

3M™ Dynatel™ Locators

2200 Series

Cable/Pipe Fault Locator 2250

Cable/Pipe/Fault Locator 2273

The 2200 series locator is designed to find the path and estimated depth of buried cables and pipes. 2200 series locators have four active frequencies: passive frequencies for power, cathodic protection, CATV and auxiliary frequencies for long distance locating from remote transmitters. They also offer toning of aerial cable, direct readout of active duct probe, and cable/pair identification.

Receivers incorporate an "expander" function to make peaks and nulls more pronounced by enhancing the amplitude difference between two conductors carrying the same tone. Both the receiver and the transmitter feature a self-test routine that is executed each time the unit is turned on.

As with other locator models, the Dynatel locator 2273 performs all the functions of the 2250 locator plus the ability to find underground faults.



3M™ Dynatel™ Cable/Pipe/Fault Locator 2273



3M™ Dynatel™ Cable/Pipe/Fault Locator 2250

3M™ Dynatel™ Advanced Cable/Pipe/Fault Locator 2250 and 2273 Physical Specifications

| Size | 2250 | 2273 |
|---------------|--|--|
| Transmitter | 6.75" H x 11.25" W x 7.75" D (17.2 cm x 28.6 cm x 19.7 cm) | 6.75" H x 11.25" W x 7.75" D (17.2 cm x 28.6 cm x 19.7 cm) |
| Receiver | 25.5" H x 3.75" W x 10.75" D (64.8 cm x 9.5 cm x 27.3 cm) | 25.5" H x 3.75" W x 10.75" D (64.8 cm x 9.5 cm x 27.3 cm) |
| Weight | | |
| Transmitter | 5.2 lbs. (2.4 kg) | 5.2 lbs. (2.4 kg) |
| Receiver | 4.1 lbs. (1.8 kg) | 4.1 lbs. (1.8 kg) |
| Shipping | 14.3 lbs. (6.5 kg) | 21.5 lbs. (9.8 kg) |





3M™ Dynatel™ Advanced Cable/Pipe/Fault Locator 2250 and 2273 Environmental Specifications

| | 2250 | 2273 |
|-----------------------|------------------------------|------------------------------|
| Operating temperature | -4° to 122°F (-20° to 50°C) | -4° to 122°F (-20° to 50°C) |
| Storage temperature | -40° to 158°F (-40° to 70°C) | -40° to 158°F (-40° to 70°C) |

3M™ Dynatel™ Advanced Cable/Pipe/Fault Locator 2250 and 2273 Features

| Receiver | 2250 | 2273 |
|---|------|------|
| Peak mode | X | X |
| Null mode | X | X |
| Differential mode | X | X |
| Push button digital depth readout | X | X |
| Cable identification | X | X |
| Measures signal current in cable | X | X |
| Direct readout of active duct probe (sonde) depth | X | X |
| Visual and audible cable locates | X | X |
| Digital fault strength indicator | | X |
| Graphic display | X | X |
| Ground level antenna | X | X |
| Expander amplifier | X | X |
| 50/60 Hz power cable locate mode | X | X |
| Transmitter | | |
| Four operator-selectable frequencies | X | X |
| Simultaneous signals | X | X |
| Built-in ohmmeter | X | X |
| Indicates presence of foreign and hazardous voltage | X | X |
| Built-in continuity test | X | X |
| Three tone application methods (direct connect, coupler, inductive) | X | X |
| Auto load impedance matching | X | X |
| High and normal output level | X | X |
| External DC operation (option 'A' only) | | X |
| Sheath (earth return) fault-finding capability | | X |
| Fault-locate and cable-locate tones applied simultaneously | | X |

3M™ Dynatel™ Advanced Cable/Pipe/Fault Locator 2250 and 2273 Electrical Specifications

| Receiver | 2250 | 2273 |
|--|--|--|
| Frequencies Trace and Modes | Active: 577 Hz, 8 kHz, 200 kHz Passive Power: 50/60 Hz, user-selectable: L50/L60-5th harmonic, H50/H60-9th harmonic, 100/120-rectified power Auxiliary: 'T' model: 31.5 kHz, 512 Hz, 560 Hz; 'P' model: 31.5 kHz | Active: 577 Hz, 8 kHz, 200 kHz Passive Power: 50/60 Hz, user-selectable: L50/L60-5th harmonic, H50/H60-9th harmonic, 100/120-rectified power Auxiliary: 'T' model: 31.5 kHz, 512 Hz, 560 Hz; 'P' model: 31.5 kHz |
| Depth | Range: 0 to 30' (0 to 9 m) Accuracy: $\pm 10\% \pm 1$ digit for 0 to 60" (0 to 1.5 m) $\pm 15\%$ for 60" to 180" (1.5 to 4.5 m) $\pm 20\%$ for 180" to 360" (4.5 to 9 m) | Range: 0 to 30' (0 to 9 m) Accuracy: $\pm 10\% \pm 1$ digit for 0 to 60" (0 to 1.5 m) $\pm 15\%$ for 60" to 180" (1.5 to 4.5 m) $\pm 20\%$ for 180" to 360" (4.5 to 9 m) |
| Power | Six alkaline "AA" (LR6) cells | Six alkaline "AA" (LR6) cells |
| Battery Life | 35 hours, typical | 35 hours, typical |
| Transmitter | | |
| Output Frequencies Trace Mode Sheath Fault Mode Tone Mode Induction Mode | 577 Hz, 8 Hz, 33 kHz, 200 kHz 577 Hz and 200 kHz pulsed at 8 Hz 33 kHz, 200 kHz | 577 Hz, 8 Hz, 33 kHz, 200 kHz 10/20 Hz for sheath fault; 577 Hz and 33 kHz for tracing 577 Hz and 200 kHz pulsed at 8 Hz 33 kHz, 200 kHz |
| Output Voltage (Maximum) Trace Mode Sheath Fault Mode Tone Mode | 70 Vrms | 70 Vrms 70 Vrms Normal setting: 10 Vrms, High setting: 60 Vrms |
| Output Power | Normal setting: Limited to 0.5W High setting: Limited to 3W or 5W with External DC power (Option 'A' only) | Normal setting: Limited to 0.5W High setting: Limited to 3W or 5W with External DC power |
| Output Protection | 240 Vrms | 240 Vrms |
| Power | Batteries: Six alkaline "C" (LR14) cells; External DC: 9-18 V DC (1A) (Option 'A' only) | Batteries: Six alkaline "C" (LR14) cells; External DC: 9-18 V DC (1A) (Option 'A' only) |
| Typical Battery Life | Normal output level: 50 hours High output level: 10 hours | Normal output level: 50 hours High output level: 10 hours |

3M™ Dynatel™ Advanced Cable/Pipe/Fault Locator 2250 and 2273 Ordering Information

| | | | Cable/Pipe Locate | Fault Locate | Transmitter Output | Direct Connect Cable - small clips | Direct Connect Cable - large clips | Coupler Size | Cigarette Lighter Adapter Cable |
|------------------|----------------|-------------|-------------------|--------------|--------------------|------------------------------------|------------------------------------|--------------|---------------------------------|
| 2250 Series Kits | 80-6108-4727-1 | 2250-U3P3 | x | | 3W | | x | 3" | |
| | 80-6108-4721-4 | 2250-U3T3 | x | | 3W | x | | 3" | |
| 2273 Series Kits | 80-6109-9352-1 | 2273-U5P3/A | x | x | 5W | | x | 3" | x |
| | 80-6109-9353-9 | 2273-U5T3/A | x | x | 5W | x | | 3" | x |
| | 80-6108-4745-3 | 2273-U3P3 | x | x | 3W | | x | 3" | |
| | 80-6108-4739-6 | 2273-U3T3 | x | x | 3W | x | | 3" | |

3M™ Dynatel™ Advanced Cable/Pipe/Fault Locator 2250 and 2273 Accessories and Spare Parts Ordering Information

Standard Accessories

| | |
|------|--|
| 9012 | Small Clip ¼" (6.4 mm) Direct Connect, 5-foot Transmitter Cable, Telephone |
| 2876 | Large Clip 5/8: (15.9 mm) Direct-Connect Transmitter Cable for Most Cable/Fault Locators |
| 8006 | Ground Rod |
| 3014 | Earth Contact Frame (2273 models) |
| 9026 | Earth Contact Frame Cable (2273 models) |
| 3001 | 3" (7.6 cm) Dyna-Coupler |

Optional Accessories

| | |
|--------|--|
| 3019 | 3" (7.6 cm) Cable Locator Coupler Accessory Kit |
| 1196 | 6" (15.2 cm) Dyna-Coupler with Pouch |
| 1196/C | 6" (15.2 cm) Dyna-Coupler with Pouch and Coupler Cable |
| 9043 | Ground Extension Cable |
| 9011 | Coupler Cable |
| 3229 | Active Duct Probe, 33kHz |
| 2200 | Soft Carrying Bag |
| 2200RB | Rechargeable Auxillary Battery for 5 watt units (Option 'A' Only) |
| 2892 | Small Clip ¼" (6.4 mm) Direct-Connect Transmitter Cable for All Cable/Fault Locators |
| 4001 | 4.5" (11.4 cm) Dyna-Coupler |
| 4519 | Dynatel™ Locator Coupler Accessory Kit |
| 3019 | 3" (7.6 cm) Cable Locator Coupler Accessory Kit |

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