



3M™ Electronic Marking System (3M EMS) Markers

Product Instructions

December 2024

Explanation of Product Safety Label Symbols



Waste of electrical and electronic equipment which are no longer usable must be collected separately and disposed of as per applicable local laws.

⚠ WARNING

- To reduce the risks associated with working around energized systems which, if not avoided, could result in - serious injury or death:
 - Installation shall be performed by personnel trained in good safety practices in handling electrical equipment.
 - De-energize and ground all electrical systems before installing product.
 - Use personal protective equipment per workplace and industry standard operating practices and procedures.

The radio equipment type, 3M EMS and 3M EMS-iD Markers, 3M Path Markers are in compliance with EU Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.3m.com/regs. The radio equipment type, 3M EMS and 3M EMS-iD Markers, 3M Path Markers are in compliance with The UK Radio Equipment Regulations 2017, UK SI 2017 No 1206, as amended. The full text of the UKCA declaration of conformity is available at the following internet address: www.3m.com/regs.

Installation Instructions

1. **3M Electronic Marking System-Identification (3M EMS-iD) Steps Before Installing**
 - 1.1. If required, remove the identification number tag to attach it to facility documentation for project.
 - 1.2. Use a 3M™ Dynatel™ EMS-iD Locator to write any needed data to the 3M EMS-iD marker.
 2. **Installing the 3M EMS and 3M EMS-iD Marker**
 - 2.1. Decide if a tie down procedure is necessary to keep the marker in place and have needed accessories.
 - 2.2. Separate the marker from any metal objects, by the minimum distance listed in the next section, using clean fill dirt.
 - 2.3. If the key point is non-metallic, place the 3M marker over the desired location.
 - 2.4. Hand fill at least 6 in (15 cm) of soil over the 3M marker to help prevent movement, or potential damage, during backfill.
- Complete installation and verify the 3M marker position with a compatible locator.

				
Specifications	Near Surface	Disk ⁽⁵⁾ /Ball Marker	Mid-Range	Full-Range
Locate/Depth ⁽¹⁾ Passive Marker (max)	3 ft (0.9 m)	6 ft (1.8 m)	6 ft (1.8 m)	9 ft (2.7 m)
Read depth ⁽¹⁾ iD Marker US-Locator (max)	3 ft (0.9 m)	5 ft (1.5 m)	X	8 ft (2.4 m)
Read depth ⁽¹⁾ iD Marker EU-Locator (max)	0.6 m	1.2 m ⁽²⁾ or 1.0 m ⁽³⁾	X	2.0 m (6.5 ft)
Vertical Separation - Facility (min)	12 in (30 cm ⁽⁴⁾)	4 in ⁽⁴⁾ (10.4 cm ⁽⁴⁾)	4 in ⁽⁴⁾ (10.4 cm ⁽⁴⁾)	6 in ⁽⁴⁾ (15.2 cm ⁽⁴⁾)
Horizontal Separation - Facility (min)	2 in ⁽⁴⁾ (5 cm ⁽⁴⁾)	4 in ⁽⁴⁾ (10.4 cm ⁽⁴⁾)	4 in ⁽⁴⁾ (10.4 cm ⁽⁴⁾)	6 in ⁽⁴⁾ (15.2 cm ⁽⁴⁾)
Distance Between n Markers (min)	3.5 ft (1.06 m)	3.5 ft (1.06 m)	3.5 ft (1.06 m)	3.5 ft (1.06 m)
Marker Diameter	0.78 (2 cm)	Disk: 10.0 cm Ball: 4 in (10.4 cm)	8.4 in (21.3 cm)	15 in (38.1 cm)
Marker Height/Length/Thickness	3 in (7.6 cm)	Disk: .38 in (1.8 cm)	1.2 in (3 cm)	0.65 in (1.65 cm)
iD Marker Program Distance (max)	6 in (15 cm)	12 in (30 cm)	X	24 in (61 cm)
Installation Marker	Vertical	Horizontal / NA	Horizontal.	Horizontal

¹ Depth Reading is measured between the lowest tip of the locator and the marker.

² Telephone, Gas, Wastewater, Communication and General Purpose Marker

³ Power and Water Marker

⁴ Target size and material dependent. Depth estimation may be adversely affected when placing the marker above a large metallic object, such as manhole cover. To improve the depth estimation accuracy, increase the vertical separation from the metal object or perform a field test of depth.

⁵ Do not direct bury disk markers

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Product Selection and Use: Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product in accordance with all applicable instructions and with appropriate safety equipment, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

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Conditional Limited Warranty: 3M provides the following Conditional Limited Warranty for its iD Electronic Marker Products: When installed in accordance with 3M's installation instructions, 3M warrants iD Electronic Markers for a period of ten (10) years from the date of purchase of the product, to be free from defects in material and manufacture, provided iD Electronic Markers are located with 3M™ Dynatel™ Locators or other brand locators as may be designated by 3M in writing. This warranty does not extend to iD Electronic Markers that have been subjected to misuse or improper application or that have been repaired or altered by others. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. If the iD Marker is found to be defective within the warranty period, your exclusive remedy shall be, at 3M's options, to repair or replace the iD Markers or refund the purchase price. Except where prohibited by law, 3M will not be liable for any direct, indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.

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