

RMP® II / RMP® III SERIES SINGLE-POLE CONNECTORS

SUITABLE FOR USE IN CLASS I, DIV 2, GROUPS A,B,C,D HAZARDOUS LOCATIONS (CANADA)

INSTALLATION INSTRUCTIONS

General Industrial Applications (USA and Canada)

CAUTION: Make sure that the supply circuit is de-energized before starting installation or maintenance. Verify that the installation is grounded. Failure to properly ground the product will create electrical shock hazards, which can cause serious injury or death.

Hazardous Locations Applications (Canada Only)

CAUTION: Make sure that the supply circuit is de-energized before starting installation or maintenance. Verify that the installation is grounded. Failure to properly ground the product will create electrical shock hazards, which can cause serious injury or death.

Before installing, make sure you are in compliance with area classifications, failure to do so may result in bodily injury, death and property damage. The installation must be in accordance with the associated location restrictions of the Canadian Electrical Code, including issues such as the routing, support and length of the cord or cable.

IMPORTANT: Please read these instructions carefully before installing or maintaining this equipment. Safe electrical practices should be followed at all times. Do not attempt installation until you are familiar with the following procedures.

WARNING: **EXPLOSION HAZARD:** THE RMP® II / RMP® III SERIES IS NOT DESIGNED FOR INTERRUPTING CURRENT. **DO NOT CONNECT OR DISCONNECT THE CONNECTORS WHILE THE CIRCUIT IS ENERGIZED.**


WARNING: FOR USE WITH COPPER (CU) CONDUCTORS ONLY. **DO NOT USE ALUMINUM CABLE.**

WARNING: TO MAINTAIN THE WATERTIGHT ENCLOSURE RATING AT THE CONDUCTOR TERMINATION END, FOLLOW THE INSTALLATION INSTRUCTIONS BELOW CAREFULLY. **THE TETHERED END-CAPS MUST BE COMPLETELY INSTALLED WHEN MALE AND FEMALE CONNECTORS ARE NOT MATED TO ENSURE THE CONNECTOR CONTACTS AND INSULATORS ARE NOT DAMAGED OR EXPOSED TO THE ELEMENTS. FAILURE TO DO SO MAY RESULT IN A SHOCK OR EXPLOSION HAZARD WHEN USED IN WET LOCATIONS.**

RMPII / RMP® III SERIES CORD-CONNECTORS ARE RATED **UL TYPE 4** WHEN PROPERLY ASSEMBLED WITH HOSE-CLAMPS PROVIDED. HEAT-SHRINK TUBING KITS ARE REQUIRED FOR ASSEMBLY TO SMALLER DIAMETER CONDUCTORS (**4/0 AWG, 262 MCM AND 313 MCM**) AND ARE PROVIDED WITH **SPECIAL INSTRUCTIONS** (See Page 4) FOR PROPER ASSEMBLY.

WARNING: **EXPLOSION HAZARD:** WHEN INSTALLED IN CLASS I, DIVISION 2 HAZARDOUS (CLASSIFIED) LOCATIONS, THE RECEPTACLE OR CORD-CONNECTOR **SET-SCREW MUST BE TIGHTENED (HAND TIGHT)** AFTER THE MALE AND FEMALE CONNECTORS ARE MATED.

Application Information

General Industrial Applications (USA and Canada): RMP® II / RMP® III Series connectors have been designed and  Certified (UL Certified for Use In USA and Canada) for a maximum continuous current rating of 1135 Amps @ 1000 Volts AC or DC when properly assembled to 125°C rated Type P "Shipboard" cable or Type DLO "Locomotive" cable. See Electrical Ratings Table below for additional ampere ratings for Cables with 90°C rated conductor insulation.

The Male Panel Mounted Receptacle or Male Line Connector is used on the power side of a circuit for an equipment-to-equipment connection using portable cables. The Female Panel Mounted Receptacle or Female Line Connector Receptacle is used on the machine or motor side of a circuit for an equipment-to-equipment connection using portable cables. Male and Female Contacts are sized to match cable size and must be ordered for the specific cable size.

Hazardous Locations Applications (Canada Only): RMP® II / RMP® III Series connectors have been C-UL Listed (UL Certified for Use In Canada only) for use in Class I Division 2 (Groups ABCD) hazardous (classified) locations. For hazardous locations applications, only Type DLO cable is permitted. **CAUTION:** Before installing, make sure you are in compliance with area classifications, failure to do so may result in bodily injury, death and property damage. These single-pole connectors are for field interconnections of potentially incandive circuits between two pieces of Class I, Division 2 electrical equipment. **Do not attempt installation until you are familiar with the following procedures.**

RMP® II / RMP® III ELECTRICAL RATINGS (PLUGS and CORD CONNECTORS):

Basic Catalog Number	Contact / Cable Size	Ampacity (A)		Voltage
		90°C	125°C	
RMPxxx-CMP-4/0	4/0 AWG	364	451	1000V
RMPxxx-CMP-262	262 kcmil	428	566	1000V
RMPxxx-CMP-3	313 kcmil	513	636	1000V
RMPxxx-CMP-373	373 kcmil	548	669	1000V
RMPxxx-CMP-4	444 kcmil	642	796	1000V
RMPxxx-CMP-5	535 kcmil	724	898	1000V
RMPxxx-CMP-6	646 kcmil	814	1009	1000V
RMPxxx-CMP-7	777 kcmil	916	1135	1000V

INSTALLATION INSTRUCTIONS

Contact Attachment – Crimp-on method

1. Cut each cable to length. Strip the end of the cable jacket and any binders back by 1-7/8 inch (48mm).
2. Insert wire and attach contact by crimping to cable, accurately making the crimps on the undercut portions of the contact.
3. See Table below for correct Crimping Tool, Dies, and number of crimps for each contact size.

WARNING: Ensure that gender of contact matches gender of insulator: **RMP® II / RMP® III SERIES CONTACTS LOCK VERY SECURELY AND ARE EXTREMELY DIFFICULT TO REMOVE WHEN LOCKED INTO THE INSULATOR BOOT.**

Crimping Information:

Burdy Crimp Tool: Y750BH or PAT750 LI			
Cable Size MCM	Hydraulic Die Catalogue No.	Head Die Code	Number of Crimps
4/0 AWG, 262 & 313	RP76	RP76	1
373 & 444	RP99H	RP99H	2
535	RP106H	RP106H	2
646 & 777	RP115H	RP115H	2

Thomas & Betts Crimp Tool: 13642PF				Thomas & Betts Crimp Tool: TBM15I (replaces TBM15PF)			
Cable Size MCM	Hydraulic Die Catalogue No.	Head Die Code	Number of Crimps	Cable Size MCM	Head Die Catalogue No.	Head Die Code	Number of Crimps
4/0 AWG, 262 & 313	11744	76H	2	4/0 AWG, 262 & 313	15512	76H	2
373 & 444	11748	99H	2	373 & 444	15505	99H	2
535	11749	106H	2	535	15515	106H	2
646 & 777	11753	115H	2	646 & 777	15504	115H	2

Contact Attachment – Solder Attachment

1. Cut cable to length. Strip the end of the cable jacket and any binders back by 1 and 7/8 inch (48mm).
2. Attach contact by soldering, using Rosin Flux and 40 – 60 solder. Do not use excessive heat or contact will be distorted and protective plating will be damaged.

RMP® II / RMP® III SERIES SINGLE-POLE CONNECTORS INSTALLATION INSTRUCTIONS (Continued)

Installation of Insulator "Boot":

WARNING: Do NOT attempt to install insulator unless spring retainer is in place on contact. **THE HOSE CLAMP IS FOR PREVENTION OF MOISTURE ENTRY ONLY AND WILL NOT PROVIDE ADEQUATE CONTACT RETENTION.**

WARNING: IF assembling smaller diameter conductors (4/0, 262, 313), **PROCEED TO SPECIAL INSTRUCTIONS ON PAGE 4. DO NOT INSTALL THE INSULATOR BOOT UNTIL YOU HAVE APPLIED THE HEAT-SHRINK TUBING.** When used outdoors or in wet locations, these smaller conductor sizes require heat-shrink tubing to be installed over the conductor jacket at the point where the hose-clamp will seal the insulator to the conductor. **HEAT-SHRINK KITS WITH SPECIAL INSTALLATION INSTRUCTIONS** are provided for assembly of those three cable sizes. If you require a Heat-Shrink Tubing Kit or a Hose-clamp, please contact Customer Service at **800-354-9189**.

1. Measure 5 ¼ inches back from contact alignment pins and wrap one or two layers of neoprene tape over cable jacket to ensure a tight seal between cable OD and insulator ID.
2. Slide the RMP® II / RMP® III insulator over the contact / conductor assembly. Each contact has two contact retention pins. These pins are to be aligned with the "U" slots in the retention ring inside the insulator. To aid assembly, the "U" slots line up with the two flattened label areas on the outside of the insulator. Push the insulator over contact until the pins hit the metal retention ring inside the insulator. (NOTE - Use only Silicone spray products if lubricant is necessary for Step 7.
DO NOT use grease or wire-pulling compound as this may cause oxidation if left on the contact surface).
3. If necessary, rotate insulator while pushing against cable until pins align with, and snap into, the u-shaped openings in the metal retention ring. When inserted correctly, the retaining spring locks behind the contact retention ring to hold the contact in position and insulator will not rotate on contact. **Ensure that retainer ring is securely locked into metal ring inside of insulator.**
4. After installation of the cable/contact assembly into the insulator boot, the insulator must be "sealed" by clamping to the cable using the supplied hose clamp. UL TYPE 4 and IP66/68 ratings only apply when the hose clamp is used. Smaller diameter conductors (4/0, 262, 313) require heat-shrink tubing to be installed between the conductor and insulator to carry those ratings. Kits are provided with special installation instructions (BELOW) for assembly to those cable sizes.

WARNING: To ensure adequate contact retention, ensure the pins are fully seated and that the spring locks are engaged behind the retainer ring. **THE HOSE CLAMP ALONE DOES NOT PROVIDE ADEQUATE CONTACT RETENTION.**

Connection of Male to Receptacles and Female Cord-Connectors : WHEN USED IN CLASS I, DIVISION 2 CLASSIFIED HAZARDOUS AREAS (Canada):



WARNING: The receptacle / cord-connector set-screw must be tightened (hand-tight) after the connectors are fully mated when the devices are used in Class I, Division 2 Hazardous Locations. Failure to do so could present an explosion hazard.

RMPII / RMPIII SERIES SINGLE-POLE CONNECTORS SPECIAL INSTALLATION INSTRUCTIONS FOR SMALLER DIAMETER CONDUCTORS

Installation of Conductor, Heat-Shrink Tubing and Insulator

WHEN USED WITH 4/0 AWG, 262 MCM and 313 MCM Type P or DLO CABLE**

** - Note: For Hazardous Locations applications, only Type DLO Cable is permitted
(Type P "Shipboard" cable is not recognized by the Canadian Electrical Code for use in HazLoc)

1. Slide the Hose Clamp over the Cable.
2. Slide two pieces of Heat-shrink tubing over 4/0 AWG cable, or slide one piece of Heat Shrink tubing over 262 MCM or 313 MCM cable.
3. Install the cable into the contact wire connector and crimp with Burndy or Thomas & Betts tool and die sets as described on Page 2 above.
4. Once the conductor is installed and properly crimped into the wire connector, measure 5 ¼ inches back from contact alignment pins and mark the conductor.
5. Center one piece of heat-shrink over the 5-1/4 inch mark on the conductor and shrink/adhere it (to create a thicker conductor jacket where the insulator will eventually be clamped) using a heat-gun. Apply heat to the Heat-shrink tubing until it shrinks down snugly onto the conductor insulation. **Be sure the heat-shrink tubing is completely adhered to the conductor insulation, and is allowed to cure, before moving on to Step 6 (for 4/0 AWG) or Step 7 (for 262 MCM and 313 MCM) below.**
6. Slide the RMPII / RMPIII insulator over the contact / conductor assembly. Each contact has two contact retention pins. These pins are to be aligned with the "U" slots in the retention ring inside the insulator. To aid assembly, the "U" slots line up with the two flattened label areas on the outside of the insulator. Push the insulator over contact until the pins hit the metal retention ring inside the insulator. (NOTE - Use only Silicone spray products if a lubricant is necessary for Step 7. **DO NOT use grease or wire-pulling compound as this may cause oxidation if left on the contact surface).**
7. If necessary, rotate insulator while pushing against cable until pins align with, and snap into, the u-shaped openings in the metal retention ring. When inserted correctly, the retaining spring locks behind the contact retention ring to hold the contact in position and insulator will not rotate on contact. Ensure that retainer ring is securely locked into metal ring inside of insulator.
8. Slide the hose clamp over the Heat-shrink and onto the insulator until it is in the narrow area of the insulator and tighten hose-clamp screw to 25 lb-ins.

