

3M™ Electronic Marker System (EMS) Near-Surface Markers

The 3M™ Near-Surface Marker provides an accurate, convenient, long-lasting method of marking underground and street-access facilities. Its size and shape allow for easy installation in asphalt, concrete or dirt, without extensive digging or drilling. The Near-Surface Marker is three inches long and 0.78 inches in diameter, and has a range of up to three feet (0.9 m) from marker to locator.

The addition of the new 3M-iD markers provides additional functionality by enabling facility data to be stored in the marker. The pre-programmed unique serial number integrates with back office mapping and GIS systems when used for mapping new and legacy assets such as valves, handholes, manholes and other points of special interest.

When buried in a vertical position, the Near-Surface Marker can be accurately located using a 3M™ Dynatel™ Locator. The locator transmits an RF signal to the buried marker. The marker returns the signal to the locator, indicating the marker's exact position, while the locator provides both a visual reading and an audible tone.

**Second Generation
iD Markers providing
4X Memory**



3M™ Electronic Marker System (EMS)
XR/iD Near-Surface Markers





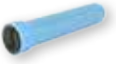


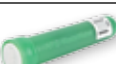
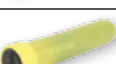



Features	Benefits
Accurate even in congested areas	Helps eliminate mislocates
Underground marker	Protected from damage from above-ground environment
Durable	Long-lasting passive antenna encased in waterproof shell helps identify underground facilities for years to come
Frequency- and color-coded	Helps identify specific utility
Easy to use	Minimal training
RFID capability	Positive identification using facility information

Physical Specifications	
Size	3.0" H x 0.78" D (7.6 cm x 2 cm)
Weight	Net: 0.88 oz. (25 gm)/ Shipping: 3.75 lb./case (1.70 kg)
Packaging	50 markers per carton
3M iD Markers Read Range	With a 'U' model (U.S.) locator: 3 ft (0.9 m) With a 'E' model (Export, CE) locator: 0.6 m
3M Passive Markers Detection Range	2 ft (0.6 m)

Environmental Specifications	
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)



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Image	Product	Application	Stock Number
	3M™ EMS Near-Surface Marker 1432	Telecommunications industry	80610230312
	3M™ iD Near-Surface Marker 1432-XR/iD	Telecommunications industry	80611321292
	3M™ EMS Near-Surface Marker 1433	Power industry	80610230379
	3M™ iD Near-Surface Marker 1433-XR/iD	Power industry	80611321300
	3M™ EMS Near-Surface Marker 1434	Water industry	80610230387
	3M™ iD Near-Surface Marker 1434-XR/iD	Water industry	80611321318
	3M™ EMS Near-Surface Marker 1435	Wastewater industry	80610230395
	3M™ EMS Near-Surface Marker 1435-XR/iD	Wastewater industry	80611321326
	3M™ EMS Near-Surface Marker 1436	Gas industry	80610230403
	3M™ iD Near-Surface Marker 1436-XR/iD	Gas industry	80611321334
	3M™ EMS Near-Surface Marker 1437-XR/iD	Cable TV and communications	80611329949
	3M™ iD Near-Surface Marker 1438-XR/iD	General purpose and reclaimed water	80611321342

Important Notice

All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use. Any statements related to the products which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

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 indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**

Conditional Lifetime Warranty

3M provides the following Conditional Limited Warranty for its Electronic Marker Products (non-iD versions only): When installed in accordance with 3M's installation instructions, 3M warrants Electronic Markers for the lifetime of the product, to be free from defects in material and manufacture, provided the 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 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 Electronic Marker is found to be defective during the normal lifetime of the product, your exclusive remedy shall be, at 3M's options, to repair or replace the Electronic Markers or refund the purchase price. **Except where prohibited by law, 3M will not be liable for any indirect, special, incidental or consequential loss or damage arising from this 3M product, regardless of the legal theory asserted.**



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