DATA SHEET

Vibro-Meter®

ABA171, ABA172 and ABA173 industrial housings

CE Ex **IECEx** CSR DNV PG KEMA KEUR UL

KEY FEATURES AND BENEFITS

- From the Vibro-Meter® product line

- Robust steel housing with protective coating

- Lockable hinged door with sealing gasket

- Device-mounting plate with DIN rails

- Cable-entry with openings and plugs

- Protection ratings: IP66, IK10, and NEMA types 4, 12 and 13

- Available in standard versions and Ex versions certified for use in potentially explosive atmospheres

- ABA171 for up to two signal conditioners

- ABA172 for up to four signal conditioners

- ABA173 for up to eight signal conditioners

APPLICATIONS

- Protection for personnel against contact with the enclosed equipment

- Protection for enclosed equipment against dirt, water and mechanical damage

DESCRIPTION

The ABA171, ABA172 and ABA173 Industrial housings provide protection for enclosed equipment against the ingress of solid objects and liquids, and against damage from impacts. In addition, these Industrial housings provide protection for personnel against accidental contact with the enclosed equipment.

They also offer protection against the possible splashing of oil, water or corrosive substances encountered in severe industrial environments, such as offshore or petrochemical applications and are recommended for the mechanical and environmental protection of signal conditioners from Meggitt's Vibro-Meter® product line.

DESCRIPTION *(continued)*

The main body of an ABA17x industrial housing is manufactured by folding and welding a single piece of steel in order to create a very robust enclosure. The housings feature a protection channel around the door opening, a hinged door with a lock, and a sealing gasket that help ensure protection ratings such as IP66 and NEMA types 4, 12 and 13.

The entire housing is pretreated with iron phosphate for improved corrosion resistance and powder coated for a tough and durable finish that is suitable for indoor industrial environments.

ABA17x industrial housings are supplied with four external mounting brackets that can be assembled on the rear of the housings for safe and easy mounting on walls. As ABA17x doors open within the outer dimensions of the body, housings can be mounted directly next to one another without interference.

In the rear of each ABA17x, there is a galvanised steel mounting plate with horizontal DIN rails for the installation of signal conditioners or other devices. If required, the device-mounting plate can be removed from the housing to facilitate the installation and wiring of equipment.

Note: As the device-mounting plate and DIN rails are metal (electrically conductive), electrically

isolating mounting adaptors may be required by signal conditioners or other devices installed in an ABA17x housing in order to help prevent earth (ground) loop problems.

At the bottom of each ABA17x, there are cable-entry holes for routing cables to and from equipment installed in the housing. The standard versions of the ABA17x use a mild steel cable-entry panel for these holes. The versions of the ABA17x for use in potentially explosive atmospheres incorporate the holes directly in the bottom of the housing. Various cable fittings (stuffing glands) can be ordered for these openings. See **Mechanical drawings and ordering information starting on page 5**.

The ABA17x industrial housings are supplied with a key for the cabinet lock, wall-mounting brackets and plugs for unused cable entries. In addition, DIN-rail end clamps are supplied in order to physically separate the devices mounted on a DIN rail and ensure that they are electrically isolated. The end clamps also prevent the devices from moving. Optional cable fittings and DIN rail terminal blocks can also be ordered.

For specific applications, contact your nearest Meggitt representative.

SPECIFICATIONS

Enclosure

Material

• *Body and door*	: 1.2 mm approx. mild steel. The body and the door are electrically connected using threaded studs and an earth strap.
• *Device-mounting plate*	: 2.0 mm approx. galvanised steel. The mounting plate is fixed to the rear of the housing.
• *Cable-entry panel (standard version only)*	: 1.4 mm approx. mild steel. The cable-entry panel is fixed to the bottom of housing.
Protective coating	: Epoxy-polyester powder coating (paint)
Colour	: Grey (RAL 7035)
Door	: Single door with two hinges and 130° opening. By default, the hinges are right-mounted for a left-opening door but can be left-mounted for a right-opening door.

SPECIFICATIONS *(continued)*

Lock	: Cabinet lock with 90° movement. Note: One key is provided with each ABA17x.
Seal	
• *Standard versions (order option code A1)*	: Polyurethane gasket
• *Versions for use in potentially explosive atmospheres (order option code A2)*	: Silicone gasket
Device mounting	: Mounting plate at rear of housing with DIN rail or rails (TH 35-15) for mounting signal conditioners or other devices.
• *ABA171*	: One 150 mm (5.9″) DIN-rail and three DIN-rail end clamps
• *ABA172*	: Two 200 mm (7.9″) DIN-rails and six DIN-rail end clamps
• *ABA173*	: Two 275 mm (10.8″) DIN-rails and ten DIN-rail end clamps

Input/output and cable fittings (stuffing glands)

Cable entry	
• *Standard versions (order option code A1)*	: Openings for routing cables in a detachable cable-entry panel in the bottom of the housing
• *Versions for use in potentially explosive atmospheres (order option code A2)*	: Openings for routing cables directly in the bottom of the housing
• *ABA171*	: Four openings
• *ABA172*	: Eight openings
• *ABA173*	: Eighteen openings
Cable fittings / stuffing glands (order option codes Bxx to Jxx)	
• *Material*	: Nickel-plated brass
• *Type*	: See **Mechanical drawings and ordering information starting on page 5**

Note: An ABA17x is supplied with screw-fit plugs for the openings (holes) for routing cables in the bottom of the housing. Optional cable fittings (stuffing glands) included in an order are supplied separately and must be fitted by the user.

Environmental

Standard versions (order option code A1)

• *Operating temperature*	: −40 to 80°C (−40 to 176°F)
• *Degree of protection provided by housing (according to IEC 60529)*	: IP66
• *Degree of protection provided by housing against external mechanical impacts (according to IEC 62262)*	: IK10
• *NEMA enclosure type (according to NEMA 250)*	: 4, 12 and 13

Versions for use in potentially explosive atmospheres (order option code A2)

• *Operating temperature*	: −55 to 100°C (−67 to 212°F)
• *Degree of protection provided by housing (according to IEC 60529)*	: IP66

SPECIFICATIONS *(continued)*

Potentially explosive atmospheres

Available in Ex approved versions for use in hazardous areas *(order option code A2)*

Industrial housings

Type of protection Ex e: increased safety, Ex t: protection by enclosure (**order option code A2**)		
Europe	EC type examination certificate	BVS 15 ATEX E 112 U
		II 2G (Zones 1, 2) Ex eb IIC Gb
		II 2D (Zones 21, 22) Ex tb IIIC Db
International	IECEx certificate of conformity	IECEx BVS 16.0026U
		Ex eb IIC Gb
		Ex tb IIIC Db

Cable fittings (stuffing glands)

Type of protection Ex e: increased safety (**order option codes Bxx to Jxx**)		
Europe	EC type examination certificate	II 2 G / D (Zones 1, 2 / 21, 22) Ex e II

⚠ **For specific parameters of the mode of protection concerned and special conditions for safe use, refer to the Ex certificates that are available from Meggitt SA.**

⚠ **For the most recent information on the Ex certifications that are applicable to this product, refer to the *Ex product register* (*PL-1511*) that is available from Meggitt SA.**

Approvals

Standard versions (order option code A1)
- *Conformity*   : CE marking, European Union (EU) declaration of conformity
- *Other*   : CSA, DNV, GOST, KEMA-KEUR, UL

Versions for use in potentially explosive atmospheres (order option code A2)
- *Conformity*   : CE marking, European Union (EU) declaration of conformity
- *Hazardous areas*   : Ex (see **Potentially explosive atmospheres on page 4**)

Physical

Housing mounting   : Four mounting holes in the rear of the housing for use with external mounting brackets. The holes are pressed out by 2 mm to allow air to circulate at the rear of the housing.
Four 3 mm steel mounting brackets are provided with each ABA17x. Sealing washers are also included to guarantee the environmental protection rating.
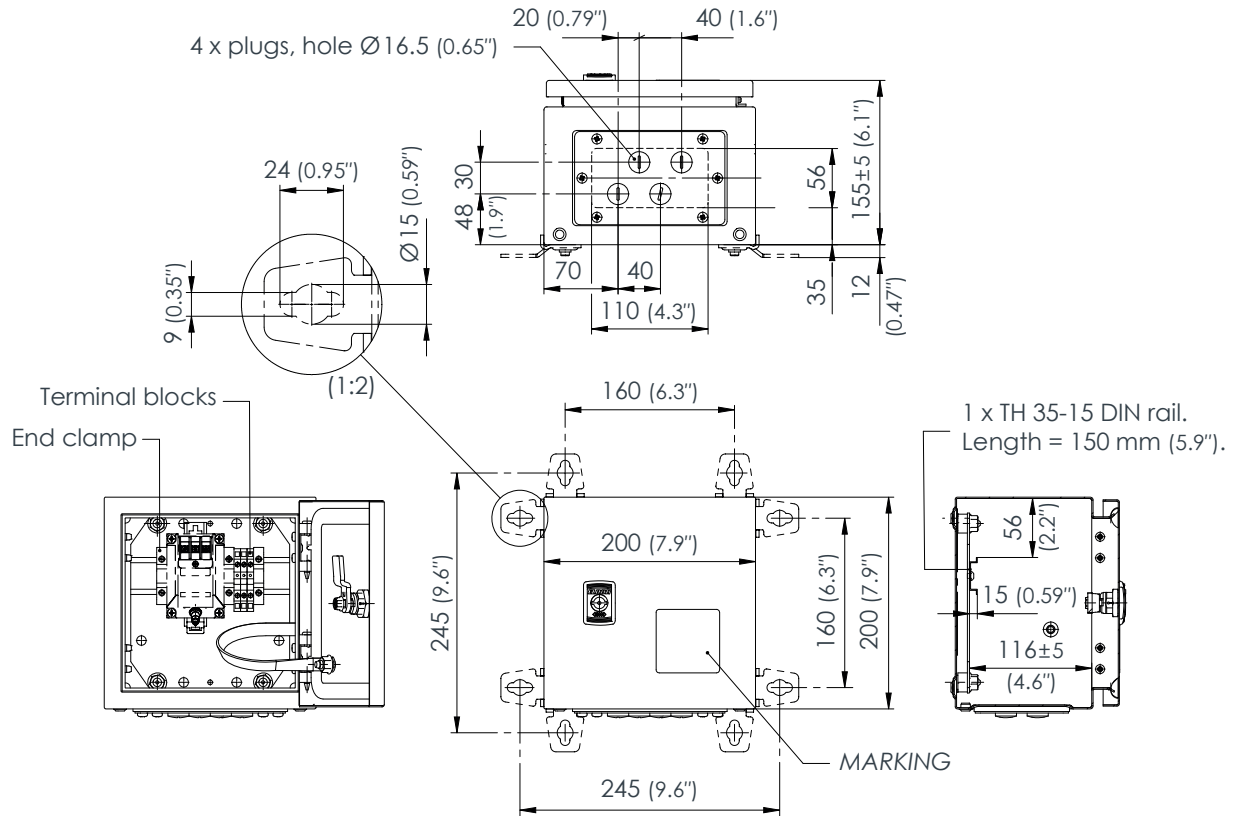
Dimensions   : See **Mechanical drawings and ordering information starting on page 5**

Weight
- *ABA171*   : 3.3 kg (7.3 lb) approx. for standard version (order option code A1).
4.25 kg (9.4 lb) approx. for Ex version (order option code A2).
- *ABA172*   : 3.8 kg (8.4 lb) approx. for standard version (order option code A1).
6.0 kg (13.2 lb) approx. for Ex version (order option code A2).
- *ABA173*   : 6.6 kg (14.6 lb) approx. for standard version (order option code A1).
8.25 kg (18.2 lb) approx. for Ex version (order option code A2).

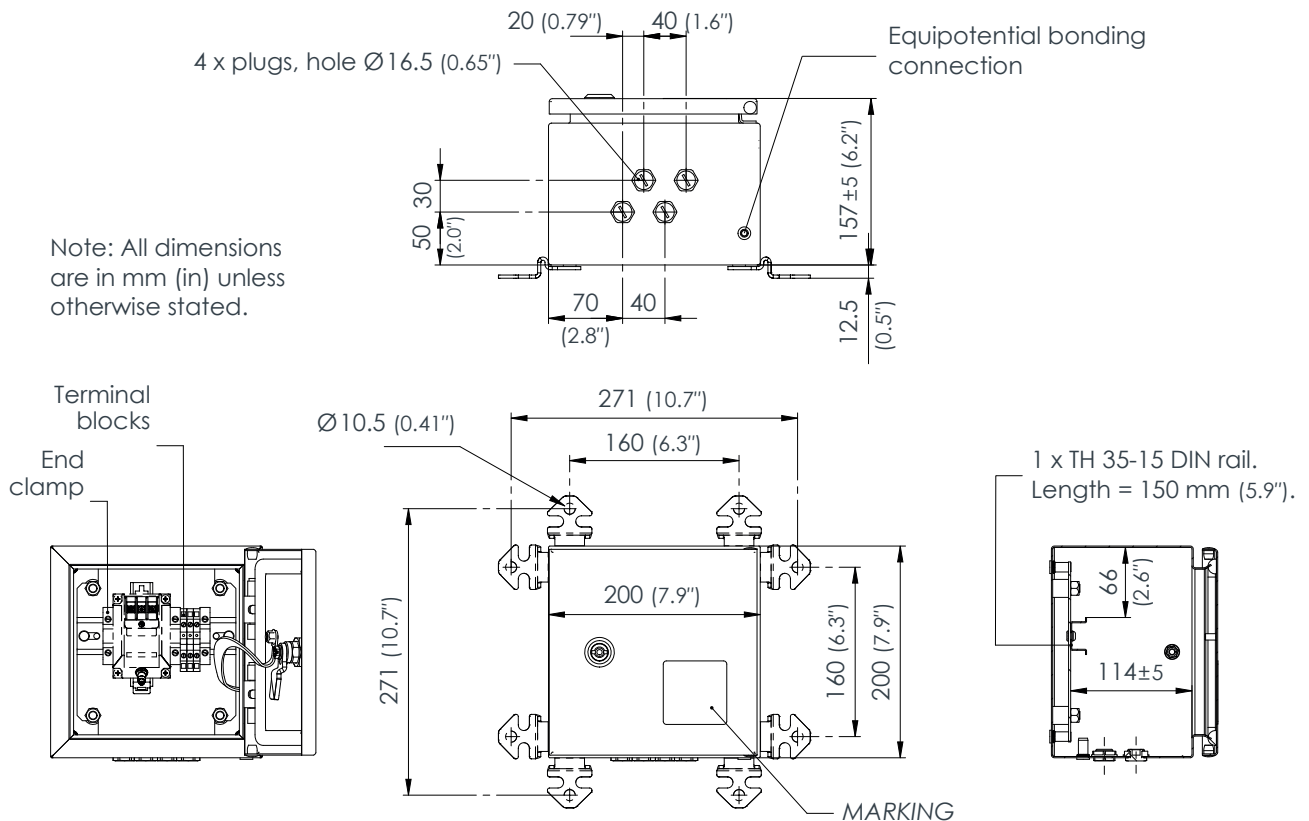# MEGGiTT

MECHANICAL DRAWINGS AND ORDERING INFORMATION

ABA171 – standard version (order option code A1)

4 x plugs, hole Ø16.5 (0.65")

24 (0.95")

Ø15 (0.59")

9 (0.35")

(1:2)

Terminal blocks

End clamp

20 (0.79") 40 (1.6")

155±5 (6.1")

56

48 30
(1.9")

70 40

110 (4.3")

35 12
(0.47")

160 (6.3")

200 (7.9")

245 (9.6")

160 (6.3")

200 (7.9")

245 (9.6")

MARKING

1 x TH 35-15 DIN rail.
Length = 150 mm (5.9").

56
(2.2")

15 (0.59")

116±5
(4.6")

Note: All dimensions are in mm (in) unless otherwise stated.

MECHANICAL DRAWINGS AND ORDERING INFORMATION *(continued)*

ABA171 – Ex version (order option code A2)

4 x plugs, hole Ø16.5 (0.65")

20 (0.79")   40 (1.6")

Equipotential bonding connection

157 ±5 (6.2")

50   30 (2.0")

70   40
(2.8")

12.5 (0.5")

Note: All dimensions are in mm (in) unless otherwise stated.

Terminal blocks

End clamp

Ø10.5 (0.41")

271 (10.7")

271 (10.7")

160 (6.3")

200 (7.9")

160 (6.3")

200 (7.9")

1 x TH 35-15 DIN rail. Length = 150 mm (5.9").

66 (2.6")

114±5

MARKING

Ordering number: 830 - 171 - 000 - 011 - [A] [B] … [J] [T]

Environment (A)	
Standard	1
Explosive (Ex)	2

Terminal blocks (T)	
xx	1 block (3 terminals)

Cable fittings (B to J)	
Cable gland for cable Ø2.5 - Ø3.6 mm	Bxx
Cable gland for cable Ø4 - Ø8 mm	Cxx
Cable gland for cable Ø6 - Ø11 mm	Dxx
Combination cable gland for cable Ø2 - Ø4 mm and flexible protection hose Ø5 - Ø7 mm. *See note 1.*	Exx
Combination cable gland for cable Ø0.7 - Ø2.7 mm and flexible protection hose Ø5 - Ø7 mm. *See note 2.*	Fxx
Combination cable gland for cable Ø2.5 - Ø3.5 mm and flexible protection hose Ø5 - Ø6 mm. *See note 3.*	Gxx
Adaptor PG9	Hxx
Cable gland for oblong LS cable (cable 6.3×3.7 mm)	Ixx
Adaptor M20×1.5 (cable Ø12 mm max.)	Jxx

Notes

Use xx to specify the quantities of **Cable fittings (B to J)** and **Terminal blocks (T)** required. For example, a complete ordering number is: 830-171-000-011-A1-B00-C02-D00-E02-F00-G00-H00-I00-J00-T00.

1. The **E** combination cable gland is suitable for use by the TQ4x2/EA4x2 and TQ4x3/EA4x3 with a flexible hose (optional protection).

2. The **F** combination cable gland is suitable for use by the TQ4x1/EA4x1 with a flexible hose (optional protection).

3. The **G** combination cable gland is suitable for use by the CV210/IVC632 with an ED109 or ED112 cable.

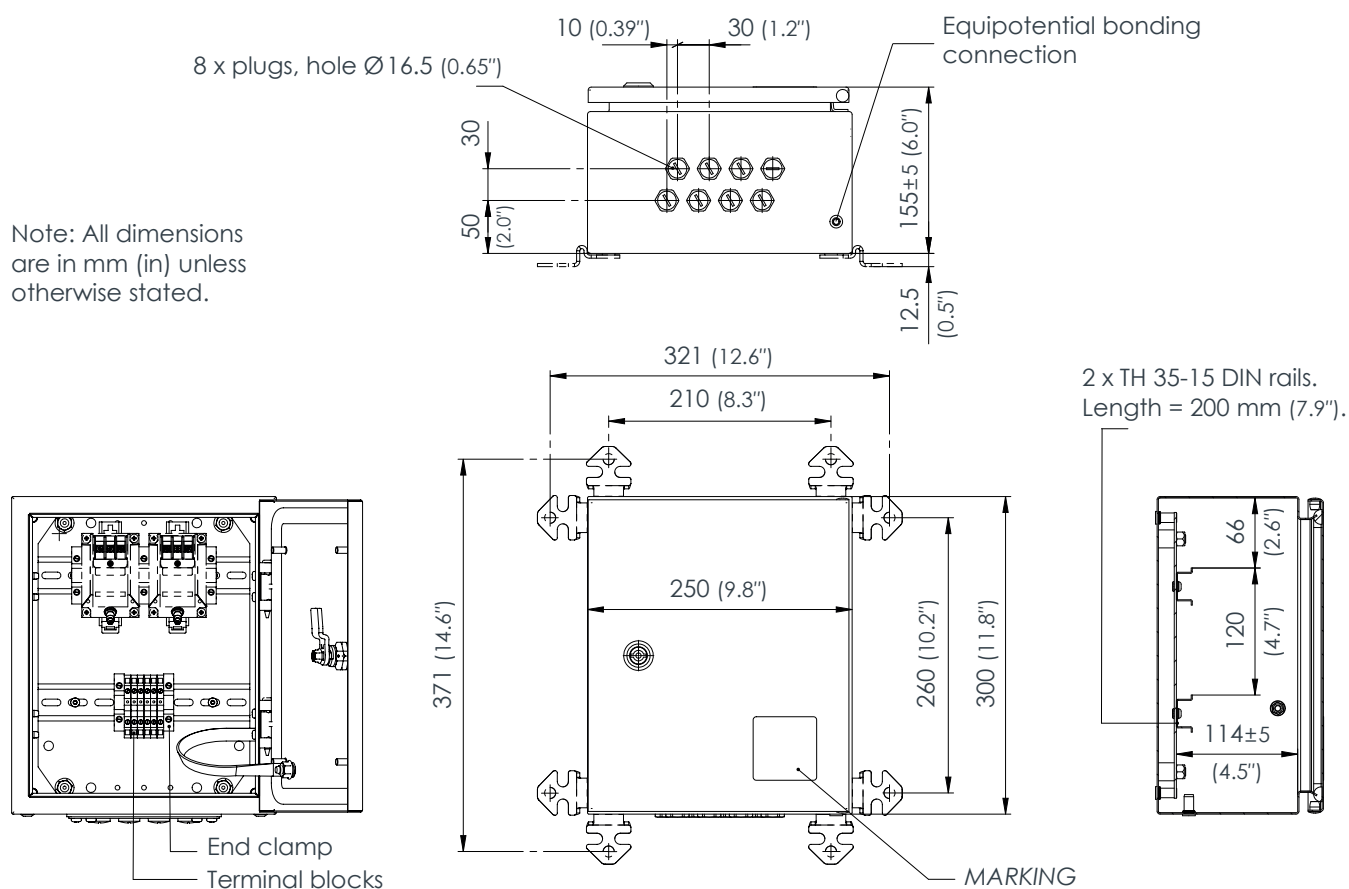## MECHANICAL DRAWINGS AND ORDERING INFORMATION *(continued)*

ABA172 – standard version (order option code A1)
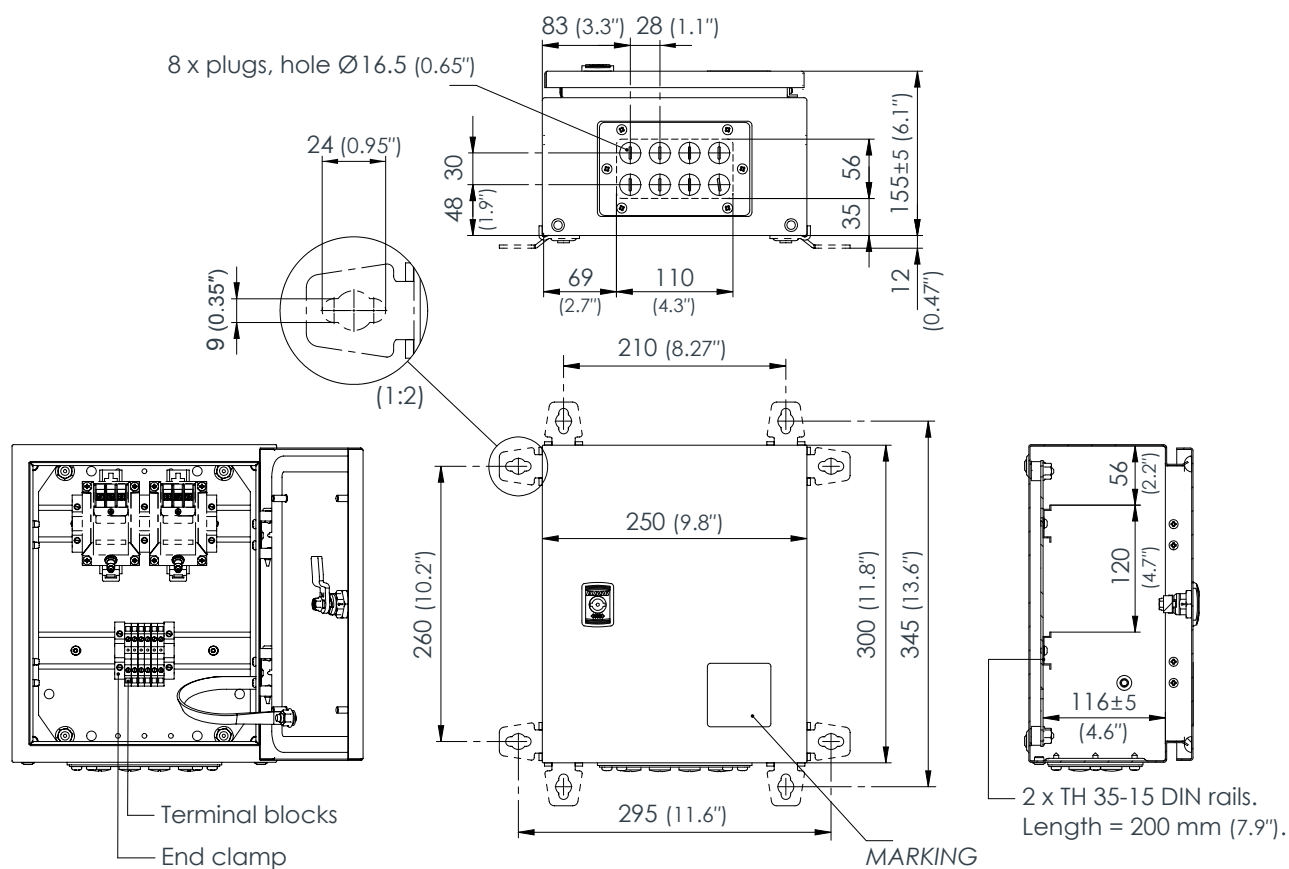
Terminal blocks
End clamp

MARKING

2 x TH 35-15 DIN rails.
Length = 200 mm (7.9").

Note: All dimensions are in mm (in) unless otherwise stated.

MECHANICAL DRAWINGS AND ORDERING INFORMATION *(continued)*

ABA172 – Ex version (order option code A2)

8 x plugs, hole Ø16.5 (0.65")

10 (0.39")   30 (1.2")

Equipotential bonding connection

30

50 (2.0")

155±5 (6.0")

12.5 (0.5")

Note: All dimensions are in mm (in) unless otherwise stated.

321 (12.6")

210 (8.3")

371 (14.6")

250 (9.8")

260 (10.2")

300 (11.8")

MARKING

2 x TH 35-15 DIN rails. Length = 200 mm (7.9").

66 (2.6")

120 (4.7")

114±5 (4.5")

End clamp
Terminal blocks

Ordering number: 830 - 172 - 000 - 011 - A — B … J — T

Environment (A)	
Standard	1
Explosive (Ex)	2

Terminal blocks (T)	
xx	1 block (3 terminals)

Cable fittings (B to J)	
Cable gland for cable Ø2.5 - Ø3.6 mm	Bxx
Cable gland for cable Ø4 - Ø8 mm	Cxx
Cable gland for cable Ø6 - Ø11 mm	Dxx
Combination cable gland for cable Ø2 - Ø4 mm and flexible protection hose Ø5 - Ø7 mm. *See note 1.*	Exx
Combination cable gland for cable Ø0.7 - Ø2.7 mm and flexible protection hose Ø5 - Ø7 mm. *See note 2.*	Fxx
Combination cable gland for cable Ø2.5 - Ø3.5 mm and flexible protection hose Ø5 - Ø6 mm. *See note 3.*	Gxx
Adaptor PG9	Hxx
Cable gland for oblong LS cable (cable 6.3×3.7 mm)	Ixx
Adaptor M20×1.5 (cable Ø12 mm max.)	Jxx

Notes

Use xx to specify the quantities of **Cable fittings (B to J)** and **Terminal blocks (T)** required. For example, a complete ordering number is: 830-172-000-011-A1-B00-C04-D00-E04-F00-G00-H00-I00-J00-T00.
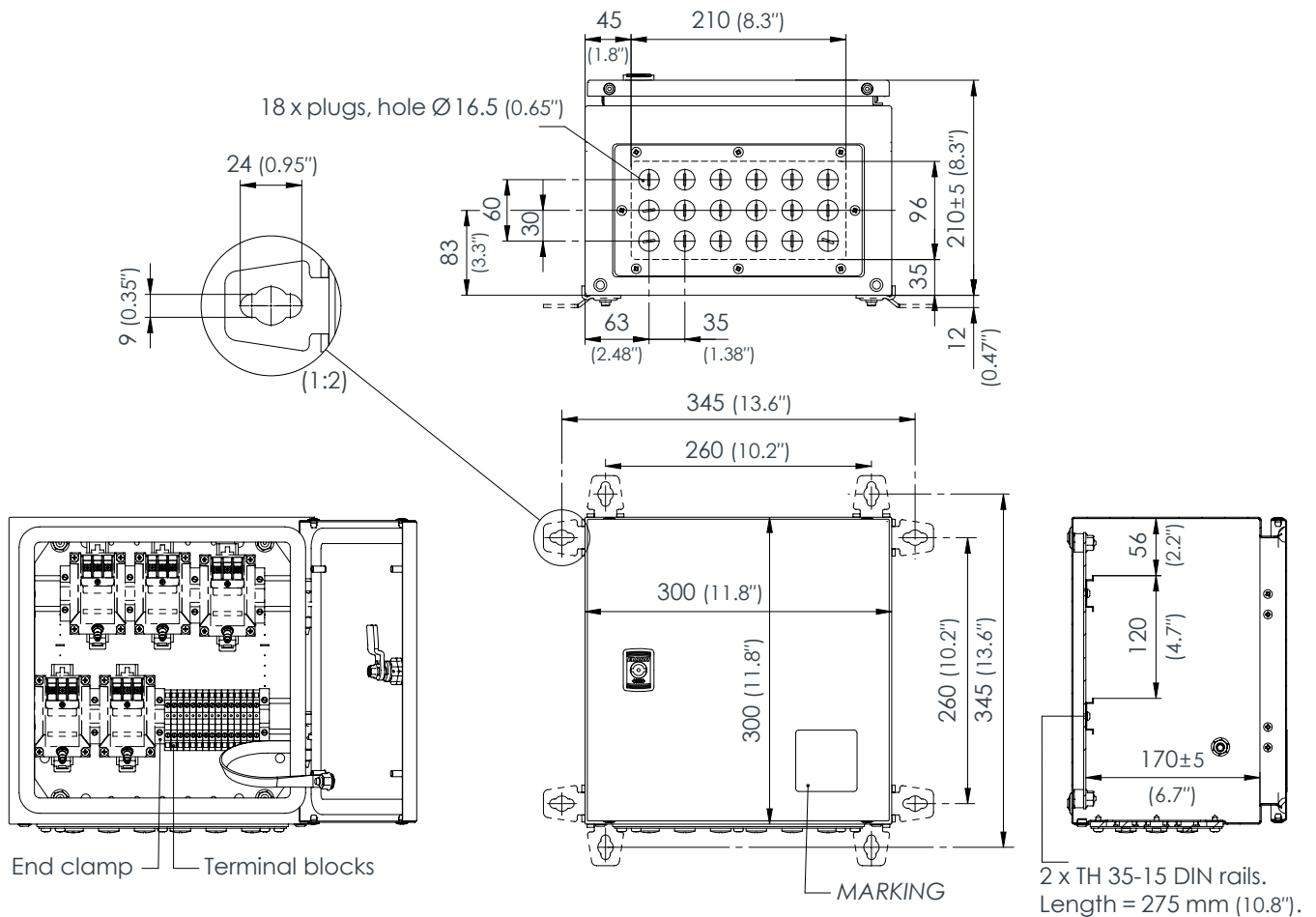
1. The **E** combination cable gland is suitable for use by the TQ4x2/EA4x2 and TQ4x3/EA4x3 with a flexible hose (optional protection).

2. The **F** combination cable gland is suitable for use by the TQ4x1/EA4x1 with a flexible hose (optional protection).

3. The **G** combination cable gland is suitable for use by the CV210/IVC632 with an ED109 or ED112 cable.

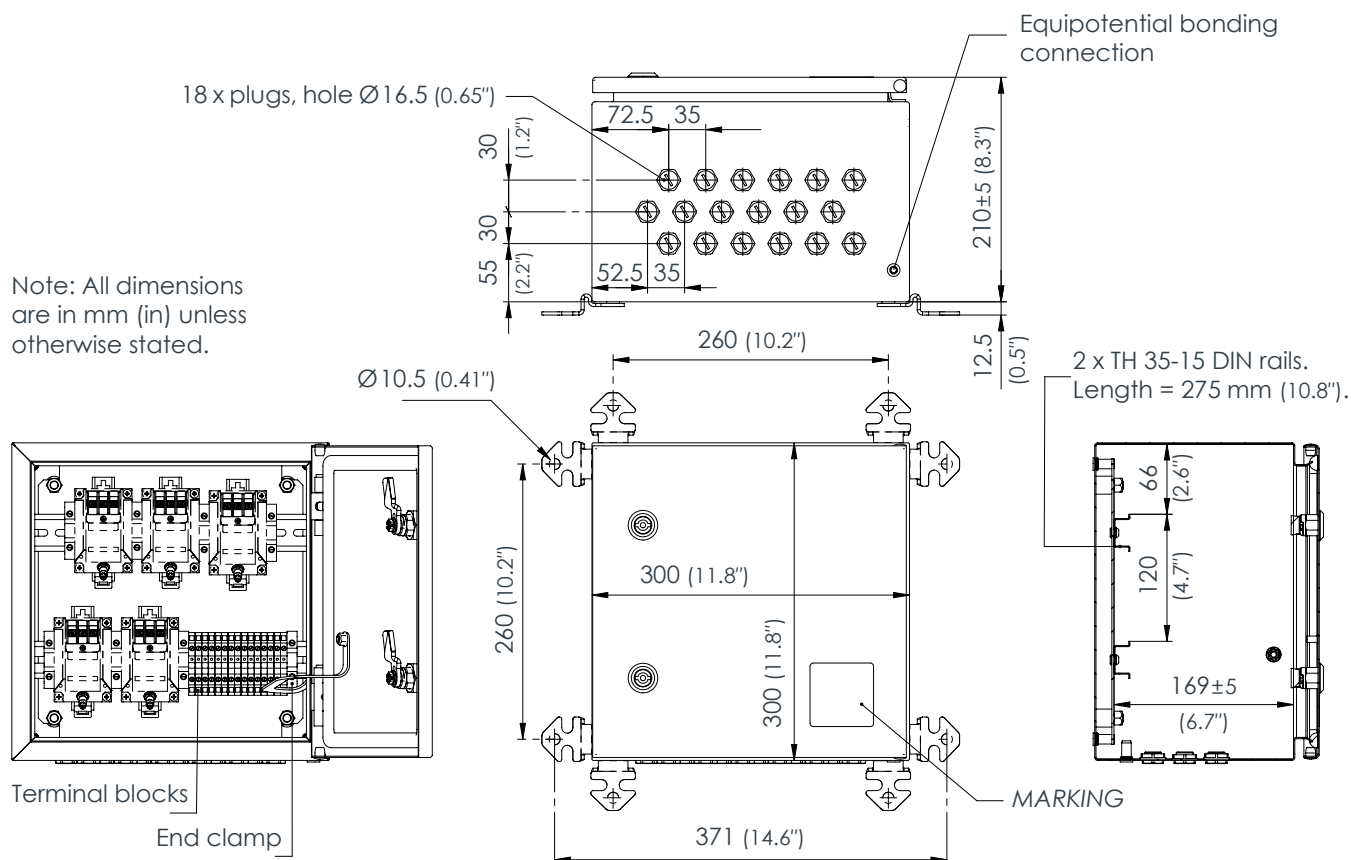## MECHANICAL DRAWINGS AND ORDERING INFORMATION *(continued)*

ABA173 – standard version (order option code A1)

18 x plugs, hole Ø16.5 (0.65")

24 (0.95")

9 (0.35")

(1:2)

45 (1.8")
210 (8.3")

60
30
83 (3.3")
96
35
210±5 (8.3")
12 (0.47")
63 (2.48")
35 (1.38")

345 (13.6")
260 (10.2")
300 (11.8")
300 (11.8")
260 (10.2")
345 (13.6")

MARKING

End clamp — Terminal blocks

56 (2.2")
120 (4.7")
170±5 (6.7")

2 x TH 35-15 DIN rails.
Length = 275 mm (10.8").

Note: All dimensions are in mm (in) unless otherwise stated.

ABA173 – Ex version (order option code A2)

Note: All dimensions are in mm (in) unless otherwise stated.

Equipotential bonding connection

18 x plugs, hole Ø16.5 (0.65")

72.5 35
30 (1.2")
30
55 (2.2")
52.5 35
210±5 (8.3")
260 (10.2")
12.5 (0.5")

2 x TH 35-15 DIN rails. Length = 275 mm (10.8").

Ø10.5 (0.41")
260 (10.2")
300 (11.8")
300 (11.8")
371 (14.6")
66 (2.6")
120 (4.7")
169±5 (6.7")

MARKING

Terminal blocks

End clamp

Ordering number: 830 - 173 - 000 - 011 - A — B — … J — T

Environment (A)	
Standard	1
Explosive (Ex)	2

Terminal blocks (T)	
xx	1 block (3 terminals)

Cable fittings (B to J)	
Cable gland for cable Ø2.5 - Ø3.6 mm	Bxx
Cable gland for cable Ø4 - Ø8 mm	Cxx
Cable gland for cable Ø6 - Ø11 mm	Dxx
Combination cable gland for cable Ø2 - Ø4 mm and flexible protection hose Ø5 - Ø7 mm. *See note 1.*	Exx
Combination cable gland for cable Ø0.7 - Ø2.7 mm and flexible protection hose Ø5 - Ø7 mm. *See note 2.*	Fxx
Combination cable gland for cable Ø2.5 - Ø3.5 mm and flexible protection hose Ø5 - Ø6 mm. *See note 3.*	Gxx
Adaptor PG9	Hxx
Cable gland for oblong LS cable (cable 6.3×3.7 mm)	Ixx
Adaptor M20×1.5 (cable Ø12 mm max.)	Jxx

Notes

Use xx to specify the quantities of **Cable fittings (B to J)** and **Terminal blocks (T)** required. For example, a complete ordering number is: 830-173-000-011-A1-B00-C08-D00-E08-F00-G00-H00-I00-J00-T00.

1. The **E** combination cable gland is suitable for use by the TQ4x2/EA4x2 and TQ4x3/EA4x3 with a flexible hose (optional protection).

2. The **F** combination cable gland is suitable for use by the TQ401/EA401 with a flexible hose (optional protection).

3. The **G** combination cable gland is suitable for use by the CV210/IVC632 with an ED109 or ED112 cable.

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Sales offices

Meggitt has offices in more than 30 countries. For a complete list, please visit our website.

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