



Division of J. B. Nottingham & CO., Inc  
75 Hoffman Lane, Islandia, New York 11749  
Phone (631) 234-2002 Fax (631) 234-2360  
Web Site <http://www.jbn-duraline.com>

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## **OPERATION AND INSTALLATION BULLETIN FOR DURALINE INDOOR/ OUTDOOR EQUIPMENT**

**Expected Life** - All Duraline plug and receptacle bodies are molded of rugged, oil, ozone, weather, water and abrasion-resistant rubber. There is no real designated "expected life" as various environmental conditions will determine how long the products will last in the field. Product is not for use in gaseous or potentially explosive environments.

**Recommended Care** – The only required maintenance is that the plugs should be kept clean and the rubber molded portion of the male pins and female sockets must be kept lubricated. The most effective lubricant is Dow Corning #111. Most non-petroleum based lubricants may be used. Lubricate approximately every 100 insertions and withdrawals, or every six months (whichever comes first) as a general guideline. Duraline plug and receptacle bodies and seal areas kept in storage should also be lubricated to prolong their usable life. Naturally, environmental factors and the specific lubricant used will affect the duration of its effectiveness; therefore, periodic inspections should be performed to insure that the molded pins and seal areas are pliable and lubricated. Periodic inspections should also be performed to check for damage that may affect safe operation of the equipment.

**Stamped Data** - All Duraline Indoor/Outdoor Factory Mutual Approved molded connectors are embossed with our company name, product model number, electrical ratings in volts and amperes, quarter and year of manufacture, colors of terminals, and the Factory Mutual logo. Devices intended for disconnect use only are marked "Do Not Pull Under Load". Applicable instruction bulletins related to each component are noted as are the words "Outdoor Use". Devices rated IP 68 are so marked.

**Mating Procedure** - All Duraline plugs in this bulletin become watertight when fully mated. The connectors require a fair amount of force to fully mate them to create the watertight seal. There is no special tool to accomplish this; however, regular use of the lubricant discussed in "Recommended Care" will help to make this an easier task.

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**Additional Strain Relief** - Duraline products are engineered and manufactured with sufficient strain relief to withstand normal operating conditions. All connectors should be disconnected prior to transporting and they should be separated where the plug bodies mate (not by pulling on the cords). Looping or knotting cords is not recommended.

**FM Approval** - When not in use, load outlets must be covered or “capped” to meet the requirements of Factory mutual for equipment intended for outdoor use. Additionally, all equipment must be stored indoors when not in use.

## **Information Pertaining to Specific Products**

1. The 4F20 female plug is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the 4M20 male plug or when fully capped with the protective cap P/N A203051. (*IP 68*)
2. The 4FR20 receptacle is suitable for outdoor use when fully mated with the 4M20 male plug or when fully capped with the protective cap P/N A203051.
3. The 30DB6-4S Distribution block is suitable for outdoor use when fully mated with the 30MNFP3 male plug, the 30MFP3 fused plug, or when fully capped with the protective cap assembly P/N A265100.
4. The 30FP3 female plug is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the 30MNFP3 male plug, the 30MFP3 fused plug, or when fully capped with the protective cap assembly P/N A270751. (*IP 68*)
5. The 30FR4X female receptacle is suitable for outdoor use when fully mated with either the 30MNFP4X male plug or the 30MFP4X fused plug or fully capped with the protective cap P/N A224651.
6. The 30FP4X female plug is suitable for outdoor use and is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the 30MNFP4X male plug, the 30MFP4X fused plug or when fully capped with the protective cap P/N A224651. (*IP 68*)

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7. The 30MR4X male receptacle is suitable for outdoor use when fully mated with the 30FP4X female plug.
8. The 3FT30 female receptacle is suitable for outdoor use when fully mated with the 3MT20 male plug or when fully capped with the protective cap P/N A201651.
9. The 3FT20-S female plug, and the 3B20-3S and 3B20-6S distribution blocks are suitable for outdoor use and continuous immersion in 6' of water, and provide complete protection against entry of dust when fully mated with the 3MT20-S male plug or when fully capped with the protective caps P/N A264000 and A201651 for plugs and receptacles and A264003 for distribution blocks. *(IP 68)*
10. The 60FIP-3 female plug and 3FRI60 female receptacle are suitable for outdoor use when fully mated with the 60MIP-3 male plug, the 3MR160 male receptacle, or when fully capped with the protective cap assembly P/N A252151 and A252100, respectively.
11. The 30FP316 female plug is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the 30MNFP316 male plug, the 30MFP316 fused plug, or when fully capped with the protective cap P/N A265151. *(IP 68)*
12. The 60FR3P4 female receptacle is suitable for outdoor use when fully mated with the 60MNFP4 male plug, the 60MFP4 fused plug, or when fully mated with the protective cap assembly P/N A249201.
13. The 60FP4 female plug is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the 60MNFP4 male plug, the 60MFP4 fused plug, or when fully mated with the protective cap assembly P/N A249202. *(IP 68)*

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14. The 30FIP3 female plug is suitable for outdoor use when fully mated with the 30MNFIP3 male plug, the 30MFIP3 fused plug, or when fully mated with the protective cap assembly P/N A218952.
15. The 3FP60 female plug and 3FP60R female receptacle are suitable for outdoor use when fully mated with the 3MP60 male plug, the 3MP60R male receptacle, or when fully mated with protective cap P/N A252151.
16. The 4F50 female plug and 4FR60 female receptacle are suitable for outdoor use when fully mated with the 4M50 male plug, the 4MR60 male receptacle, or when fully mated with the protective cap assemblies P/N A252151 and A252100, respectively.
17. The 3FP30 female plug, and 3B30-1 and 3B30-2 blocks are suitable for outdoor use and continuous immersion in 6' of water, and provide complete protection against entry of dust when fully mated with the 3MFP5, 3MNF30 and 3MFP30 male plugs, or when fully mated with protective cap P/N A271651 (also P/N A270751). The blocks are available on either 8/3 SOWA cable, or 3 separate #10/1 DLO leads. They can be wired to a circuit breaker, a terminating connector, or into existing wiring system. Black, white and green wires must be correctly attached to the appropriate locations of the breaker, connector or cable, and must be done so in accordance with the National Electrical Code. (*IP 68*)
18. The 3MR30 male receptacle is suitable for outdoor use when fully mated with the 3FP30 female plug.
19. The FTP2 female plug is suitable for outdoor use and is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the MTP2 male plug. It can only be used in conjunction with a separate ground wire (see dwgs. SK062493-1 & SK120292-2 for application). (*IP 68*)
20. The FTP3 female plug is suitable for outdoor use and is submersible in up to 6' of water for 7 days only when fully mated with the MTP3 male plug. (*IP 68*)
21. The 15FP3 female plug is suitable for outdoor use and is suitable for outdoor use and continuous immersion in 6' of water, and provides complete protection against entry of dust when fully mated with the 15MP3 male plug. (*IP 68*)

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**Fuse Plugs** - Fuses in Duraline fused plugs are easily replaceable using the following instructions.

1. Remove replaceable pin using wrenching flats.
2. Remove contact using a suitable slotted screwdriver.
3. Remove fuse to be replaced.
4. Replace fuse\*.
5. Replace contact - do not over-tighten as this may damage the fuse container. A snug fit is all that is necessary.
6. Lubricate base of pin which seats on "O" ring with Dow Corning #111 or equivalent.
7. Replace pin - do not over-tighten (see step 5).
8. Lubricate seal area of rubber molded pin.

## **\*Replacement Fuses**

Replacement fuses shall be UL listed. All Mil-F style replacement fuses to have glass melamine bodies. Styles and ratings shall match model numbers and cable sizes as indicated on the following table:

### **Fuse Style - MIL-F-15160/60**

<b><u>Model#</u></b>	<b><u>Cable Size</u></b>	<b><u>Fuse Rating</u></b>	<b><u>Duraline#</u></b>
3MFP5	14/3	5A	006991
3MFP30	8/3	30A	001007
3MFP30	10/3	30A	001007
30MFP3	14/3	15A	001006
30MFP3	12/3	25A	006950
30MFP316	14/3	15A	001006
30MFP316	12/3	25A	006950
30MFP4X	12/4	20A	006972
30MFP4X	10/4	25A	006950
30MFP4X	8/4	30A	001007
60MFP4	10/4	25A	006950

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## Fuse Style - MIL-F-15160/62

<u>Model#</u>	<u>Cable Size</u>	<u>Fuse Rating</u>	<u>Duraline#</u>
60MFP4	8/4	35A	005730
60MFP4	6/4	45A	006973
60MFP4	4/4	60A	001020
60MFP4	6/4W	60A	001020

## Fuse Style - FRN-R

<u>Model#</u>	<u>Cable Size</u>	<u>Fuse Rating</u>	<u>Duraline#</u>
30MFIP3	12/3	25A	006974
30MFIP3	10/3	30A	006978

NOTE: Installation of any Duraline equipment is to be in accordance with the National Electrical Code. All warranties void if replacement fuses used are not glass melamine.