EN

READ MANUAL
BEFORE COMMENCING
WITH INSTALLATION

VESX50-IP Magnetic Clamp

Installation & Operating Instructions



IECEx UKCA

The safety of any system incorporating the equipment referred to in this manual is the responsibility of the installer of the system.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Any warranty is made void if the equipment is not installed, or used, in accordance with the manufacturers instructions.

Product Overview

Grounding clamps are typically designed around torsion or compression springs. The spring type grounding clamps are ideal for many different applications. However, attaching a spring based grounding clamp to a flat or curving surface is not normally possible e.g. the body of a drum.

Newson Gale have designed a 2 pole grounding clamp that capitalises on the power of magnetism and tungsten carbide tips to provide a strong low resistance connection (≤10 Ohms) to any ferrous metal surface e.g. body of a drum, tote, IBC, etc. This will allow drums to be filled, the cover fitted complete with extract connection over the open top and still ground the ferrous metal based drum with the VESX50-IP 2 pole magnetic grounding clamp.

The VESX50-IP 2 pole magnetic grounding clamp is fully compatible with the Newson Gale Bond-Rite and Earth-Rite monitoring systems that provide the customer with visual indication and interlock capability. Using this clamp and these systems will help the user to comply with International Guidance and Recommended Practices IEC TS 60079-32-1, NFPA77 and API 2003 in achieving a metal on metal to ground connection of ≤10 Ohms before the process starts and therefore mitigate static build up.

The body and integral handle of the VESX50-IP 2 pole magnetic grounding clamp are made from stainless steel (A2/SS304) for long life and corrosion resistance. Two sharp spring loaded tungsten carbide tips are used to penetrate coatings and make a low resistance connection (≤10 Ohms) to ground possible.

Due to the strength of the two Neodymium magnets the clamp is supplied with a sacrificial metal keeper that will need to be removed before the clamp is used. The sacrificial keeper will help focus away the magnetic field from other ferrous objects until the clamp is installed.

An optional stowage point is available for the VESX50-IP 2 pole magnetic grounding clamp. It allows the clamp to have a designated stowage point close to the item of ferrous metal based plant that the operator can use to park the clamp safely when it is not in use.

Instructions for Safe Use, Installation & Maintenance

With regard to the relevant and essential health & safety requirements (EHSRs), the following declarations are made with respect to the Newson Gale magnetic clamp.

1. The materials of construction of the magnetic clamp are deemed to be suitable for the intended use.

2. **Intended use:** The magnetic clamp is designed to dissipate static electricity away from conductive ferrous objects when used with a Newson Gale system.

   Upon installation ensure the metallic keeper plate is removed from the clamp to expose the clamp tips and discarded.

3. Use the handle built into the magnetic clamp to attach it to the conductive ferrous item of plant before starting the process. Always hold the clamp by the handle and make sure that hands and fingers are well away from the front of the magnetic clamp at all times.

4. The magnetic clamp should be connected to a flexible, multi-strand 2 core cable suitable for the Ex area of operation and the site conditions. A suitable 2 core spiral cable can be supplied by Newson Gale in 3 m, 5 m, 10 m & 15 m lengths.

5. The magnetic clamp and cable should be checked regularly particularly before use to ensure that they have not been damaged. If the magnetic clamp and/or cable are found to be damaged it must taken out of service or be replaced immediately.

6. The magnetic clamp and cable must have a connection to a verified earth point in order to dissipate static electricity when used with a Newson Gale system.

7. The magnetic clamp must be connected to the ferrous metal object requiring to be earthed at a position which is clean and free from any insulating coating.

8. The magnetic clamp has been designed to be used with any of the Newson Gale intrinsically safe 2 core grounding systems.

9. The magnetic clamp should be used by trained and competent persons only.

10. At the end of it's life the magnetic clamp should be disposed of in a safe, considerate manner.

11. The clamp uses very strong magnets and therefore to avoid injury, the clamp body should not be opened.

12. Care should be taken by pacemaker wearers and others with medical implants and a safe distance maintained from the clamp due to the strength of magnets used within it.

Technical Specification

Clamp Body

Materials of Construction	Stainless Steel 304 Body Stainless Steel 17-7 PH Springs Nylon Viton O-Ring Tungsten Carbide Tips
Ambient Temperature Range	-40°C to +60°C
Certification	II 1 G Ex h IIC T6 Ga II 1 D Ex h IIIC T185°C Da
Certificate No.	IECEx EXV 20.0033 ExVeritas 21UKEX0842
Size	133 mm high, 96 mm deep and 36 mm wide (cable & connector add another 325 mm to the length)
Weight	520 grams (nett)

Spiral Cable

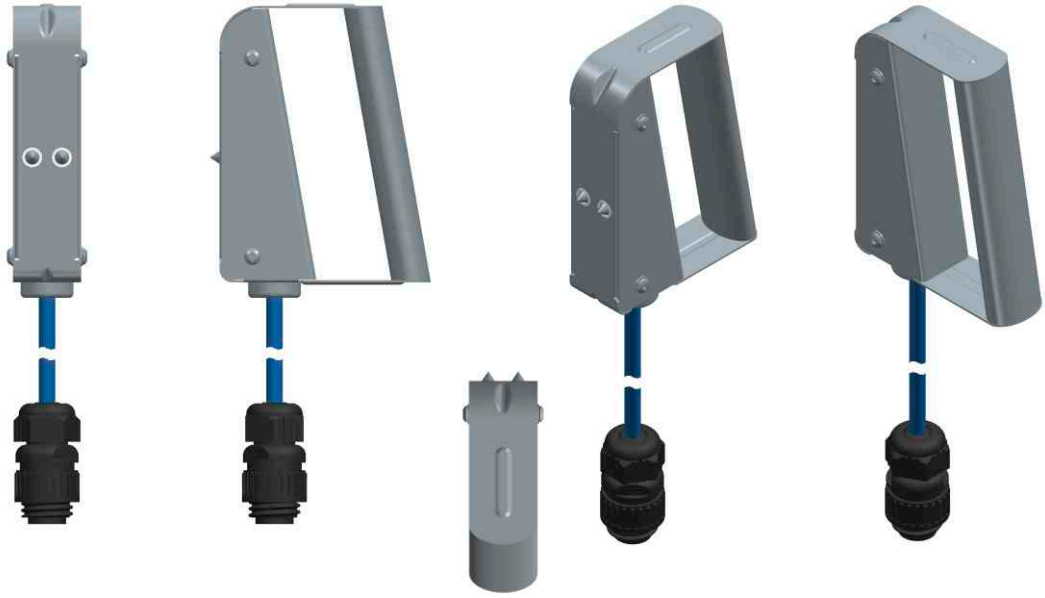
Conductors	2 x 1.00 mm^2 copper (Red & Black cores)
Sheath	Hytrel sheathed 2 core blue Cen-Stat spiral cable The sheath is chemical & abrasion resistant and contains colour, UV & anti-static additives
Cable Lengths	3 m (10 ft), 5 m (16 ft), 10 m (32 ft) or 15 m (50 ft) (also available in straight lengths, please discuss with Newson Gale)

Connector

Materials Contact Base Materials	CuZn
Contact Plating	Cu/Ag
Contact Bearer Material	PA 66 GF
Contact Bearer Colour	Black
Flammability Class (Contact Bearer)	UL 94 V-0
Attachment Material	PA 66 GF
Flammability Class (Attachment)	UL 94 V-0
Gasket Material	NBR

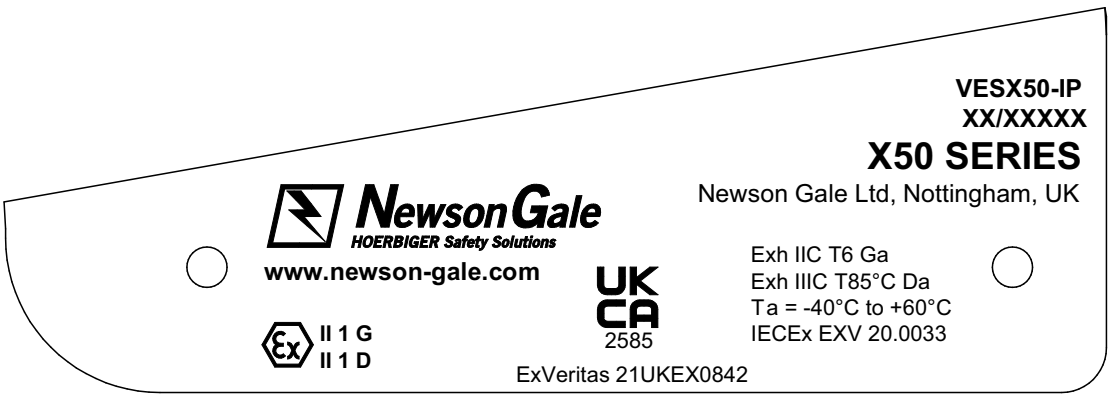
NB: In line with our policy of continual product development, we reserve the right to alter specifications at any time.

VESX50-IP Product Views



VESX50-IP Stowage Point





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UK Declaration of Conformity

This declaration of conformity is issued under the sole responsibility of Newson Gale Ltd of Omega House, Private Road 8, Colwick, Nottingham

Declare that: The Newson Gale CAT 1 Static Grounding Clamps (Certificate: ExVeritas 21UKEX0842 – ExVeritas Certification Service 2585

- Are in accordance with the following regulations:

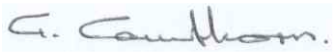
Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended by UKSI 2019:696)

- Have been designed and manufactured to the following specification:

CAT 1 Clamps: BS EN ISO 80079-36:2016

Note: The above equipment has been checked against the latest standard (Technical Knowledge) and the requirements have been found to be no more onerous.

I hereby declare that the equipment named above, on the date the equipment accompanied by this declaration is manufactured and shipped, has been designed to comply with the relevant sections of the above referenced specifications. The equipment complies with the essential requirements of the Regulations.

Signed by: 

Name: G. Cawthorn

Position: Electrical & Electronic Engineer

Location: Colwick, Nottingham

Date: 21st January 2022

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