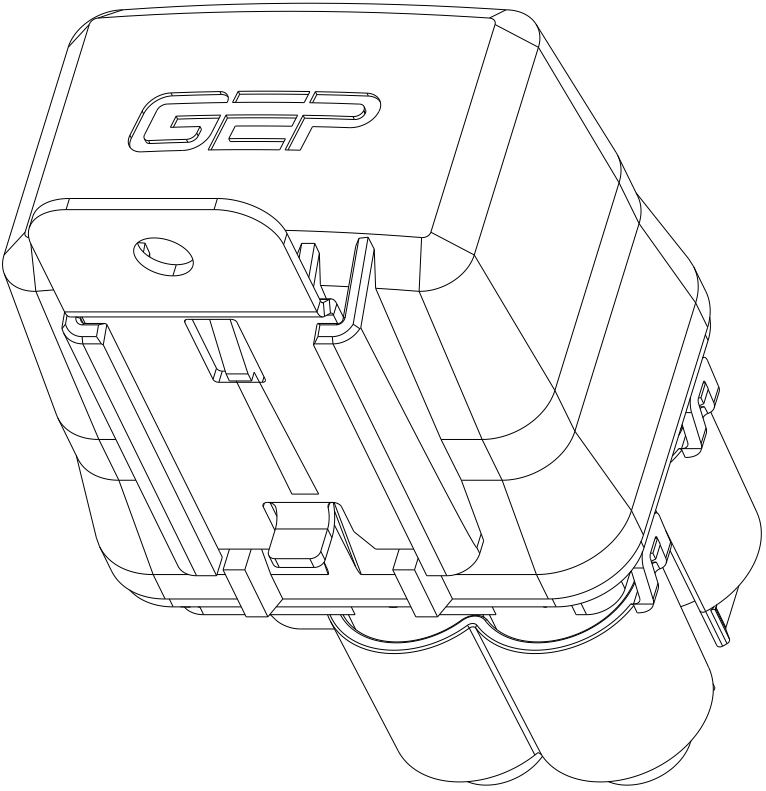


REV	REVISION DETAILS	ECO	DATE	BY	ABY
0	INITIAL RELEASE	NP-003279	2-2-2021	JWK	JML
1	CORRECTED HOUSING AND SEAL PART NUMBER IN EXAMPLE ASSEMBLY BOM	NP-003299	2-8-2021	JWK	JML
2	REMOVED DIODE KEY SHEET 4 - NOT SUPPORTED ON THIS PRODUCT	NP-003322	2-10-2021	JJW	JML
3	UPDATED GEOMETRY OF HOUSING	NP-003953	9-21-2021	JWK	JJW
4	UPDATED TO LATEST DRAWING STANDARDS. UPDATED PART NUMBER AND DESCRIPTION.	NP-006086	4-17-2024	JWK	JML



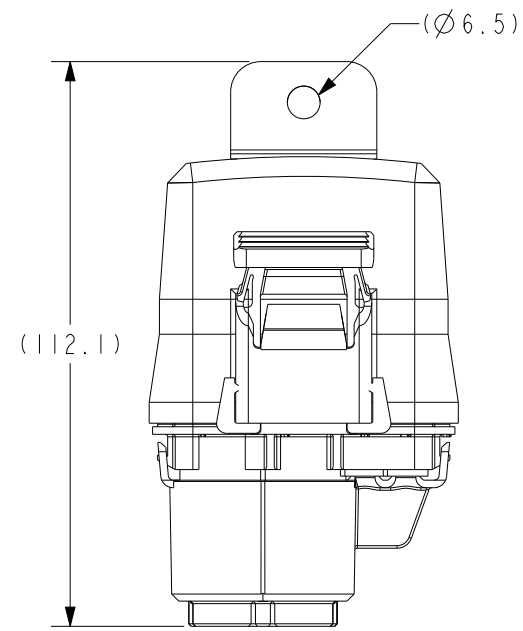
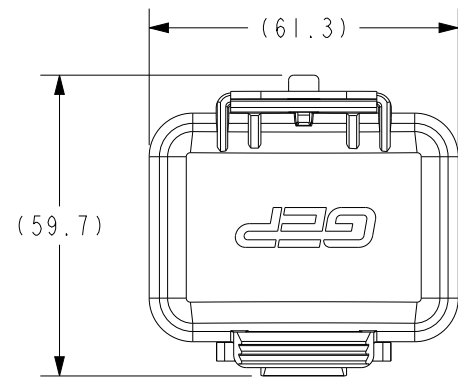
ISO VIEW
FOR REF ONLY

CONFIDENTIAL

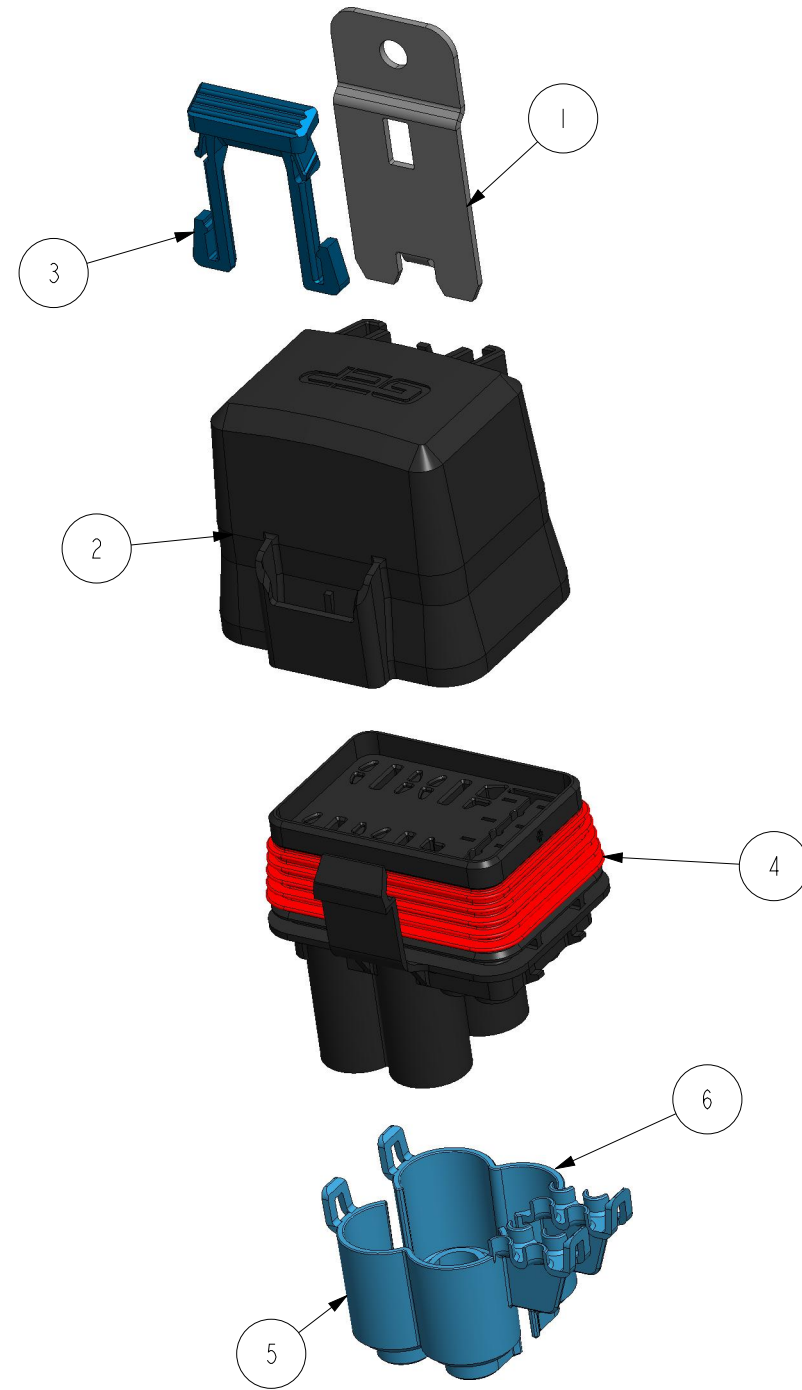
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<p>▲ CRITICAL DIMENSIONS ON FEATURES TO BE CHECKED DURING ANY SET-UP ADJUSTMENTS, TOOL CHANGES, OR ANNUAL MAINTENANCE ON TOOLING.</p>	<p>○ DIMENSIONS OR FEATURES TO BE CHECKED FROM RUN-TO-RUN</p>				
<p>TOLERANCES UNLESS OTHERWISE SPECIFIED</p>	<p>THIRD ANGLE PROJECTION</p>				
<table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">METRIC TOL</td> <td style="width: 50%;">ENGLISH TOL</td> </tr> <tr> <td>1 PL DEC. = ±.25 2 PL DEC. = ±.13</td> <td>2 PL DEC. = ±.01 3 PL DEC. = ±.005</td> </tr> </table>	METRIC TOL	ENGLISH TOL	1 PL DEC. = ±.25 2 PL DEC. = ±.13	2 PL DEC. = ±.01 3 PL DEC. = ±.005	<p>ANGULAR TOL = ±2° FRACTION TOL = ±1/64 IN</p> <p>○ DIMENSIONS INSIDE PARENTHESES OR CONTAINING "REF" ARE FOR REFERENCE ONLY.</p>
METRIC TOL	ENGLISH TOL				
1 PL DEC. = ±.25 2 PL DEC. = ±.13	2 PL DEC. = ±.01 3 PL DEC. = ±.005				
<p>COPYRIGHT - GEP POWER PRODUCTS</p> <p>This is unpublished work. The disclosure of this work is limited to a select personnel. Further dissemination or disclosure to the public is PROHIBITED. This unpublished work is protected by Federal Copyright law and all rights thereunder are reserved by GEP Power Products.</p>					

		16830 Pheasant Drive Brookfield, WI 53005	
PART NO:		FRH - MAXI AND MINI - SERIES (SALES)	
DESCRIPTION:		FRH - MAXI AND MINI - SERIES	
CUSTOMER:		STANDARD	
METRIC (MM)	REV	SHEET	SCALE
	4	1 OF 8	1.25:1
			B



EXAMPLE CONFIGURATION WITH DIMENSIONAL INFO



EXAMPLE CONFIGURATION EXPLODE VIEW

- NOTES:
1. HOUSING, COVER & CPA MATERIAL: UNFILLED PBT
 2. TPA & KEY MATERIAL: NYLON
 3. BRACKET MATERIAL: ZINC PLATED STEEL OR STAINLESS STEEL (SEE CHART)
 4. DESIGNED TO USE DELPHI 280 METRI-PACK TERMINALS AND SEALS, LEAR MAK8 TERMINALS AND GEP SEALS, LITTELFUSE MINI & MAXI FUSES
 5. PICK BRACKET OPTION TO MOUNT ASSEMBLY
 6. MOUNTING HOLE TO ANTI-ROTATION TAB DIM

EXAMPLE CONFIGURATION BOM			
ITEM	DESCRIPTION	PART NO.	QTY
1	BRACKET - PDM, FRH, FLAT WITH ANTI-ROTATION, ZINC STEEL	FRH-A12-MB-A1	1
2	COVER - PDM, FRH 24 POS	FRH-A24-C	1
3	CPA - PDM, FRH	FRH-A-CPA	1
4	HOUSING AND SEAL - PDM, FRH, MAXI AND MINI	SC42-2014A-A001	1
5	TPA - PDM, FRH, MAXI AND MINI, A	SC38-2013A-B003	1
6	TPA - PDM, FRH, MAXI AND MINI, B	SC38-2013B-B003	1

GEP POWER PRODUCTS 16830 Pheasant Drive Brookfield, WI 53005

PART NO: FRH - MAXI AND MINI - SERIES (SALES)

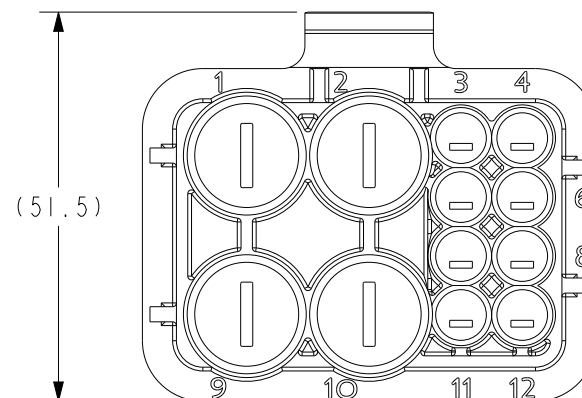
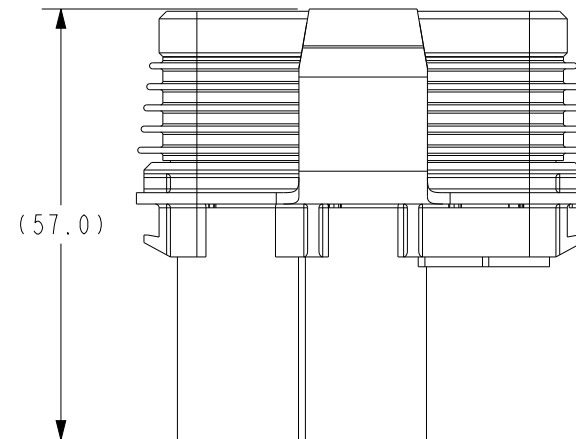
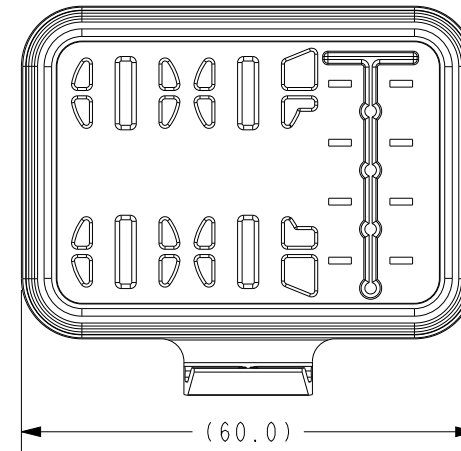
DESCRIPTION: FRH - MAXI AND MINI - SERIES

CUSTOMER: STANDARD

METRIC (MM)	REV 4	SHEET 2 OF 8	SCALE 1:1.5	SIZE B
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HOUSING W/SEAL OPTIONS

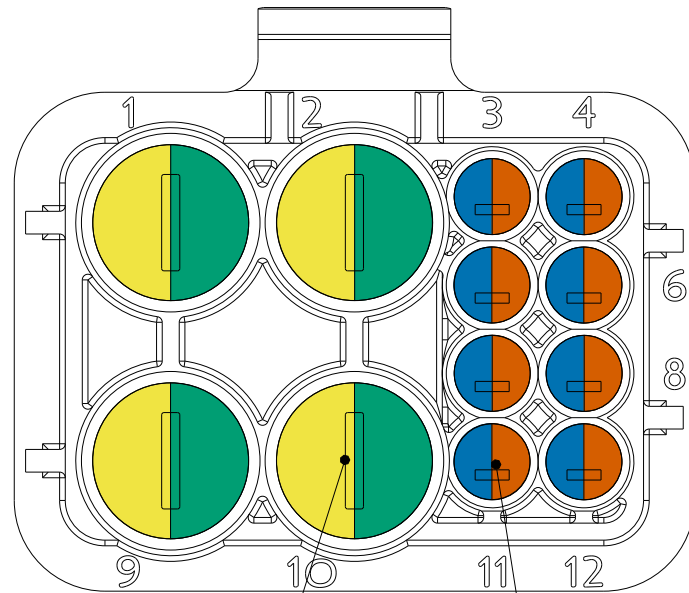
SC42-2014A-A001
HOUSING AND SEAL - PDM, FRH, MAXI AND MINI



GEP POWER PRODUCTS		16830 Pheasant Drive Brookfield, WI 53005		
PART NO:	FRH - MAXI AND MINI - SERIES (SALES)			
DESCRIPTION:	FRH - MAXI AND MINI - SERIES			
CUSTOMER:	STANDARD			
METRIC (MM)	REV 4	SHEET 3 OF 8	SCALE 1:1	SIZE B

HOUSING TERMINALS AND SEALS

SC42-2014A-A001
HOUSING AND SEAL - PDM, FRH, MAXI AND MINI



LEAR MAK8 CAVITIES
SEE TABLE D FOR TERMINALS
AND CABLE SEALS

280 CAVITIES
SEE TABLE A FOR TERMINALS
AND CABLE SEALS

Table A

DELPHI 280 METRI-PACK TERMINALS				
PART #	CABLE RANGE (mm ²)	MATERIAL	PLATING	
12077413	3	TIN BRASS	TIN	
12129493	2.0-3.0	TIN BRASS	TIN	
12077411	0.8-1.0	TIN BRASS	TIN	
12084201	0.35-0.50	TIN BRASS	TIN	
12176387	5	BERYLLIUM COPPER	SILVER/NICKEL	
12176388	2.0-3.0	BERYLLIUM COPPER	SILVER/NICKEL	
12176389	0.8-1.0	BERYLLIUM COPPER	SILVER/NICKEL	
DELPHI 280 METRI-PACK CABLE SEALS (FOR REF. ONLY)				
PART # REEL	PART # LOOSE	CABLE DIA.	MATERIAL	COLOR
12015360	12015193	3.45-4.3	SILICONE	BLUE
12015359	12010293	2.81-3.49	SILICONE	LT. GRAY
12015284	12015323	2.03-2.85	SILICONE	GREEN
12041352	12041351	2.03-2.42	SILICONE	TAN
12089444	12089679	1.6-2.15	SILICONE	PURPLE
12034365	12015899	1.29-1.70	SILICONE	DK. RED
	12010300	PLUG	SILICONE	GREEN
DELPHI 280 METRI-PACK TERMINAL REMOVAL TOOL (FOR REF. ONLY)				
PART # 12094430				

Table D

LEAR MAK8 PLUS TERMINALS (FOR REF. ONLY)			
PART NUMBER	RANGE (mm ²)	PLATING	VARIATION
28224 306 179	2.5-4.0	TIN	1 - LONG SEAL
28224 306 710	2.5-4.0	SILVER	1 - LONG SEAL
28469 306 189	2.5-4.0	SILVER/TIN	3 - SHORT SEAL
28225 306 179	6.0-10.0	TIN	1 - LONG SEAL
28225 306 710	6.0-10.0	SILVER	1 - LONG SEAL
28459 306 189	6.0-10.0	SILVER/TIN	3 - SHORT SEAL
28243 306 179	10.0-16.0	TIN	1 - LONG SEAL
28243 306 710	10.0-16.0	SILVER	1 - LONG SEAL
GEP CABLE SEALS (VARIATION 1 - LONG)			
PART NUMBER	CABLE DIA.	MATERIAL	COLOR
PDM-TWS-L1	2.7-3.0	SILICONE	GREEN
PDM-TWS-L2	3.4-3.8	SILICONE	PURPLE
PDM-TWS-L3	4.0-4.5	SILICONE	ORANGE
PDM-TWS-L4	4.6-5.3	SILICONE	LIGHT BLUE
PDM-TWS-L5	5.8-6.6	SILICONE	GRAY
PDM-TWS-L6	6.5-7.8	SILICONE	RED
GEP CABLE SEALS (VARIATION 3 - SHORT)			
PDM-TWS-S1	2.7-3.0	SILICONE	GREEN
PDM-TWS-S2	3.4-3.8	SILICONE	PURPLE
PDM-TWS-S3	4.0-4.5	SILICONE	ORANGE
PDM-TWS-S4	4.6-5.3	SILICONE	LIGHT BLUE
PDM-TWS-S5	5.8-6.6	SILICONE	GRAY
GEP CABLE SEAL PLUG			
PDM-TWS-P	N.A.	SILICONE	YELLOW
LEAR MAK8 PLUS TERMINAL REMOVAL TOOL (FOR REF. ONLY)			
PART # 50000017609 BY Karl Pülpichhuisen GmbH & Co.			

GEP POWER PRODUCTS 16830 Pheasant Drive
Brookfield, WI 53005

PART NO: FRH - MAXI AND MINI - SERIES (SALES)

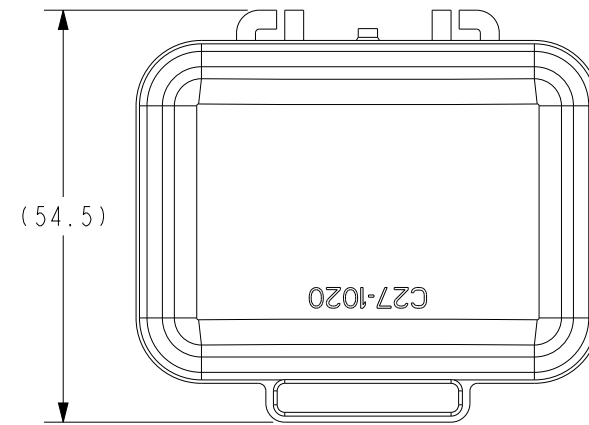
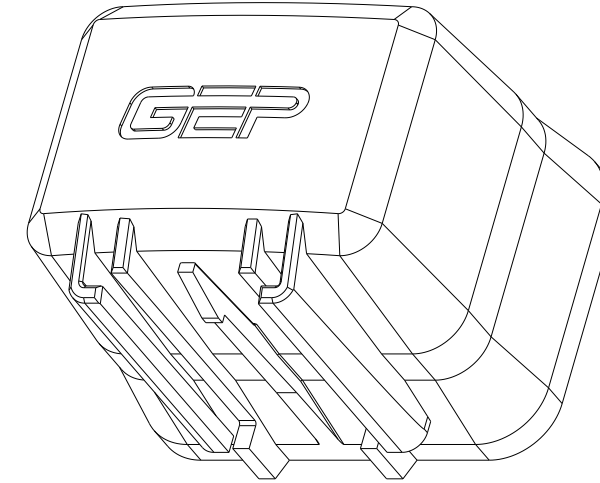
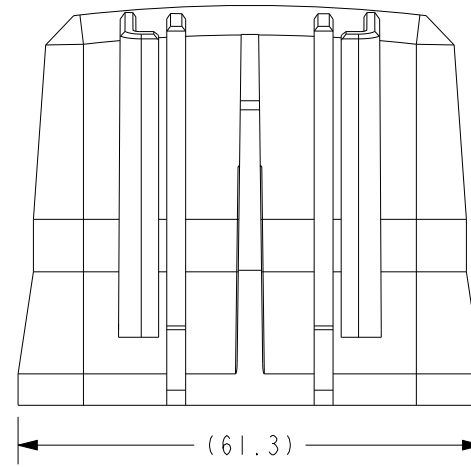
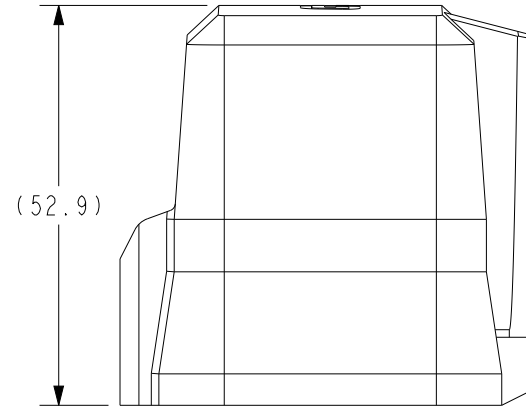
DESCRIPTION: FRH - MAXI AND MINI - SERIES

CUSTOMER: STANDARD

METRIC (MM)	REV	SHEET	SCALE	SIZE
	4	4 OF 8	1.25:1	B

COVER OPTIONS

FRH-A24-C
COVER - PDM, FRH 24 POS

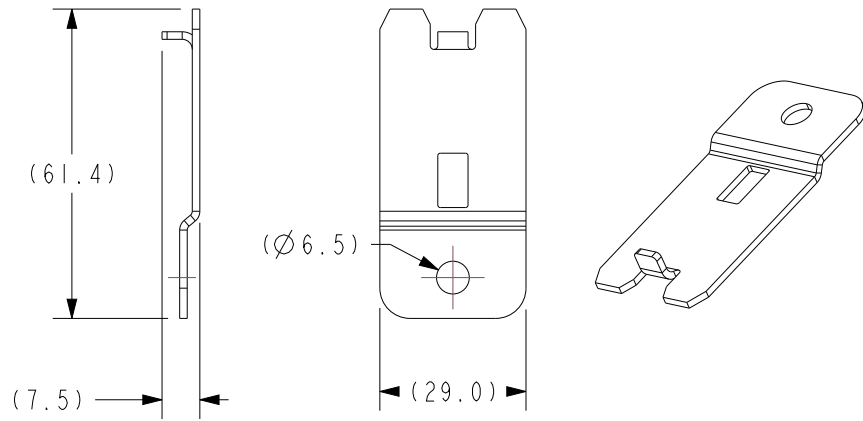


		16830 Pheasant Drive Brookfield, WI 53005		
PART NO:		FRH - MAXI AND MINI - SERIES (SALES)		
DESCRIPTION:		FRH - MAXI AND MINI - SERIES		
CUSTOMER:		STANDARD		
METRIC (MM)	REV	SHEET	SCALE	SIZE
	4	5 OF 8	1.25:1	B

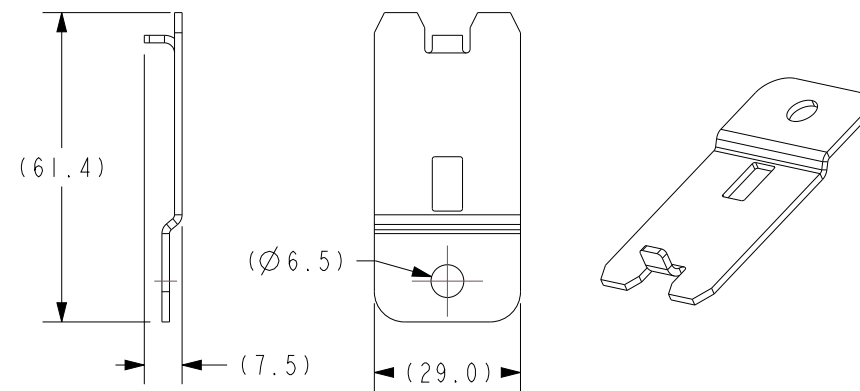
FRH - ACCESSORY OPTIONS

FOR NON-STANDARD MOUNTING OPTIONS EMAIL
GEPENGINEERING@GEPPOWERPRODUCTS.COM TO REVIEW

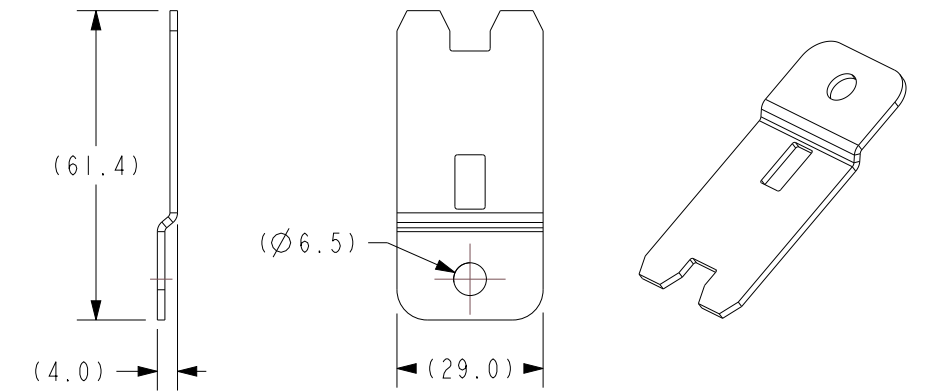
FRH-A12-MB-A1
BRACKET - PDM,FRH,FLAT WITH ANTI-ROTATION, ZINC STEEL



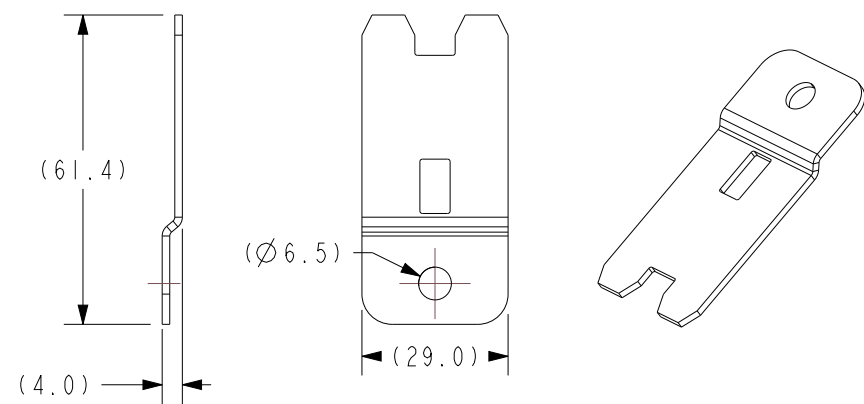
FRH-A12-MB-A2
BRACKET - PDM, FRH, FLAT WITH ANTI-ROTATION, STAINLESS 304



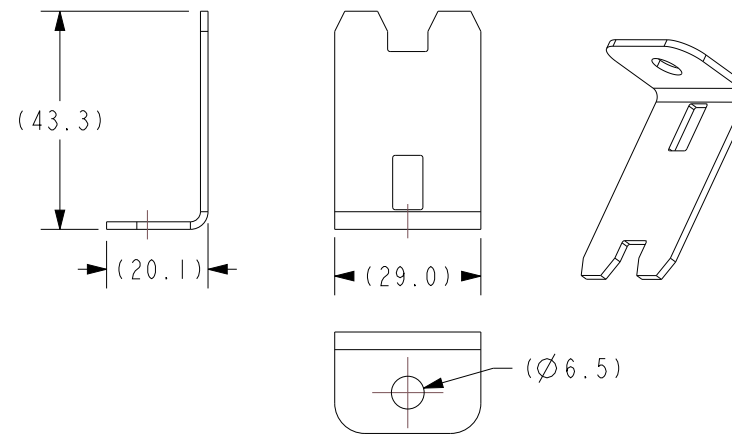
FRH-A12-MB-B1
BRACKET - PDM, FRH, FLAT WITHOUT ANTI-ROTATION, ZINC STEEL



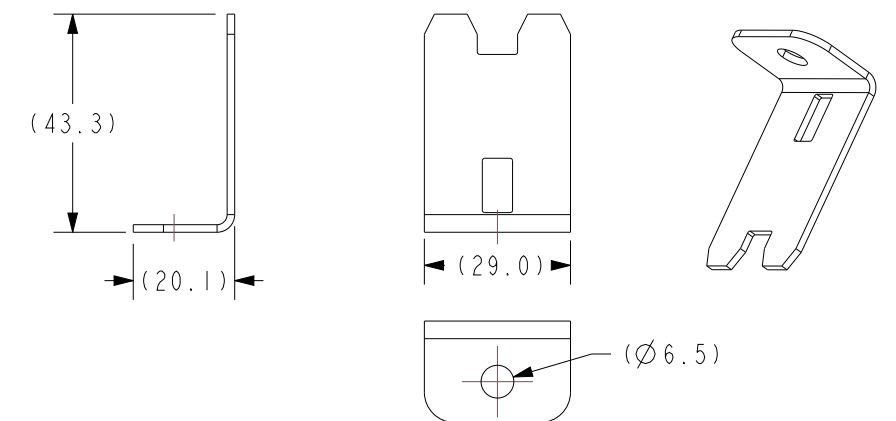
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BRACKET - PDM, FRH, FLAT WITHOUT ANTI-ROTATION, STAINLESS 304



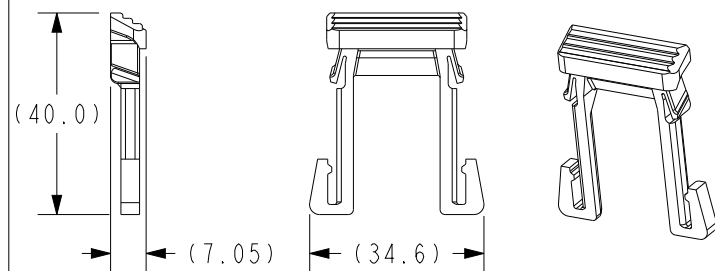
FRH-A12-MB-C1
BRACKET - PDM, FRH, 90° BENT, ZINC STEEL



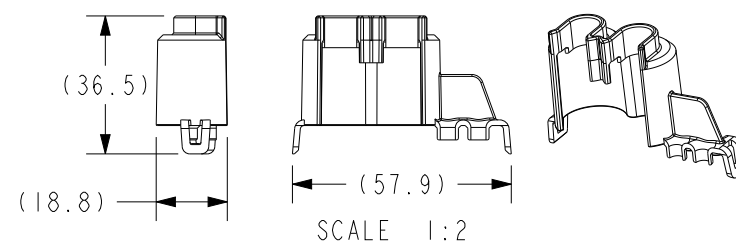
FRH-A12-MB-C2
BRACKET - PDM, FRH, 90° BENT, STAINLESS 304



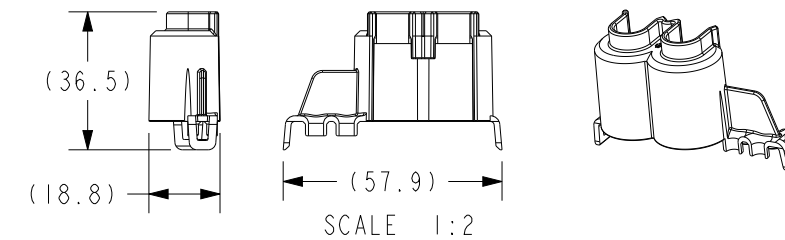
FRH-A-CPA
CPA - PDM, FRH



SC38-2013A-B003
TPA - PDM, FRH, MAXI AND MINI, A



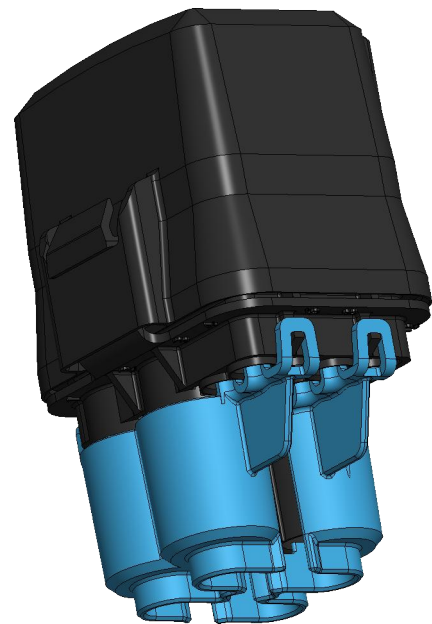
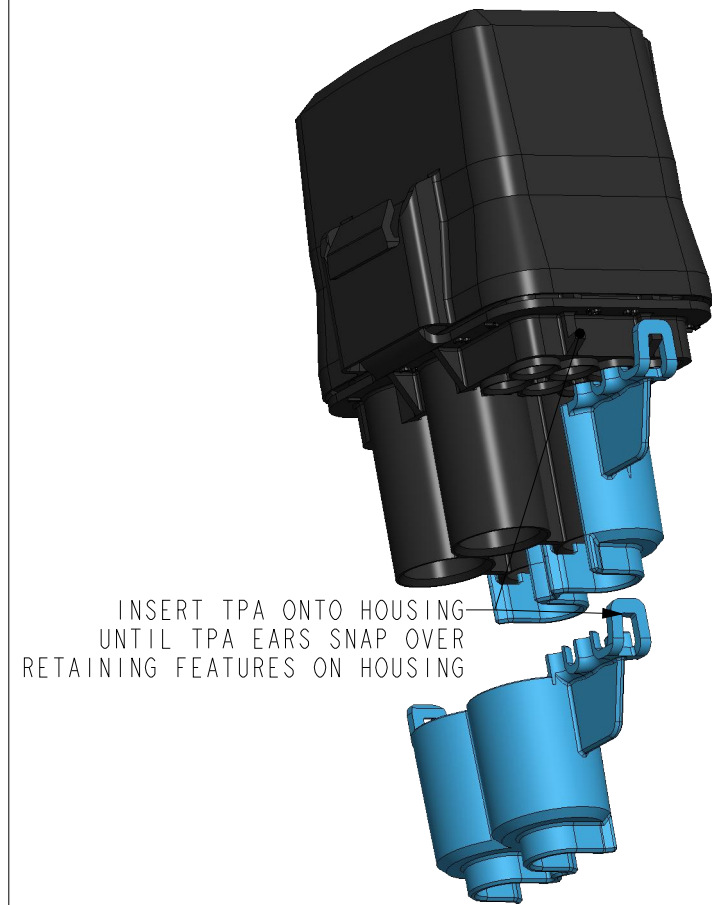
SC38-2013B-B003
TPA - PDM, FRH, MAXI AND MINI, B



GEP POWER PRODUCTS		16830 Pheasant Drive Brookfield, WI 53005		
PART NO:	FRH - MAXI AND MINI - SERIES (SALES)			
DESCRIPTION:	FRH - MAXI AND MINI - SERIES			
CUSTOMER:	STANDARD			
METRIC (MM)	REV 4	SHEET 6 OF 8	SCALE 1:1	SIZE B

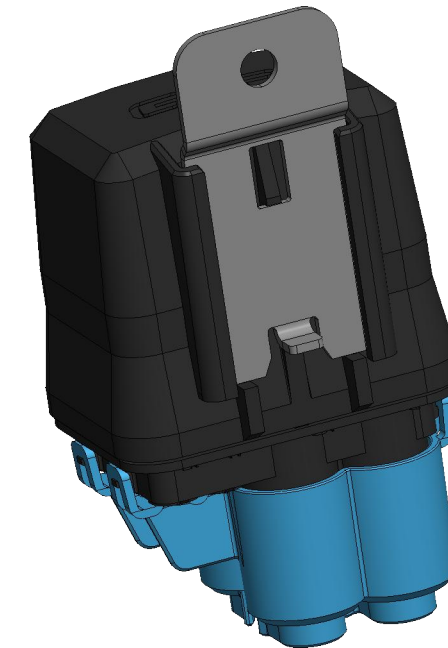
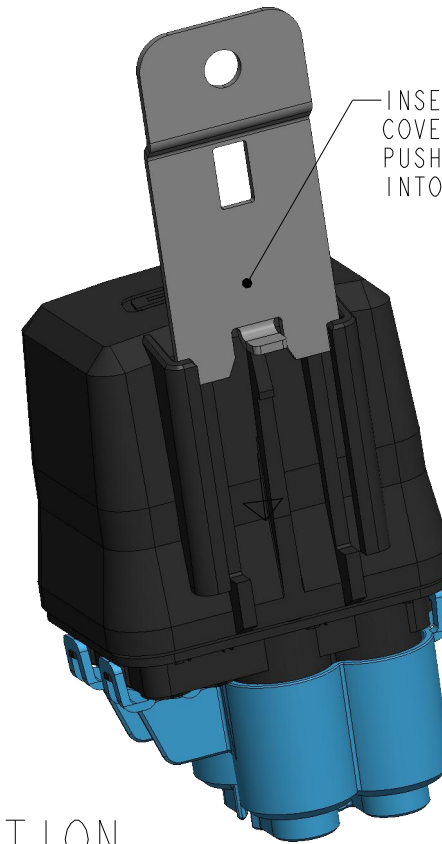
ACCESSORY ASSEMBLY INSTRUCTIONS

TPA INSTALLATION



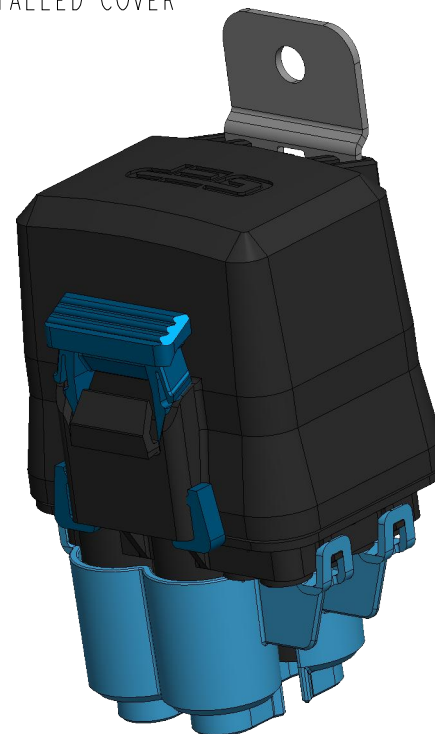
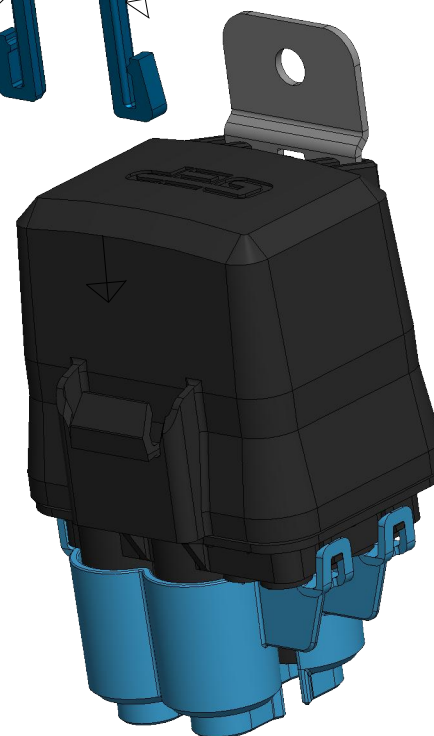
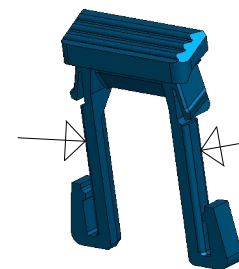
INSTALLED TPAS

MOUNTING BRACKET INSTALLATION



INSTALLED MOUNTING BRACKET

CPA INSTALLATION

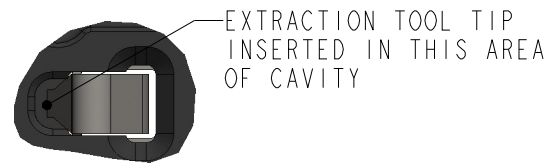


INSTALLED CPA

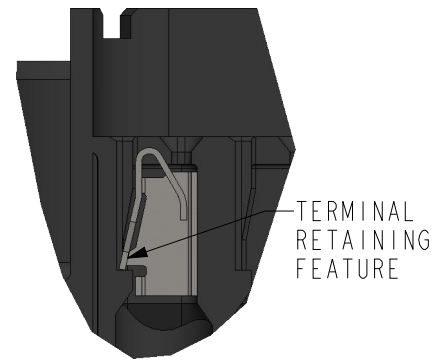
GEP POWER PRODUCTS		16830 Pheasant Drive Brookfield, WI 53005		
PART NO:	FRH - MAXI AND MINI - SERIES (SALES)			
DESCRIPTION:	FRH - MAXI AND MINI - SERIES			
CUSTOMER:	STANDARD			
METRIC (MM)	REV 4	SHEET 7 OF 8	SCALE 1:1.25	SIZE B

DEPINNING INSTRUCTIONS

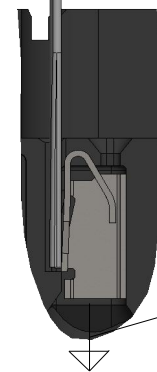
280 TERMINAL DEPINNING



TOP VIEW
(SCALE 3:1)



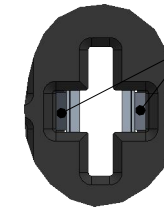
INSTALLED 280 TERMINAL
IN PDM-R4A01
SIDE VIEW
(SCALE 2:1)



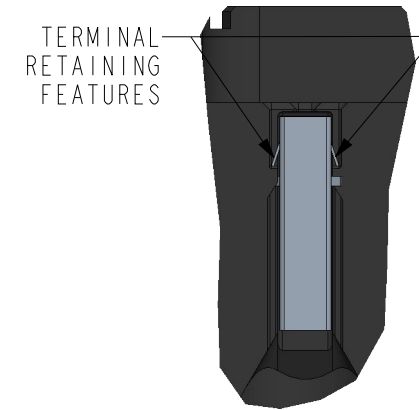
REMOVE TERMINAL
IN THIS DIRECTION

EXTRACTION TOOL INSERTED
AND TERMINAL RELEASED
SIDE VIEW
(SCALE 2:1)

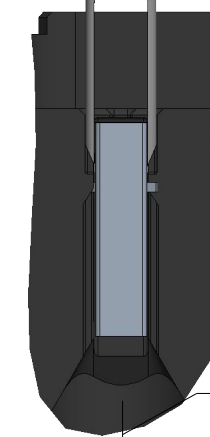
LEAR MAK8 TERMINAL DEPINNING



TOP VIEW
(SCALE 2:1)



INSTALLED LEAR MAK8
TERMINAL IN PDM-R4D01
SIDE VIEW
(SCALE 1.5:1)



REMOVE TERMINAL
IN THIS DIRECTION

EXTRACTION TOOL INSERTED
AND TERMINAL RELEASED
SIDE VIEW
(SCALE 1.5:1)

		16830 Pheasant Drive Brookfield, WI 53005		
PART NO:	FRH - MAXI AND MINI - SERIES (SALES)			
DESCRIPTION:	FRH - MAXI AND MINI - SERIES			
CUSTOMER:	STANDARD			
METRIC (MM)	REV 4	SHEET 8 OF 8	SCALE 1:1	SIZE B