

REVISIONS			
REV	DESCRIPTION, ECN, EAR NO.	DATE	APP'D
B	PRODUCT DRAWING (EAR14988)	OCT15/21	K.L.

**ORDERING CODE: NDH - N6XX**

SERIES, INDUSTRIAL SQUARE  
PUSH/PULL DESIGN

IX INDUSTRIAL

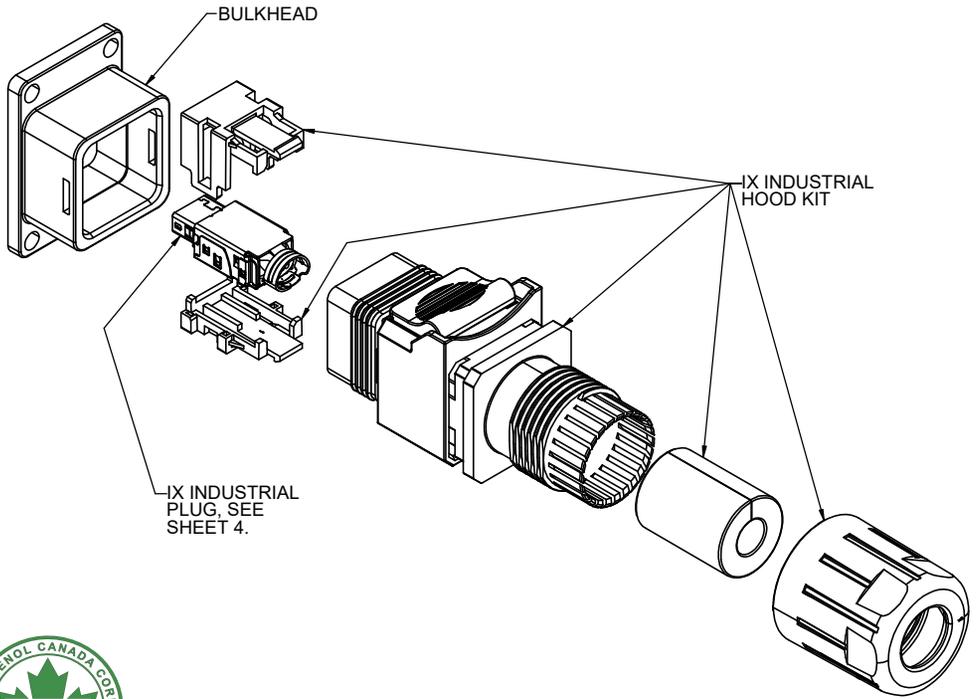
KIT CONFIGURATION:  
6 = BULKHEAD, HOOD + PLUG KIT

PLUG KEY TYPE & TERMINATION  
A = A KEY SOLDER PAD  
B = B KEY SOLDER PAD  
D = A KEY 24AWG IDC  
E = B KEY 24AWG IDC  
G = A KEY 26-28AWG IDC  
H = B KEY 26-28AWG IDC

PLATING FOR IX PLUG MATING AREA  
1 = GOLD FLASH  
2 = 0.20µm (8µ") GOLD  
3 = 0.76µm (30µ") GOLD  
4 = 1.27µm (50µ") GOLD  
7 = 0.76µm (30µ") PALLADIUM  
NICKEL WITH GOLD FLASH

**NOTES:**

- MATERIAL: RoHS COMPLIANT PER EU DIRECTIVE 2011/65/EU AND AMENDMENTS.
  - BULKHEAD: ENGINEERING THERMOPLASTIC, COLOUR: BLACK
  - HOOD COVERS, BODY, SLIDE & END CAP: PBT GLASS REINFORCED, COLOUR: BLACK
  - HOOD LOCK: PBT GLASS REINFORCED, COLOUR: RED
  - GASKETS & GROMMET: SILICONE RUBBER, COLOUR: BLACK
  - PLUG SHIELD: STAINLESS STEEL, NICKEL PLATED
  - PLUG INSERTS: HIGH TEMPERATURE RESISTANT ENGINEERING THERMOPLASTIC UL94V-0, BLACK
  - PLUG IDC WIRE GUIDES: POLYCARBONATE UL94V-0, CLEAR (WITH YELLOW TINT FOR 24 AWG SIZE). CONFIRM THAT ANY PROCESS CLEANERS ARE POLYCARBONATE COMPATIBLE.
  - CONTACTS: COPPER ALLOY PLATED WITH GOLD OR PALLADIUM-NICKEL (SEE ORDERING CODE) OVER 1.27µm (50µ") MINIMUM NICKEL ON THE MATING AREA AND MATTE TIN OVER NICKEL ON THE TERMINALS.
- IX CONNECTOR DESIGNED TO CONFORM TO REQUIREMENTS OF IEC 61076 PART 3-124 SPECIFICATION. THE TYPE A KEY FEATURE IS INTENDED FOR USE WITH ETHERNET APPLICATIONS, EITHER 10/100 Mbit/S OR 1 TO 10 Gbit/S (CAT 5e, 6 & 6A). THE ALTERNATIVE B KEY CAN BE USED IN A COMPLEX ETHERNET APPLICATION TO HELP CONTROL MATING PLUG INSTALLATIONS OR USED IN NON-ETHERNET APPLICATIONS UP TO 10 POSITIONS.
- CURRENT RATING: 1.5 AMPERES, VOLTAGE RATING: 50V AC rms OR 60V DC
- OPERATING TEMPERATURE -40°C TO +105°C.
- DIELECTRIC WITHSTANDING VOLTAGE: 500V DC
- INSULATION RESISTANCE: 500 MEGOHMS MINIMUM.
- NDH-N6XX PARTS WILL PROVIDE AN IP67 SEALED SOLUTION WITH PUSH/PULL MATING FOR IX INDUSTRIAL APPLICATIONS. THE IP67 RATING APPLIES IN THE MATED CONDITION FOR BOTH THE ENCLOSURE AND THE MATING INTERFACE.
- FOR THE PCB MOUNTED MATING RECEPTACLE, SEE AMPHENOL DRAWINGS P-ND9-AS3X-00 AND P-ND9-BS3X-00. THE RECEPTACLE IS A HORIZONTAL STYLE RIGHT ANGLE IX INDUSTRIAL CONNECTOR.
- TO ORDER PARTS SEPARATELY, REFER TO AMPHENOL DRAWINGS P-NDH-N200 FOR THE BULKHEAD AND P-NDH-N3XX FOR THE HOOD & PLUG KIT.
- CONSULT WITH AMPHENOL IF CABLE ASSEMBLY IS REQUIRED.



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ANGULAR DEGREES	DO NOT SCALE DRAWING		

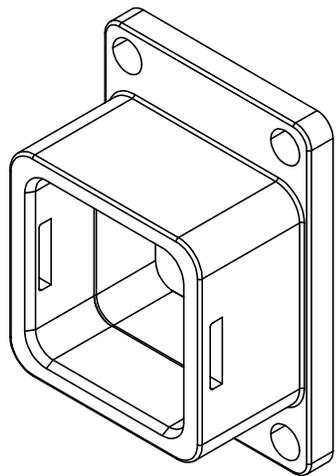
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**NDH SERIES IX INDUSTRIAL BULKHEAD, HOOD & PLUG KIT, IP67 RATING, RoHS COMPLIANT**

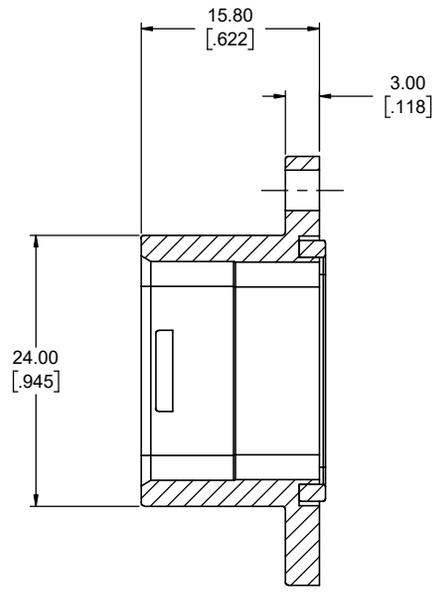
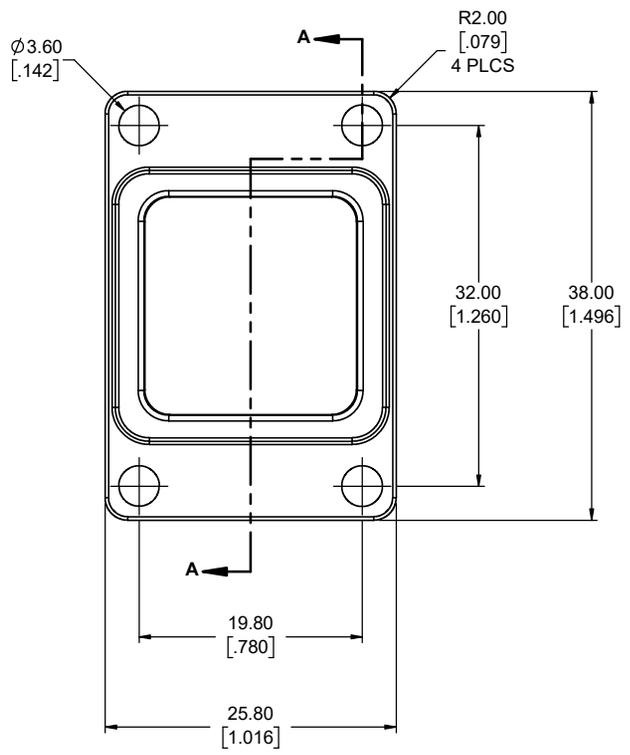
DWG. NO. **P-NDH-N6XX** REV **B**

CODE ID NO. 03554 | DWG SIZE: X | SCALE: 2:1 | SHEET 1 OF 6

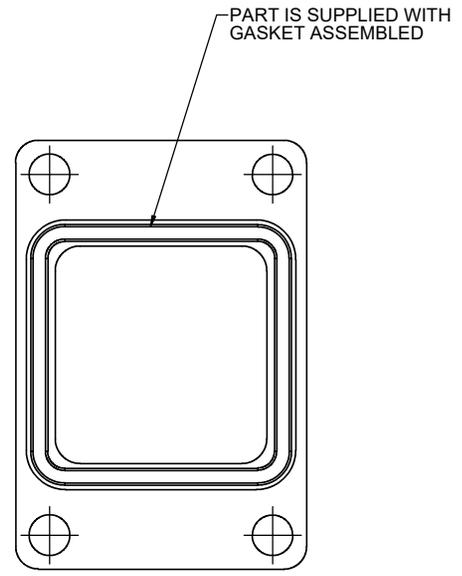
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# BULKHEAD



SECTION A-A



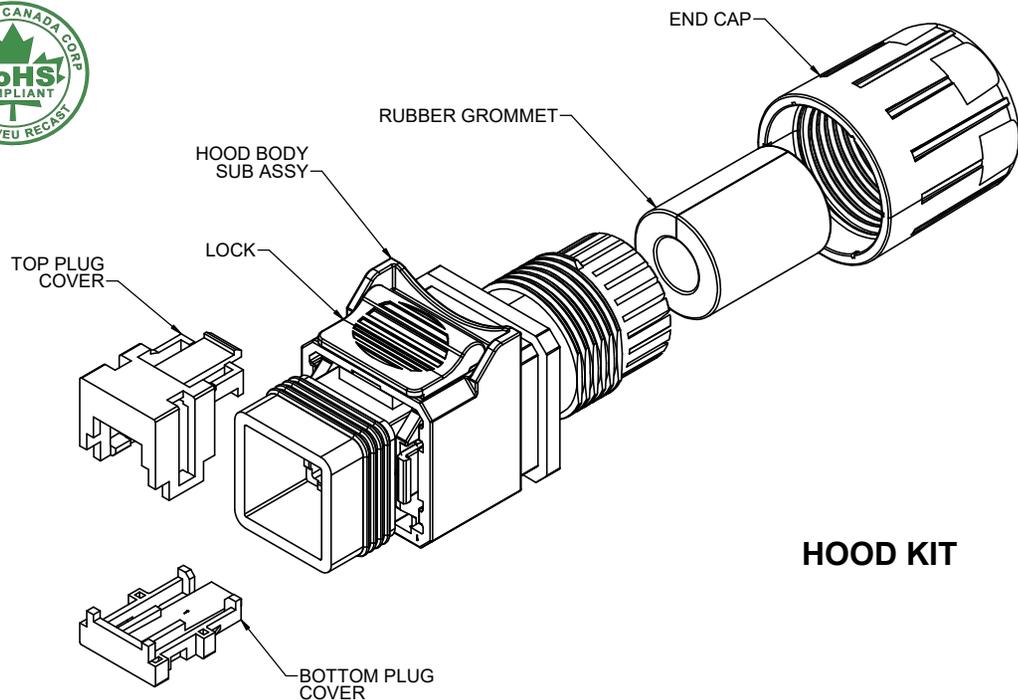
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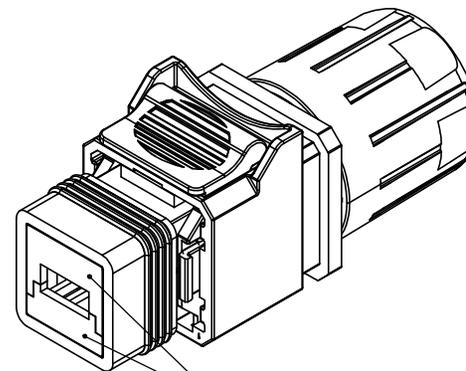
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HOOD & PLUG KIT, IP67 RATING,  
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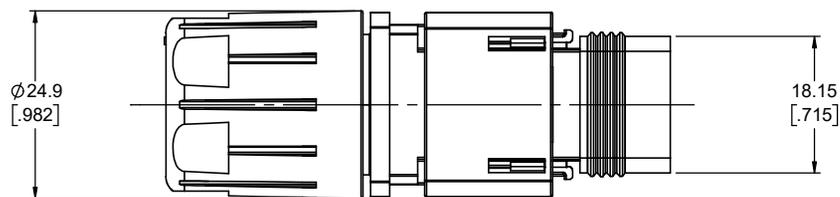
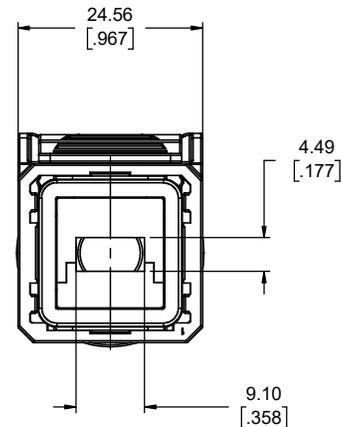
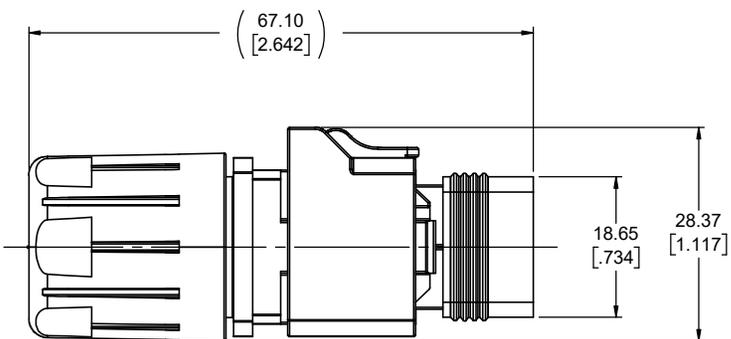
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**HOOD KIT**



THE TOP & BOTTOM PLUG COVERS HAVE A POKE-YOKE FEATURE. THEY CAN ONLY BE ASSEMBLED ONTO THE PLUG AND INTO THE HOOD BODY IN ONE WAY. AT FINAL ASSEMBLY THE HOOD & COVER FRONT FACES WILL BE FLUSH.



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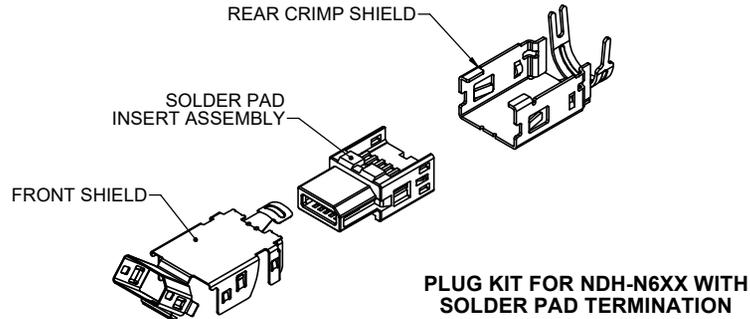
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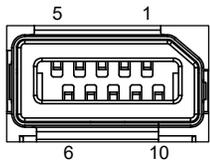


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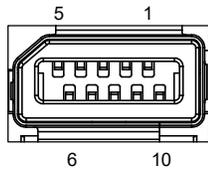


**PLUG KIT FOR NDH-N6XX WITH SOLDER PAD TERMINATION**

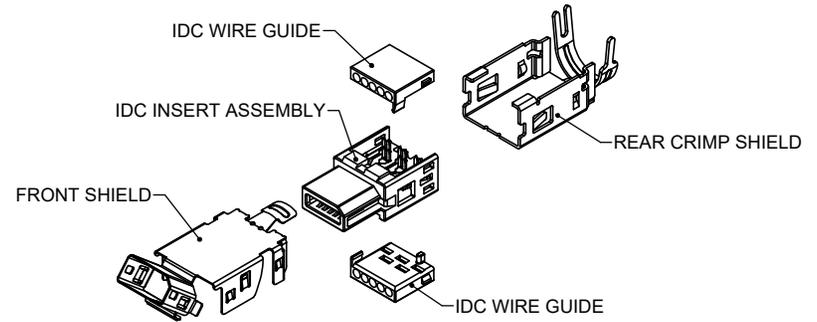
**TYPE A KEY**  
CUT CORNER AT POSITION 1



**TYPE B KEY**  
CUT CORNER AT POSITION 5



## PLUG KIT



**PLUG KIT FOR NDH-N6XX WITH IDC CONTACT TERMINATION**

### CONNECTOR PIN ASSIGNMENT FOR ETHERNET

POSITION NUMBER	PIN ASSIGNMENT 10 OR 100 MBit/S ETHERNET	PIN ASSIGNMENT 1, 2.5, 5 OR 10 Gbit/S ETHERNET	WIRE COLOUR (TIA/EIA 568-A)	WIRE COLOUR (TIA/EIA 568-B)
1	TX +	BI_DA +	WHITE/GREEN	WHITE/ORANGE
2	TX -	BI_DA -	GREEN	ORANGE
3	NOT USED	-	-	-
4	NOT USED	BI_DC +	BLUE	BLUE
5	NOT USED	BI_DC -	WHITE/BLUE	WHITE/BLUE
6	RX +	BI_DB +	WHITE/ORANGE	WHITE/GREEN
7	RX -	BI_DB -	ORANGE	GREEN
8	NOT USED	-	-	-
9	NOT USED	BI_DD +	WHITE/BROWN	WHITE/BROWN
10	NOT USED	BI_DD -	BROWN	BROWN

**NOTE:** CONTACTS #3 & #8 ARE NOT CONNECTED FOR ETHERNET, BUT ALL MAY BE USED FOR A 10 CONTACT APPLICATION.

### RECOMMENDED CABLE SPECIFICATIONS

ITEMS		IDC 26 -28 AWG	IDC 24 AWG	SOLDER PAD
CONDUCTORS	SIZE	26 - 28 AWG	24 AWG	22 - 28 AWG
	STRANDS	7 STRANDS PER WIRE		-
	MATERIAL	ANNEALED COPPER WIRE		-
INSULATION OUTSIDE DIAMETER		Ø0.95 - 1.05mm (Ø.037 - .041")	Ø1.10 - 1.25mm (Ø.043 - .049")	Ø1.55mm MAX (Ø.061" MAX)
BRAIDED SHIELD		TIN PLATED		
JACKET OUTSIDE DIAMETER		Ø6.30 - 7.20mm (Ø.248 - .283")		

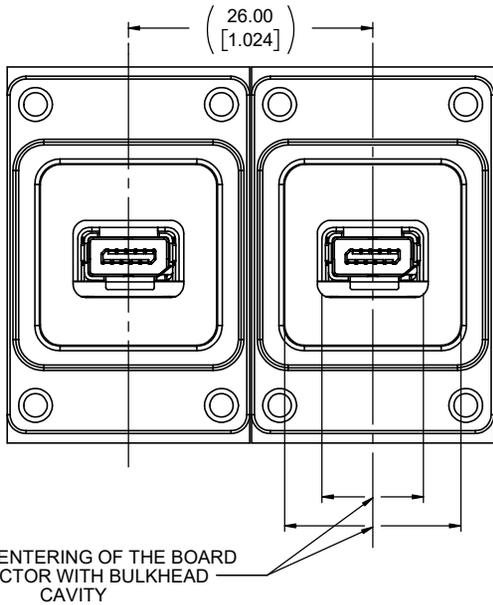
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HOOD & PLUG KIT, IP67 RATING,  
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**BULKHEAD PORT SPACING**

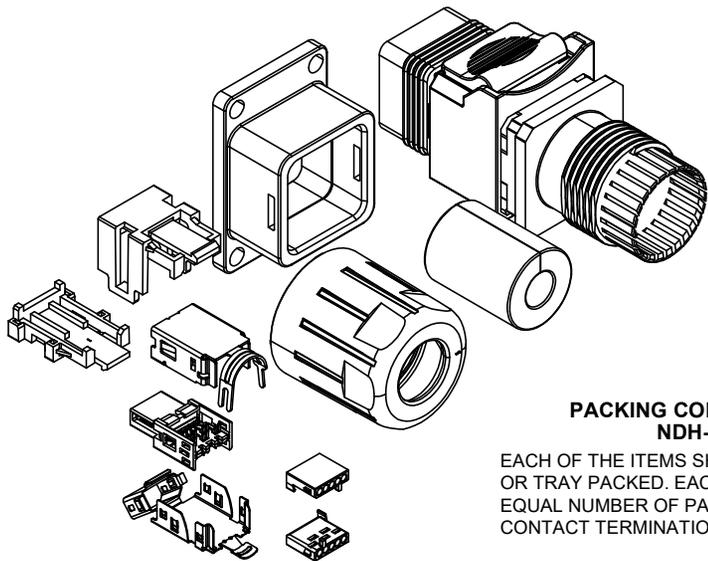
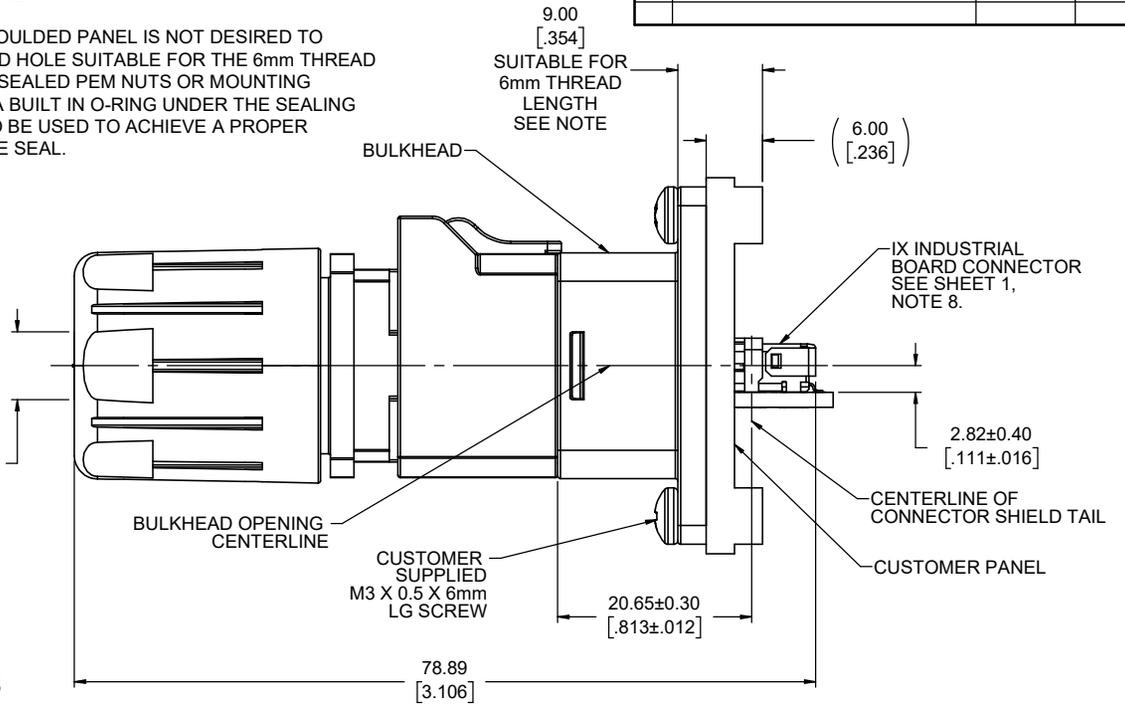


**APPLICATION NOTE:**

- IF A CAST OR MOULDED PANEL IS NOT DESIRED TO ACHIEVE A BLIND HOLE SUITABLE FOR THE 6mm THREAD LENGTH, BLIND SEALED PEM NUTS OR MOUNTING SCREWS WITH A BUILT IN O-RING UNDER THE SEALING HEAD CAN ALSO BE USED TO ACHIEVE A PROPER MOUNTING HOLE SEAL.

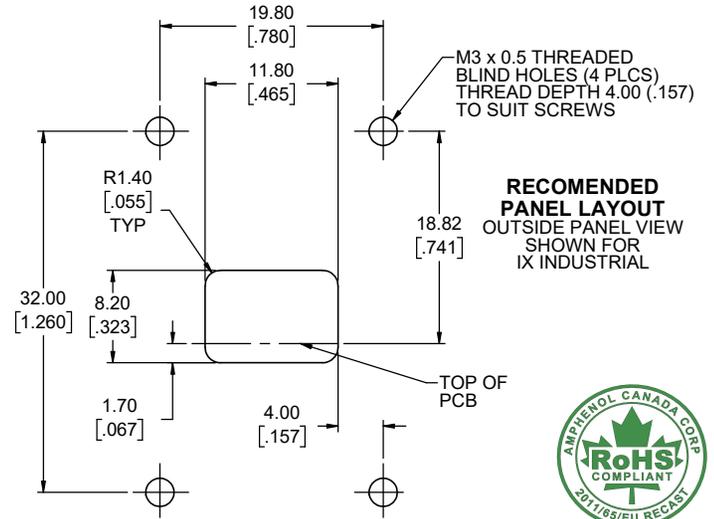
**APPLICATION VIEWS**

6.30 TO 7.20  
(.248 TO .283)  
O.D. CABLE



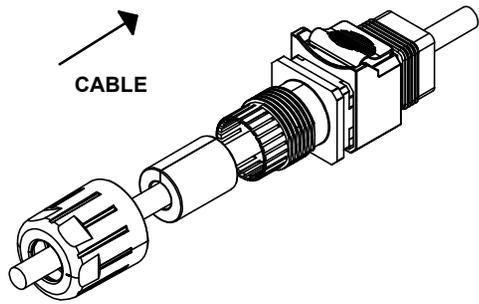
**PACKING CONFIGURATION NDH-N6XX**

EACH OF THE ITEMS SHOWN ARE SUPPLIED BULK OR TRAY PACKED. EACH CARTON TO PROVIDE AN EQUAL NUMBER OF PARTS. PLUG KIT WITH IDC CONTACT TERMINATION SHOWN.

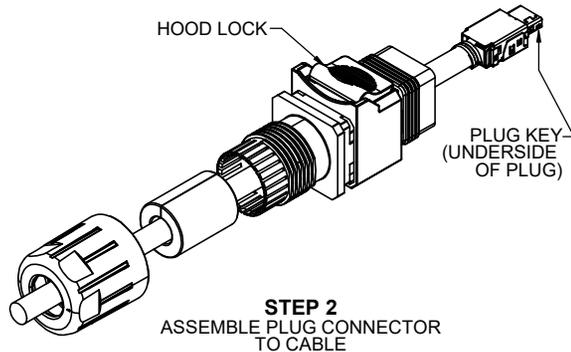


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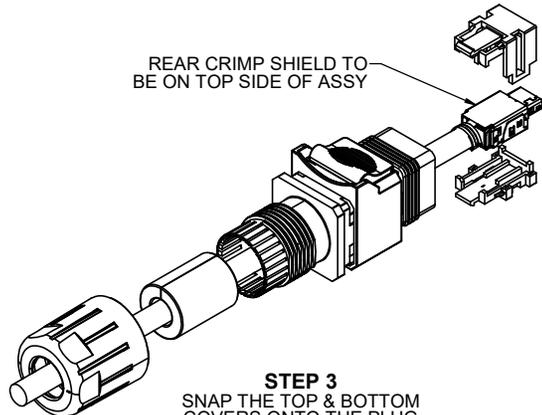
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NDH SERIES IX INDUSTRIAL BULKHEAD, HOOD & PLUG KIT, IP67 RATING, RoHS COMPLIANT			
P-NDH-N6XX			REV B
DWG. NO.	CODE ID NO. 03554	DWG SIZE: X	SCALE: X
SHEET 5 OF 6			



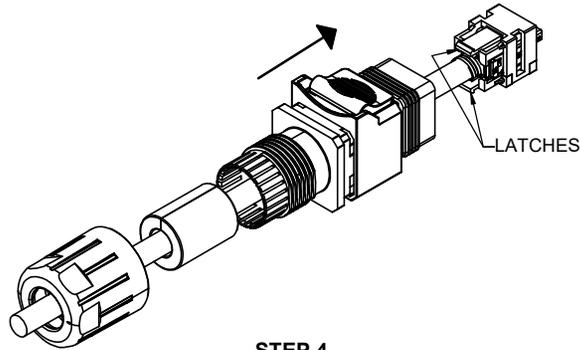
**STEP 1**  
SLIDE INDIVIDUAL COMPONENTS OF HOOD KIT (EXCLUDING TOP AND BOTTOM PLUG COVERS) ONTO THE BARE CABLE PRIOR TO PLUG INSTALLATION



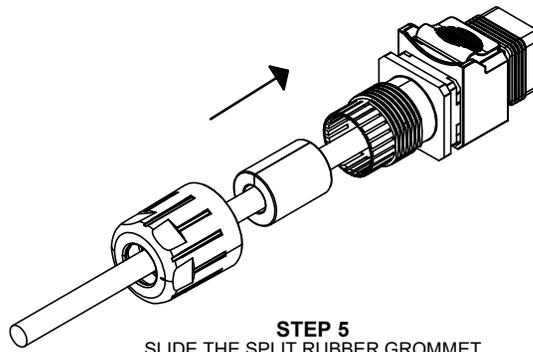
**STEP 2**  
ASSEMBLE PLUG CONNECTOR TO CABLE



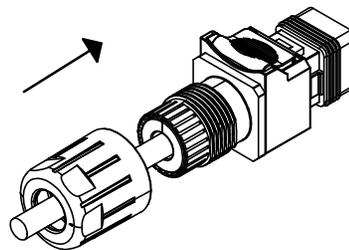
**STEP 3**  
SNAP THE TOP & BOTTOM COVERS ONTO THE PLUG ASSEMBLY



**STEP 4**  
SLIDE THE NDH HOOD BODY ONTO THE NEWLY CREATED PLUG COVER ASSEMBLY UNTIL THE TOP & BOTTOM LATCHES SNAP INTO PLACE. CONFIRM THAT THE PLUG KEY IS AT THE BOTTOM AND THE HOOD LATCH IS AT THE TOP



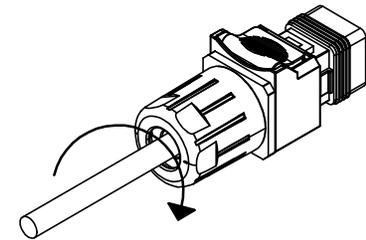
**STEP 5**  
SLIDE THE SPLIT RUBBER GROMMET ALONG THE CABLE INTO THE HOOD BODY UNTIL INSTALLED TO FULL DEPTH



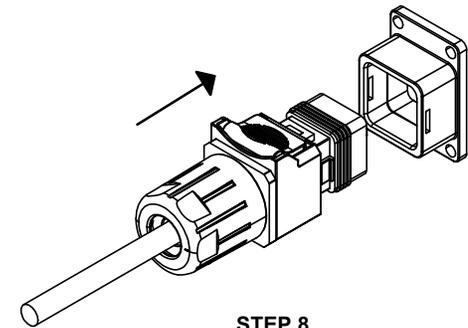
**STEP 6**  
SLIDE THE END CAP ONTO THE HOOD BODY



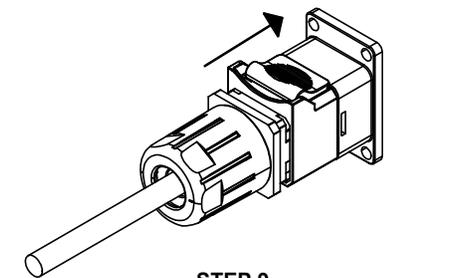
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**STEP 7**  
SCREW THE END CAP UNTIL HAND TIGHT



**STEP 8**  
INSERT NDH ix INDUSTRIAL ASSEMBLY INTO BULKHEAD



**STEP 9**  
PUSH THE HOOD LOCK FORWARD UNTIL ASSEMBLY SNAPS INTO POSITION. TO UN-MATE, PULL THE HOOD LOCK BACKWARD BEFORE PULLING ON THE HOOD / PLUG.

# FIELD ASSEMBLY PROCEDURE

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