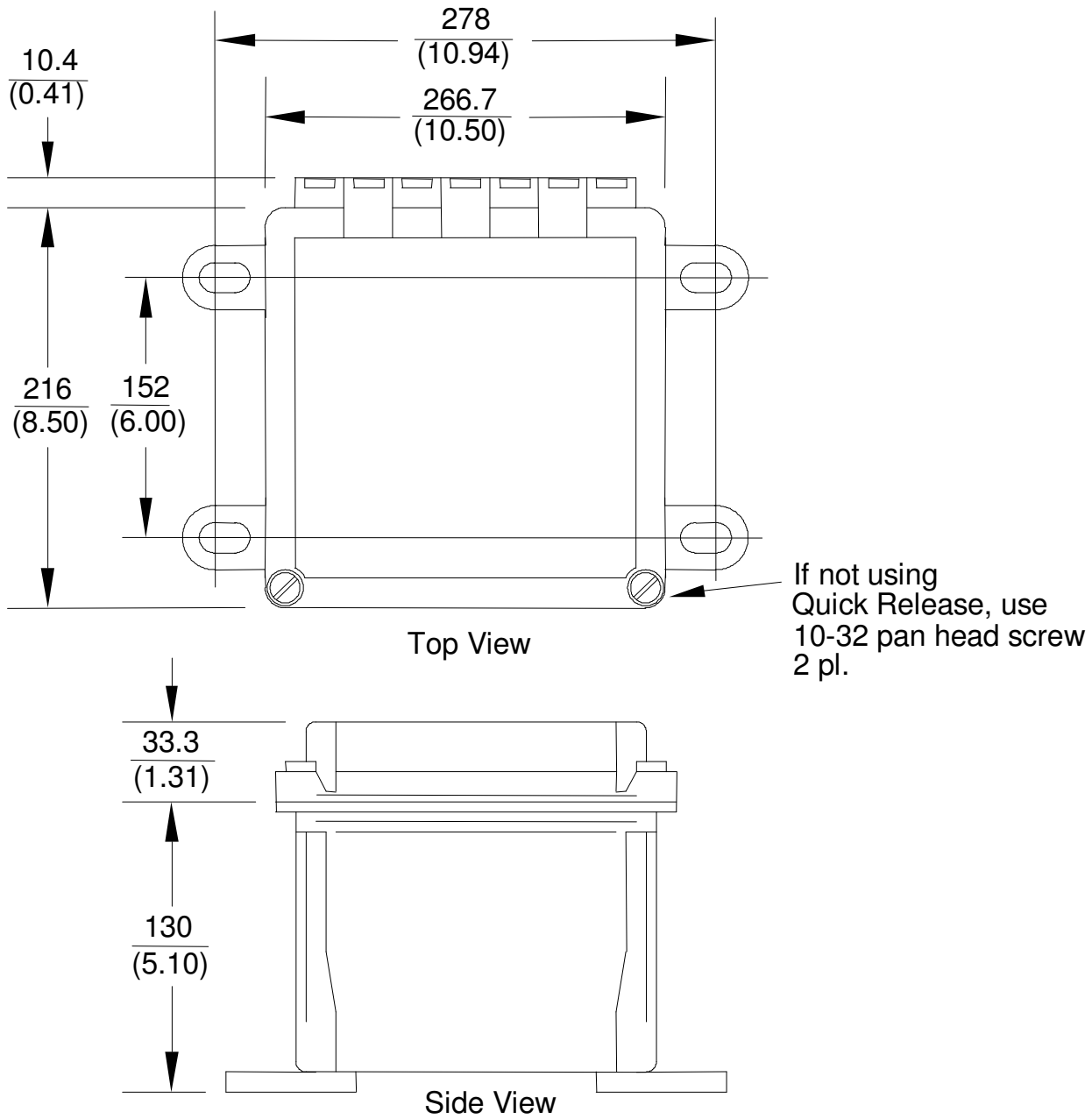


Figure 4: Fiberglass polyester weatherproof housing
 Dimensions are in millimetres (inches)

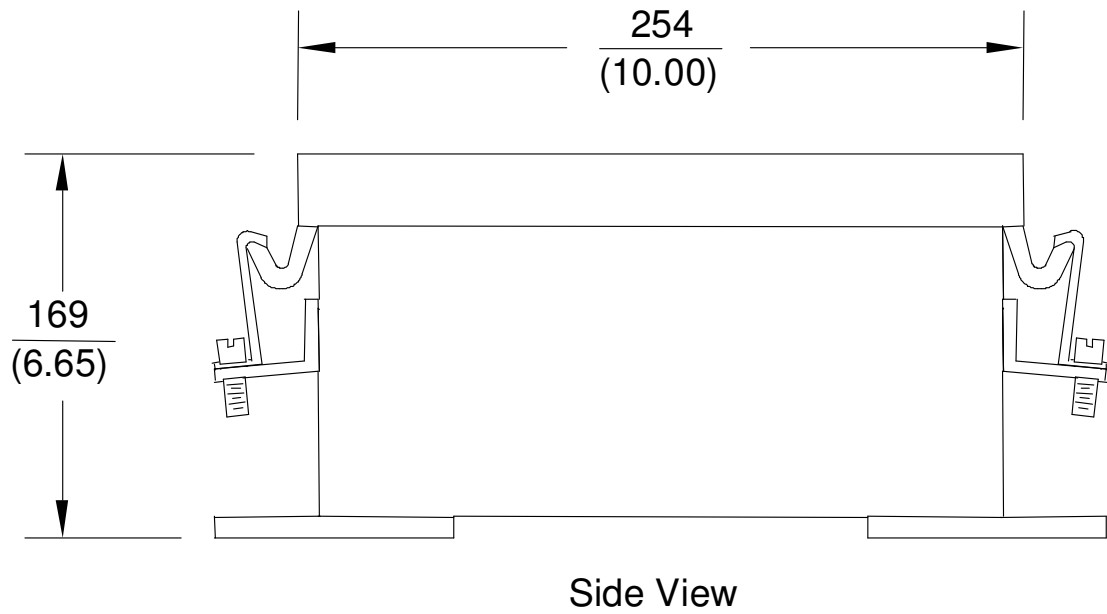
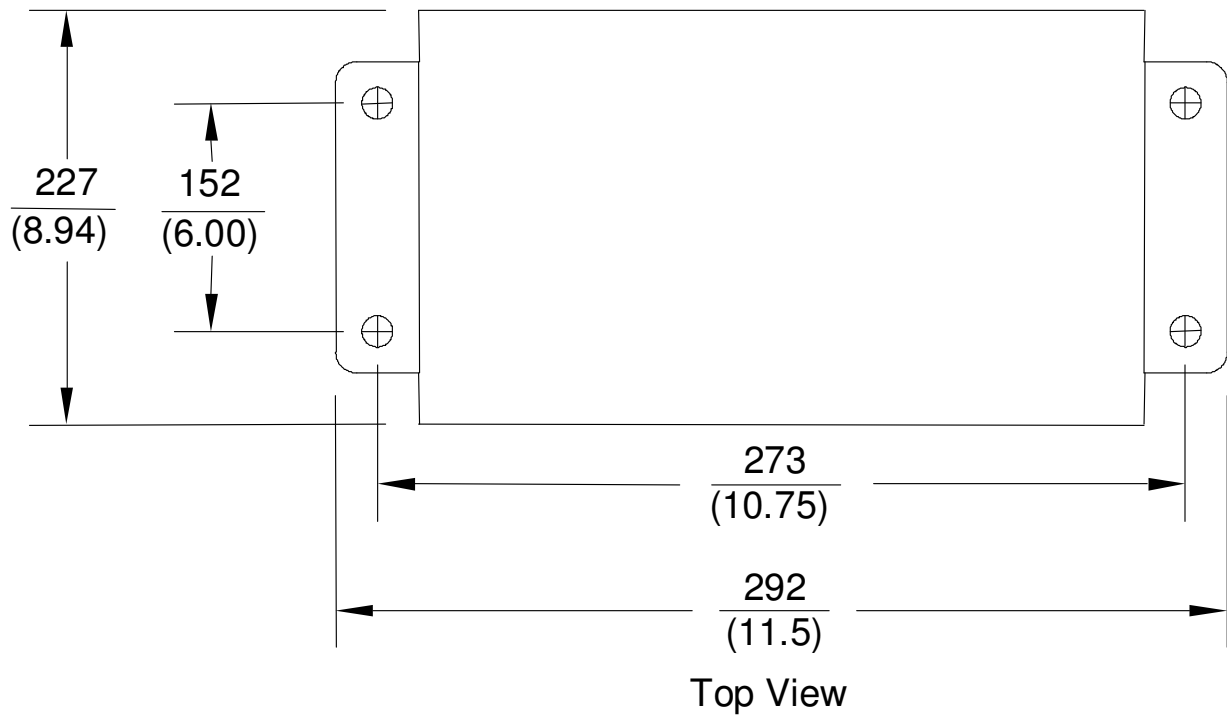


Figure 5: Stainless steel weatherproof housing
 Dimensions are in millimetres (inches)

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