

# EMI/RFI Shielded Conduit

The Electri-Flex Company offers three types of flexible liquidtight conduits designed for wiring applications requiring shielding effectiveness from Electromagnetic and Radio Frequency Interference (EMI/RFI).

These conduits are used to protect sensitive electronic circuits used in communications, radar and data transmission from outside interference, or “noise.” The reverse situation is also an issue. Today’s Original Equipment Manufacturers (OEMs) are finding that, if they wish to ship electrical equipment into the European community, they may need to be in compliance with CE standards that reduce the allowable amount of EMI/RFI emissions from electrical apparatus.

All three are designed to accept industry standard liquidtight connectors and address the problems of assembly and grounding. Connectors of this type include a grounding ferrule, which contacts the internal metallic material of the conduit and the connector body. This produces a direct shield-to-drain or ground, simply by tightening the connector.

**RECENTLY  
UPDATED**

Conduit Type		Page
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## Distinctive Characteristics Include:

- UL Listed (Type SLA)
- Accepts standard liquidtight fittings
- Withstands wide temperature ranges
- Three levels of EMI/RFI protection



## SHIELD-FLEX™

**SHIELD-FLEX conduit allows for greater versatility than shielded cable in wiring configurations and retrofitting projects. With three levels of effectiveness to choose from, SHIELD-FLEX meets your needs.**

## Markets We Serve:

- Medical
- Military
- Industrial
- Government/Defense
- Commercial
- Telecommunications
- Aerospace
- Public transit
- Utilities

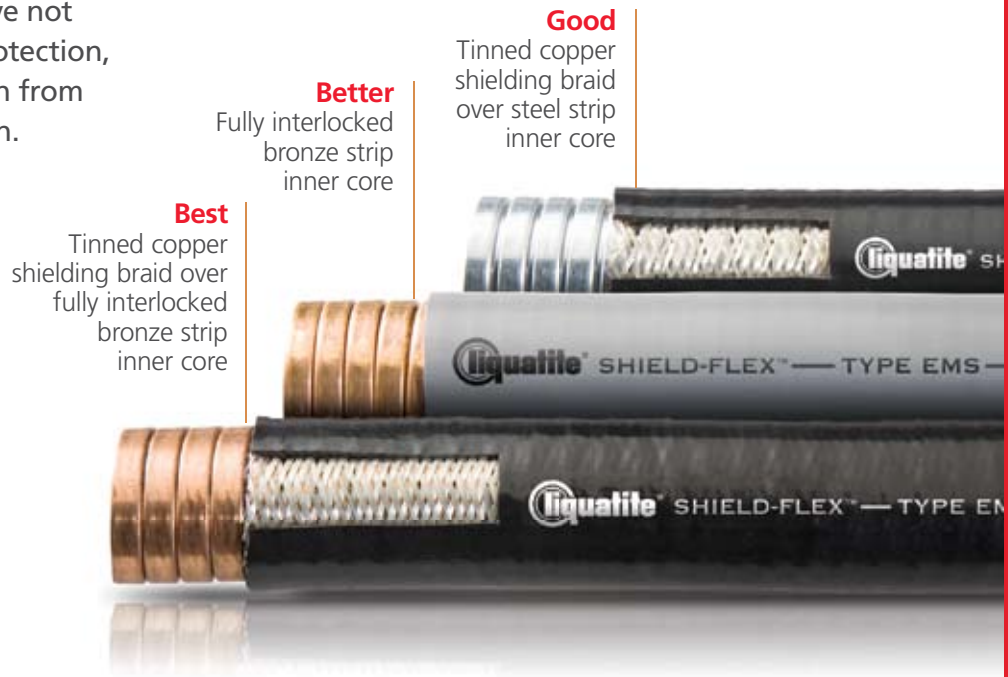
## Applications/Vertical Markets:

- Air Handling Equipment (HVAC)
- Test & Measurement Equipment
- Data Centers
- Variable Speed Drives
- Commercial-off-the-shelf (COTS)
- CE — European Standard
- Radio Broadband/Antenna
- Solar/Wind Energy
- Ship Building
- Medical Diagnostics Equipment
- Wireless Communication
- Healthcare/Medical

Shielded flexible conduits allow for greater versatility for wiring configurations and retrofitting than is experienced with shielded cable assemblies.

All three of these easy-to-install shielding conduits offer a “Good – Better – Best” scenario as shown in the Shielding Effectiveness Chart below. We use a combination of steel or bronze flexible cores coupled with a tinned copper braid to achieve not only the required EMI/RFI protection, but also the added protection from crushing, impact and abrasion.

The outer jacketing material may be modified to accommodate a variety of environmental conditions, with materials ranging from standard PVC to halogen-free polyurethane to high/low temperature thermoplastics.



### Shielding Effectiveness

The graph below depicts a general comparative shielding effectiveness (attenuation in dBs) of all three types of SHIELD-FLEX conduit. The dotted line indicates a comparison to standard unshielded liquidtight flexible conduit Type LA. The spectrum of test frequency is from 1 MHz to 10 MHz Electric Field, to 100 MHz to 1 GHz Planewave Field and 2 GHz to 6 GHz Microwave Field. Tests were performed per MIL-STD-285 on 1" trade size conduit using standard liquidtight fittings from Thomas & Betts Series 5300. Results are based on controlled laboratory conditions and may vary in actual field-installed conditions.

