

Datasheet for 76650-0151

General Information

Part Number:	76650-0151
Manufacturer:	Molex / Waldom
Title:	Deluxe Splashproof Application Kit
Description:	Includes USB Type A and B, RJ-45, MX150L, MX150, Mini-Splashproof Product Families. Pitches range: 2.5mm (.098") - 5.84mm (.230")
Product Family:	Mini-Splash Proof, MX150™, MX150L™, and Industrial (USB, & RJ-45 Ethernet)
Certificates:	(Molex Parts within this kit) - EU RoHS Compliant
Country of Origin:	Kit assembled in U.S.A.

Specifications

Design

Configuration:	(Wire-to-Board) and (Wire-to-Wire)
Pitch:	2.50mm (.098"), 3.5mm (.138"), and 5.84mm (.230")
Connector Type:	Plugs and Receptacles, and Cables
Mounting	
Orientation:	Vertical (Receptacles)
Circuit Sizes:	2, 3, 4 and 6
Current Rating:	1 Amp and 1.5 Amps, (3-4) Amps, 18 Amps and 22 Amps
Voltage:	25 Volts / 30 VoltsAC (RMS) and 150 Volts / 250 Volts / 600 Volts
Wire:	(22-20), (22-18) and (20-18) AWG

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Product Highlights

Industrial USB (Universal Serial Bus) connectors bring one of the most popular and convenient I/O connectors into harsh commercial and industrial environments. USB connectors are ideal for both short-term diagnostics (that require simple and fast setup), without having to turn off computers or equipment, and permanent installations for data acquisition systems. The rugged, plug and receptacle designs feature bayonetstyle latches, encapsulated PCB receptacles and overmolded cable assemblies to help keep out dust, debris and water.

Ethernet connectors are of Category 5e transmission performance and TIA/EIA-568-B (RJ-45) connection interface. RJ-45 EtherNet/IP* Cordsets and Receptacles are ideal for use in environments where EtherNet protocol is used, including manufacturing facilities, water treatment plants and transportation hubs. Designed with one sealing surface, the connectors ensure optimum performance even in harsh environments.

The pre-assembled, submersible MX150L is a high performance, environmentally sealed connector system suitable for challenging, rugged and harsh applications, supporting both low-level signal as well as power applications. The cost-effective connector design features all-in-one plug and receptacle housings with pre-assembled mat-wire and interfacial connector seals. The mating interface provides full IP67 sealing capability.

*EtherNet/IP and †DeviceNet are trademarks of the Open DeviceNet Vendor Association.

Product Highlights continued

2.50 mm (.098") pitch Mini-Splash Proof, is a 2-4 circuit water-resistant WTW connector system. Mini-Splash Proof connectors are sealed for moisture environments, and JIS D0203 S2 Waterproof Compliant.

The MX150 Sealed Connector System is designed to meet the need for a rugged, environmentally sealed connector system supporting both low-level signal applications as well as power applications up to 22A, from on-engine automotive applications to off-road construction equipment applications. This design eliminates the need to purchase, handle and crimp individual wire seals to lower applied cost, is in a reduced package size for typical SAE style wire.

Features and Benefits

- IP67 and NEMA 6P Rating ensures cordsets are water and dust tight for functional integrity
- Fully shielded cable provides Electro Magnetic Interference/Radio Frequency Interference (EMI/RFI) protection
- Overmolded cordsets, allow faster installation at customer site versus field-wireable designs

Applications

- Factory Automation
- Industrial Computers
- Industrial Controllers
- Factory Peripherals
- Printers
- Barcode Scanners
- Robotics
- Vision Systems
- Motion and Process Controls

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- Bayonet-style latch receptacle provides quick and easy connection and ensures proper insertion depth with mating
 - Ease-of-use
 - Meets Open DeviceNet † Vendors' Association and ControlNet ‡ Vendors' Association IP Specifications
 - One Sealing Surface means less likelihood of failure
 - Easy termination allows custom length cable to be made in field
 - Robust bayonet style lock
 - Simple error free mating
- Test and Measurement Equipment
 - Medical Devices
 - Factory Networking Installations
 - Production Equipment
 - Industrial Environment: Food and Beverage, Automotive, Chemical and Other continuous and batch processes
 - Water Treatment plants: Waste water, Municipal drinking water
 - Transportation Hubs: Airports, Bus Stations, Rail Stations
 - Metal and explosive detectors
 - EDS's (Explosive Detection System)
 - ETD's (Explosive Trace Detector)

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‡ ControlNet is a trademark of ControlNet International, Ltd.

Features and Benefits continued

- Simple crimp, poke and plug application, no crimping individual wire seals
- Audible and tactile clicks on insertion, extraction and mating
- Easy terminal extraction and insertion
- Quick, low-cost field repairs using common screw driver, needle nose pliers and terminal extraction tool
- Environmentally sealed to IP67
- Integrated mat wire seal
- Circuit plugs provide the ability to plan for possible future circuit additions, while maintaining the sealing integrity of the mated pair.

Applications continued

- Agriculture Equipment
- Construction Equipment
- Recreational Vehicles
- On-Engine automotive applications
- Marine Equipment

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| <ul style="list-style-type: none"> • JIS D0203 S2 waterproof compliant • Unique seal stopper design provides low insertion force • For tight packaging applications • User-friendly friction lock saves space and protects locking latch area • Polarizing rib to ensure proper mating • Unique spring-beam design provides high pressure and small deflection for high vibration applications • Stabilizing bump at tip keeps terminal in place during mating • Raised split-beam design provides polarization • Seal is in housing to simplify crimping process • Matte seal design • Audible and tactile clicks on insertion, extraction, and mating • Meets USCAR performance requirements • Smallest 1.50mm (.059") sealed connector in the market • Terminal retention is 2x industry standard • Clip slot standard on male side • Low insertion force • Strong crimps • Accommodates SAE and metric wires • Easy terminal extraction and insertion • Lead free | <ul style="list-style-type: none"> • Motorcycle • Recreation Vehicle • Marine/Boat • Bus • Automobile Door Mirror • Heated Toilet Seat • Bug Zapper • Outdoor Lighted Sign • Vending Machine • Medical • Factory Automation Equipment
<ul style="list-style-type: none"> • Automotive Vehicles • Commercial Vehicles • Recreational Vehicles • Industrial Vehicles and Equipment • Construction Equipment • Marine Equipment |
|---|--|

Bill of Materials for Part No. 76650-0151

Molex Part No.	Country of Origin	Description	Quantity in Kit
84727-1005	Mexico	0.5 Ft Long, 5C Pigtailed, USB Type A, Plug, Shielded	1
84728-1005	Mexico	0.5 Ft Long, 5C Pigtailed, USB Type B, Plug, Shielded	1
84729-0009	Taiwan	USB Type A, Panel Mount PCB, Receptacle	1
84730-0001	Mexico	USB Type B Panel Mount PCB Receptacle	1
84700-0002	Mexico	Plug Field Wireable Assembly RJ-45 CAT5e	1
84702-0005	Mexico	Receptacle PCB Mount Assembly RJ-45 CAT5e	1
19420-0010-C	USA	MX150L™ Female Terminal (22-18) AWG	50
19417-0048-C	USA	MX150L™ Male Terminal (22-18) AWG	50

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19418-0016	Taiwan	5.84mm (.230") Pitch MX150L™ 2 Circuit Receptacle 22-18 AWG (Red Seal)	2
19419-0008	Taiwan	5.84mm (.230") Pitch MX150L™ 2 Circuit Plug Assembly 22-18 AWG (Red Seal)	2
19418-0018	Taiwan	5.84mm (.230") Pitch MX150L™ 4 Circuit Receptacle Assembly 22-18 AWG (Red Seal)	1
19419-0005	Taiwan	5.84mm (.230") Pitch MX150L™ 4 Circuit Plug Assembly 22-18 AWG	1
19418-0020	Taiwan	5.84mm (.230") Pitch MX150L™ 6 Circuit Receptacle Assembly 22-18 AWG (Red Seal)	1
19419-0012	Taiwan	5.84mm (.230") Pitch MX150L™ 6 Circuit Plug Assembly 22-18 AWG	1
50147-8100	Japan	Male (Mini) Splash Proof Crimp Terminals 22-20 AWG	25
50148-8100	Japan	Female (Mini) Splash Proof Crimp Terminals 22-20 AWG	25
52213-0211	Japan	2.50mm (.098") Pitch (Mini) Splash Proof Receptacle, 2 Circuit Version	3
52266-0211	Japan	2.50mm (.098") Pitch (Mini) Splash Proof Plug, 2 Circuit Version	3
52213-0311	Japan	2.50mm (.098") Pitch (Mini) Splash Proof Receptacle, 3 Circuit	2
52266-0311	Japan	2.50mm (.098") Pitch (Mini) Splash Proof Plug, 3 Circuit	2
33011-0004-C	USA	MX150™ Male Terminal, Gold (Au) Plating, 20-16 AWG	25
33001-3004-C	USA	MX150™ Female Terminal, Gold (Au) Plating, 20-18 AWG	25
33471-0301	China	3.5mm (.138") MX150™ Receptacle 1X3 Circuit, Black, Polarization A	2

Bill of Materials for Part No. 76650-0151 continued

Molex Part No.	Country of Origin	Description	Quantity in Kit
33481-0301	China	3.5mm (.138") MX150™ Plug 1X3 Circuit, Black, Polarization A	2
33471-0401	China	3.5mm (.138") MX150™ Receptacle 1X4 Circuit, Black, Polarization A	2
33481-0401	China	3.5mm (.138") MX150™ Plug 1X4 Circuit, Black, Polarization A	2
33471-0601	China	3.5mm (.138") MX150™ Receptacle 1X6 Circuit, Black, Polarization A	1
33481-0601	China	3.5mm (.138") MX150™ Plug 1X6 Circuit, Black, Polarization A	1

Recommended Molex Tool(s) for Part No. 76650-0151*

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Molex Part No.	Country of Origin	Description
63813-1500 *	USA	Manual Extraction Tool - MX150™
63811-6000 *	Germany	Hand Crimp Tool, 18-22 AWG - MX150™
63811-6100 *	Germany	Hand Crimp Tool, Metric 1.00 and 1.50 - MX150™
63811-6200 *	Germany	Hand Crimp Tool, Metric 0.05 and 0.75 - MX150™
63811-4400 *	Germany	Hand Crimp Tool (22-18) - MX150L™
63811-7600 *	Germany	Hand Crimp Tool (22-18) AWG - MX150L™
63811-8600 *	Singapore	Hand Crimp Tool - Splash Proof
57132-5000 *	Mexico	Hand Crimp Tool - Splash Proof - JAPAN
57147-6000 *	Mexico	Cap Tool - Splash Proof - JAPAN
11-03-0043 *	USA	Extraction Tool - Splash Proof

*Tool(s) not included in kit. Tool(s) ordered separately.