

3M™ EMS MARKERS



Full Range Marker

The full-range marker is suited for deep applications up to 8'. Its 15" diameter makes it ideal for use as a digging shield over sensitive underground facilities.



Ball Marker

Engineered for narrow trench applications up to 5' in depth, the 4"-diameter ball marker has a unique, patented self-leveling feature that ensures an accurate, horizontal position regardless of how it is placed in the ground.*



Mini-Marker

Designed for marking applications up to 6' in depth, marker spokes in the 8.5"-diameter mini-marker help stabilize it in the correct position after placement.



Near-Surface Marker

The near-surface marker is ideal for marking underground and street-access facilities up to 2' in depth. Its 3.5" length, cylindrical size and shape allows for easy installation in asphalt, concrete or rock without extensive digging or drilling.

*Contains a mixture of propylene glycol and water, which is approved for use in pharmaceuticals, cosmetics and as a food additive. The mixture is readily biodegradable and will not harm humans, wildlife or the environment.

SPECIFICATIONS

3M™ EMS iD BALL MARKER 1400 SERIES	
FEATURE	DESCRIPTION
Physical Specifications	
Size	4 in. (10.4 cm) diameter sphere
Marker weight	0.77 lb. (0.35 kg)
Shipping weight	25 lb. (11.4 kg)
Packaging	30 to a case
Frequencies/models	Telephone, gas, CATV, power, water, wastewater, general-purpose
Range	
Search mode	5 ft. maximum using any 3M Dynatel Locator for markers.
Read mode	5 ft. maximum using 3M Dynatel 1420 or 2200M-iD Series Locators (4 ft. or 1.2 m with E-model locators)
Write	1 ft. maximum using 3M Dynatel 1420 or 2200M-iD Series Locators
Shell	High-density, watertight polyethylene
Contents	Mixture of propylene glycol and water
ID number	Unique 10-digit number
Memory size	256 bits
Typical compressed text length	6 lines (each line holds an 8-character subject label and a 13-character description label)
Environmental Specifications	
Operating temperature	-4° F to 122° F (-20° C to 50° C)
Storage temperature	-4° F to 158° F (-20° C to 70° C)

FEATURES

EMS iD BALL MARKER 1400 SERIES							
FEATURE	TELEPHONE	POWER	CATV	GENERAL PURPOSE	WATER	WASTEWATER	GAS
Model	1421-XR/iD	1422-XR/iD	1427-XR/iD	1428-XR/iD	1423-XR/iD	1424-XR/iD	1425-XR/iD
Color	orange	red	black/orange	purple	blue	green	yellow
Application	<ul style="list-style-type: none"> • Cable paths • Buried splices • Buried service drops • Load coils • Conduit stubs • Fiber optic facilities • All types of splices • Bends • Depth changes • Manhole covers • Road crossings 	<ul style="list-style-type: none"> • Cable paths • Service drops • Conduit stubs • Road crossings • All types of splices • Buried transformers • Service loops • Street lighting • Bends • Manhole covers • Distribution loops 	<ul style="list-style-type: none"> • Cable paths • Fiber optic facilities • Buried service drops • Road crossings • Buried splices • Bends 	<ul style="list-style-type: none"> • Reclaimed water • Private campuses • Valve boxes • Road crossings • Path marking • Buried valves • Tees • Meter boxes • Main stubs • Service stubs 	<ul style="list-style-type: none"> • Pipeline paths • Service stubs • PVC pipeline • All types of valves • Road crossings • Tees • Clean-outs 	<ul style="list-style-type: none"> • Pipeline paths • Service stubs • PVC pipeline • Buried valves • Road crossings • Tees • Clean-outs 	<ul style="list-style-type: none"> • Pipeline paths • Main stubs • Service stubs • Tees • Road crossings • All types of valves • Meter boxes • Stopping fittings • Depth changes • Transition fittings • Squeeze points • Pressure control fittings • Electro fusion couplings

ORDERING INFORMATION

EMS iD BALL MARKER 1400 SERIES							
FEATURE	TELEPHONE	POWER	CATV	GENERAL PURPOSE	WATER	WASTEWATER	GAS
Model	1421-XR/iD	1422-XR/iD	1427-XR/iD	1428-XR/iD	1423-XR/iD	1424-XR/iD	1425-XR/iD
UPC 051115-	13688	13689	13690	13691	13791	13792	13793

SPECIFICATIONS

3M™ ELECTRONIC MARKING SYSTEM								
	RANGE	TELEPHONE	CATV	POWER	WATER	WASTE-WATER	GAS	GENERAL PURPOSE
Near-surface marker Product number Color	2 ft.	1432 Orange	N/A	1433 Red	1434 Blue	1435 Green	1436 Yellow	N/A
Ball marker Product number Color	5 ft.	1401-XR Orange	1407-XR Black/Orange	1402-XR Red	1403-XR Blue	1404-XR Green	1405-XR Yellow	1408 Purple
Disk marker Product number Color	5 ft.	1411-XR Orange	N/A	1412-XR Red	1413-XR Blue	1414-XR Green	1415-XR Yellow	N/A
Mini-marker Product number Color	6 ft.	1255 Orange	N/A	1256 Red	1257 Blue	1258 Green	1259 Yellow	N/A
Full-range marker Product number Color	8 ft.	1250 Orange	N/A	1251 Red	1252 Blue	1253 Green	1254 Yellow	N/A
Marker locator Product number	—	2205-TEL 2206 1420/1420E	2205-PWR 2206 1420/1420E	2206 1420/1420E	2206 1420/1420E	2206 1420/1420E	2206 1420/1420E	1420/1420E

PHYSICAL SPECIFICATIONS

ELECTRONIC MARKING SYSTEM				
	NET WEIGHT	SHIPPING WEIGHT	RANGE (DEPENDENT ON MARKER TYPE)	STANDARD PACKAGING
Near-surface marker	0.055 lbs. (0.025 kg)	3.75 lbs. (1.71 kg)	2 ft. (0.6 m) from locator probe	50/cs.
Ball marker	0.76 lbs. (0.35 kg)	25.00 lbs (11.40 kg)	5 ft. (1.5 m) from locator probe	30/cs.
Disk marker	1.40 oz. (39.70 g)	5.00 lbs. (2.30 kg)	5 ft. (1.5 m) from locator probe	50/cs.
Mini-marker	0.31 lbs. (0.14 kg)	17.00 lbs. (7.70 kg)	6 ft. (1.8 m) from locator probe	50/cs.
Full-range marker	1.75 lbs. (0.80 kg)	30.90 lbs. (14.00 kg)	8 ft. (2.4 m) from locator probe	25/cs.

APPLICATIONS

ELECTRONIC MARKING SYSTEM					
TELEPHONE	CATV	POWER	WATER	WASTEWATER	GAS
<ul style="list-style-type: none"> • Cable paths • Splices • Buried service drops • Load coils • Conduit stubs • Fiber optic facilities • Branch splices 	<ul style="list-style-type: none"> • Cable paths • Fiber optic facilities • Buried service drops • Road crossings • Buried splices 	<ul style="list-style-type: none"> • Cable paths • Service drops • Conduit stubs • Buried splices • Road crossings • Branch splices • Buried transformers 	<ul style="list-style-type: none"> • Pipeline paths • Service stubs • Clean-outs • Road crossings 	<ul style="list-style-type: none"> • Pipeline paths • Service stubs • PVC pipeline • Buried valves • Road crossings • Tees 	<ul style="list-style-type: none"> • Pipeline buried • Main stubs • Service stubs • Tees • Road crossings • Valve boxes • Meter boxes

ORDERING INFORMATION

ELECTRONIC MARKING SYSTEM			
PRODUCT NUMBER	PKG. (LBS.)	MIN. ORDER	UPC 054007-
2205-TEL	1 each (5.00)	1 each	92578
2205-CT	1 each (5.00)	1 each	92576
2206	1 each (5.00)	1 each	92582