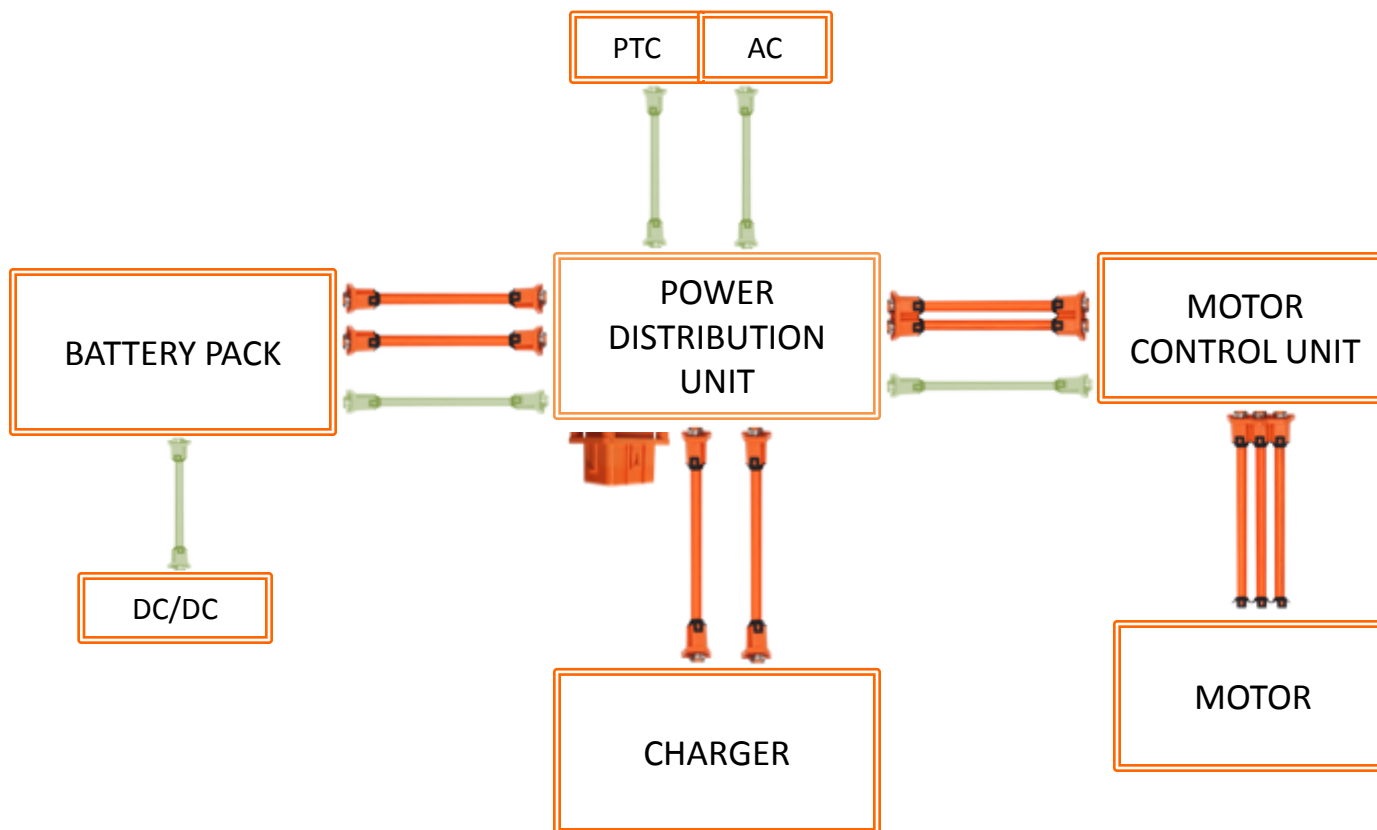


Amphenol Industrial

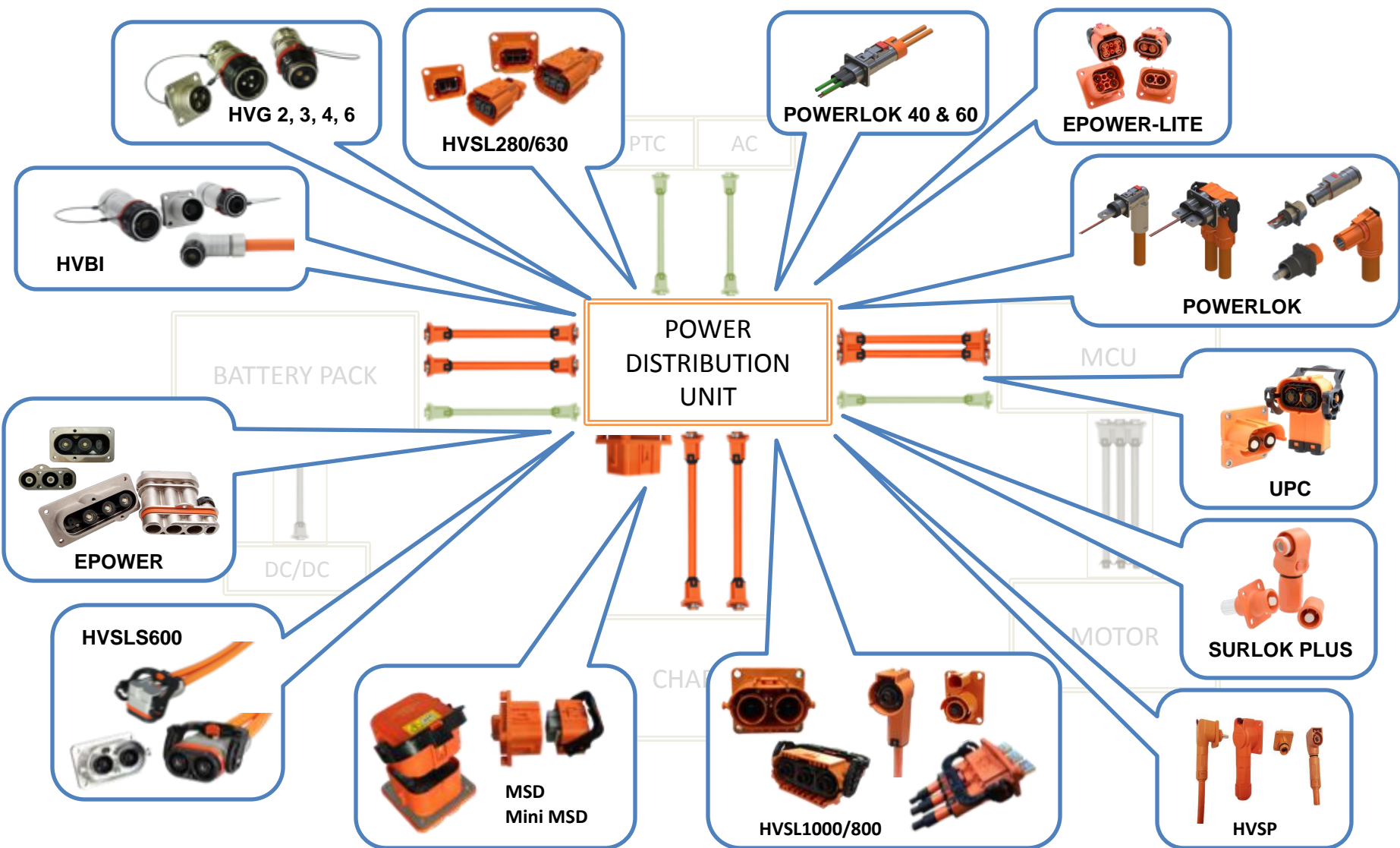


EV PRODUCT PORTFOLIO

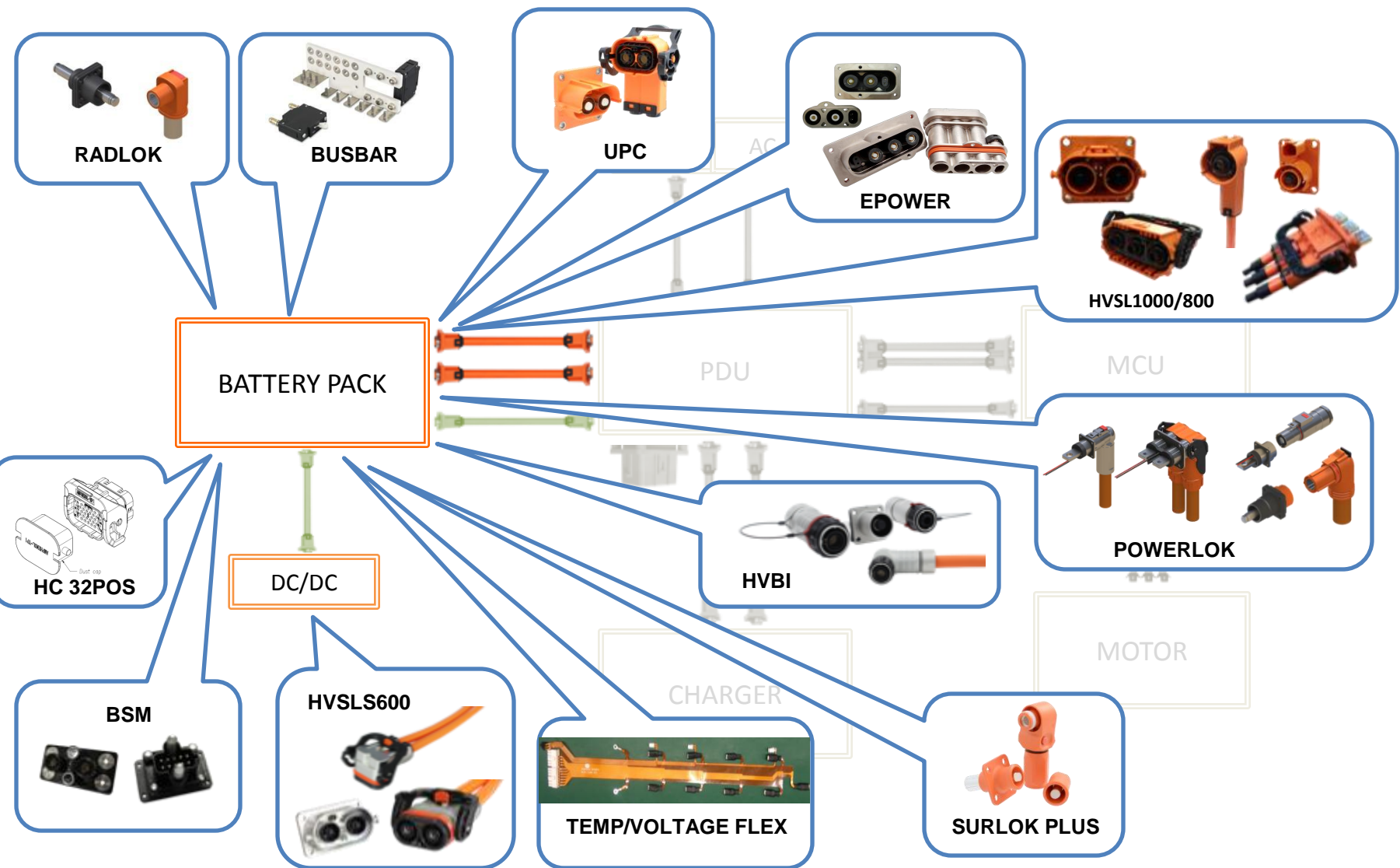
AMPHENOL INDUSTRIAL OFFERS A COMPLETE SOLUTION FOR ANY EV APPLICATION



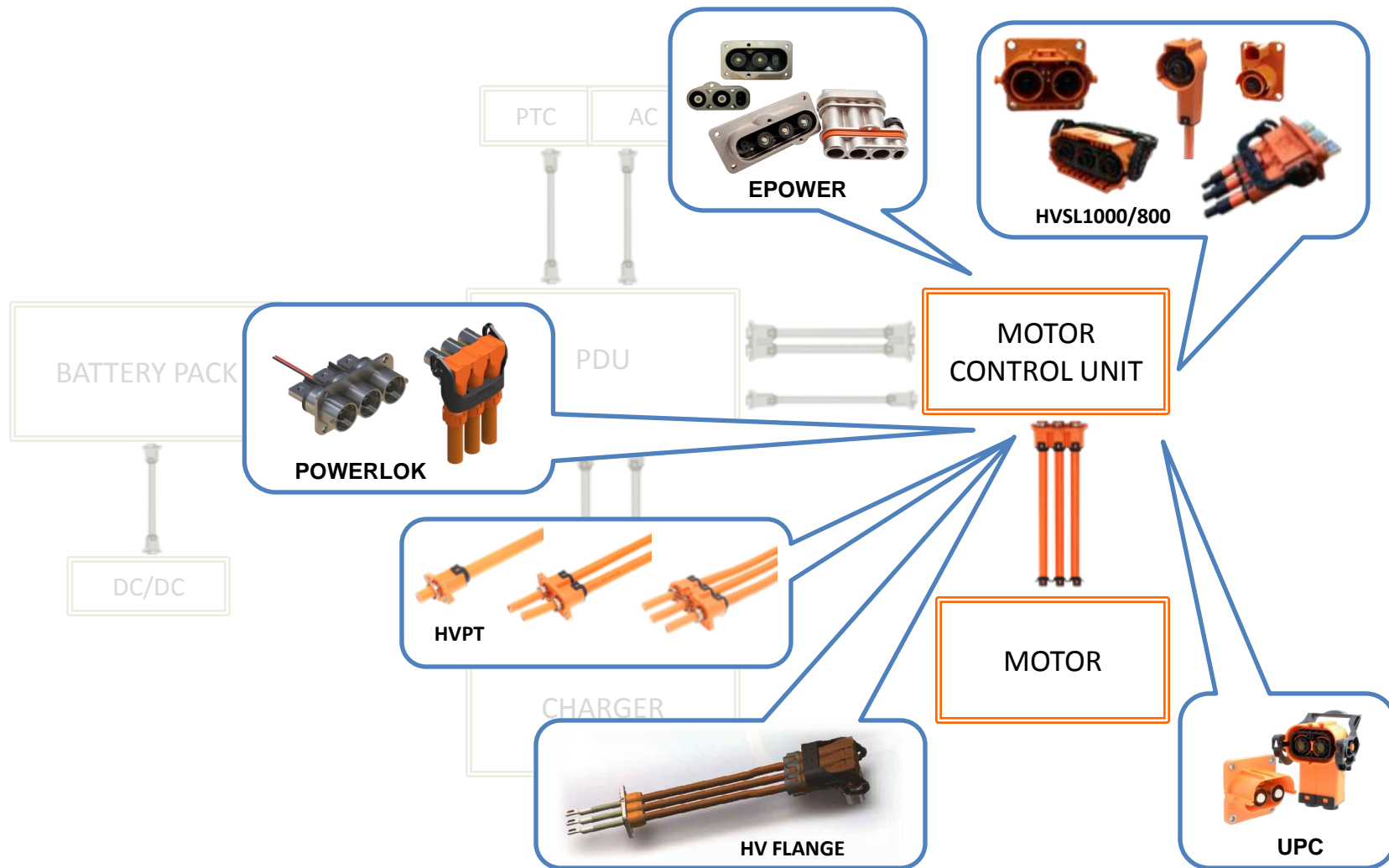
CONNECTIONS AROUND THE POWER DISTRIBUTION UNIT (PDU)



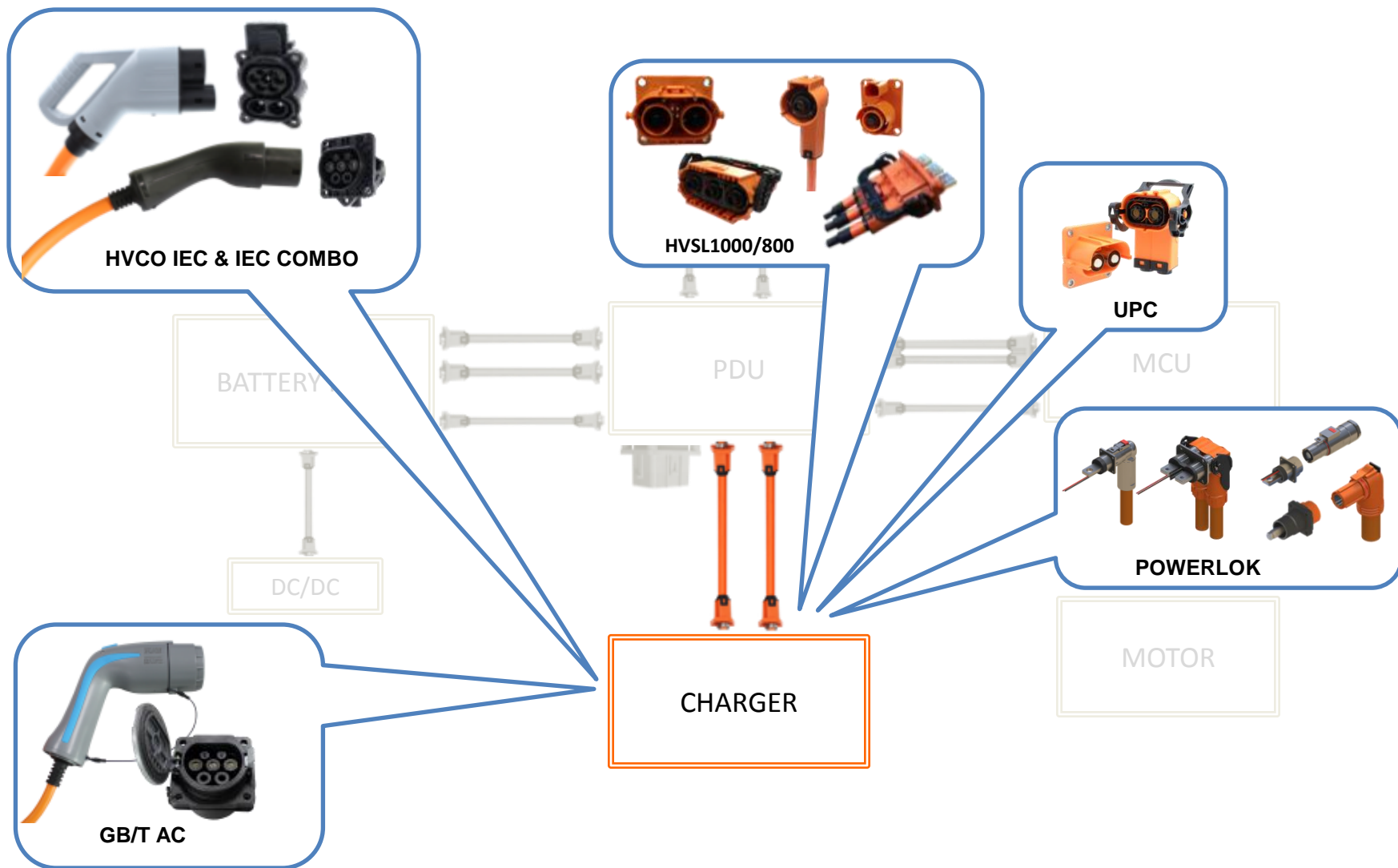
CONNECTIONS AROUND THE BATTERY PACK



CONNECTION BETWEEN THE MOTOR AND THE MOTOR CONTROL UNIT (MCU)

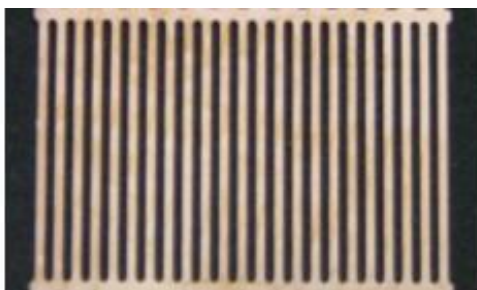


CHARGING CONNECTIONS



AMPHENOL INDUSTRIAL EV PRODUCTS ARE POWERED BY RADSOK® TECHNOLOGY

HOW IS A RADSOK® CONTACT MADE?



Flat Stamped Grid

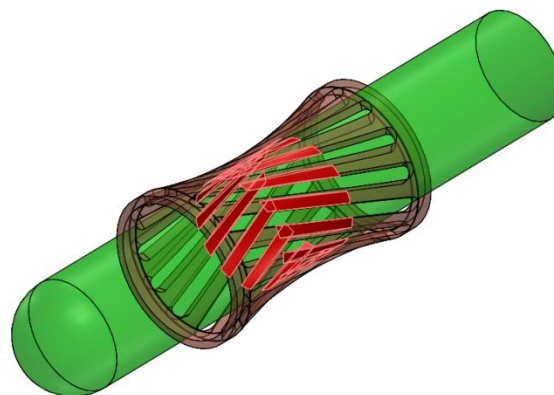


Twisted Grid

DEVELOPED FROM FLAT STAMPED GRID
TWISTED INTO A **HYPERBOLIC GEOMETRY**
TO FORM A SOCKET CONTACT WITH
UNIQUE CHARACTERISTICS

KEY BENEFITS OF RADSOK® TECHNOLOGY

- ☐ HIGHER AMPERAGES WITHIN SMALLER ENVELOPES
- ☐ HIGH RELIABILITY
- ☐ HIGH CURRENT RATINGS
- ☐ LOW MATING FORCE
- ☐ HIGH DURABILITY



NON-EMI PRODUCTS FOR EV APPLICATIONS

PRODUCT SERIES	RADLOK	SURLOK PLUS	HVSP	POWERLOK-E
PICTURE				
VOLTAGE	UP TO 1000V	UP TO 1000V	UP TO 1000V	UP TO 1000V
TEMP RATING	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C
RADSOK CONTACT SIZE	3.6MM / 5.7MM / 8MM 10MM / 12MM / 14MM	5.7MM / 8MM / 10.3MM	6MM / 8MM / 10MM	8MM
OPERATING CURRENT*	UP TO 650AMP	UP TO 400AMP	UP TO 330AMP	UP TO 300AMP
SECONDARY LOCKING	YES	NO	NO	YES
HVIL	NO	NO	NO	NO
SEALING	IP40	IP67	IP67 / IP69K	IP67 / IP69K
WIRE SIZE	FROM 10MM2 TO 150MM2	FROM 16MM2 TO 95MM2	FROM 25MM2 TO 70MM2	FROM 25MM2 TO 50MM2
OVERMOLDING	YES	NO	NO	NO
MATERIAL	PLASTIC	PLASTIC	PLASTIC	PLASTIC
TOUCH PROOF (IP2x)	NO	YES	YES	YES

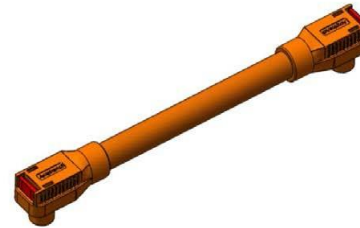
*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

RADLOK

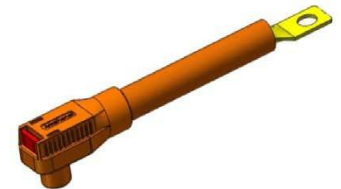
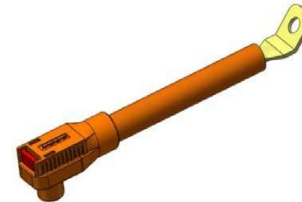


KEY FEATURES

- ☐ CURRENT RATING UP TO 650AMP*
- ☐ VOLTAGE RATING 1000V
- ☐ QUICK AUDIBLE LOCKING CLIP
- ☐ FROM 10MM² TO 150MM² CABLE SIZE
- ☐ 3 COLORS OPTIONS (RED, BLACK & ORANGE)
- ☐ FIELD CRIMPABLE OR OVERMOLDED
- ☐ RADSOK[®] CONTACTS FROM 3.6MM TO 14MM



PRE-ASSEMBLED OPTIONS



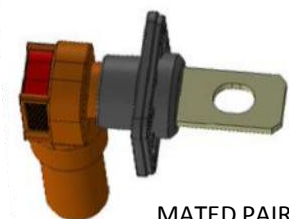
BUSBAR PIN



SEALED FEED-THRU



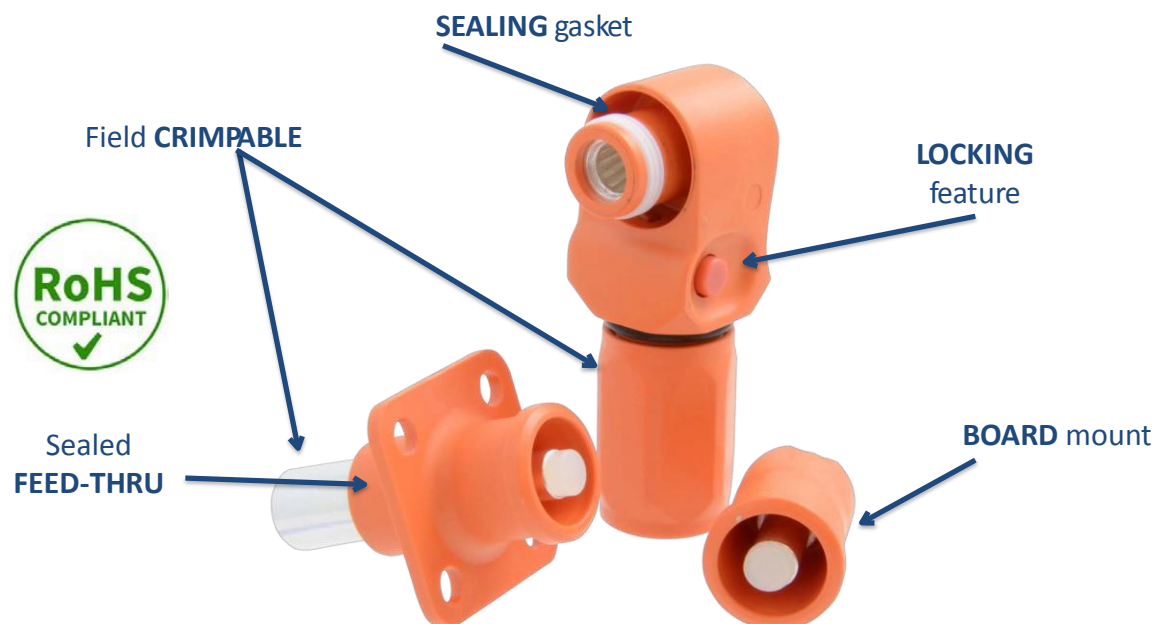
UNMATED PAIR



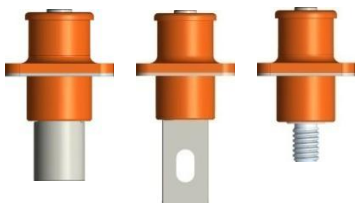
MATED PAIR

*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

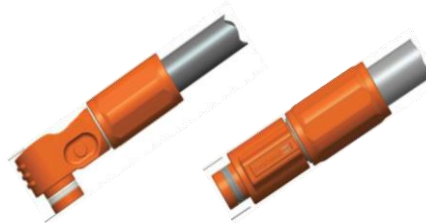
SURLOK PLUS



90°
Keyw
ays
180°
Keyw
ays



SEALED FEED-THRU
(IP67-IP6K9K TOWARDS INSIDE PANEL)



FIELD INSTALLABLE
(IP67-IP6K9K IN MATED CONDITION)

AVAILABLE CONTACT SIZES*

5.7MM: UP TO 160AMP FOR CABLE SIZE 16 AND 25MM²

8.0MM: UP TO 300AMP FOR CABLE SIZE 35 AND 50MM²

10.3MM: UP TO 400AMP FOR CABLE SIZE 50, 70 AND 95MM²

KEY FEATURES

- ☐ VOLTAGE RATING 1000V AC/DC
- ☐ INTEGRATED SLIDE LOCKING SYSTEM
- ☐ **EMI SHIELDING**
- ☐ FIELD CRIMPABLE OR OVERMOLDED
- ☐ RADSOK[®] CONTACTS
- ☐ PLASTIC MOLDED HOUSING
- ☐ **IP67 MATED – IP2X UNMATED**
- ☐ CRIMP / LUG / BUSBAR TERMINATION
- ☐ MECHANICAL KEYS AND COLOR CODING (ORANGE, RED & BLACK)

*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

HVSP

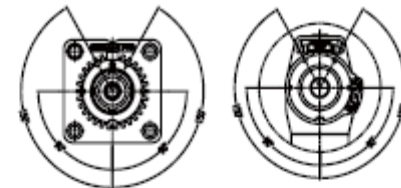


KEY FEATURES

- ☐ MECHANICAL KEYWAYS
- ☐ IP67 & IP6K9K MATED – IP2X UNMATED
- ☐ UP TO 1000V VOLTAGE RATING
- ☐ UP TO 70MM² CABLE
- ☐ UP TO 330AMP CURRENT RATING*
- ☐ SINGLE POLE
- ☐ THREAD / BUSBAR / CRIMP TERMINATION
- ☐ SECONDARY LOCKING

*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

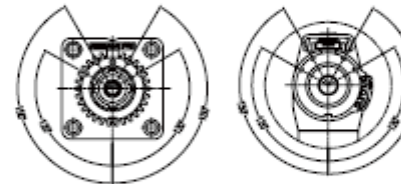
Coding A



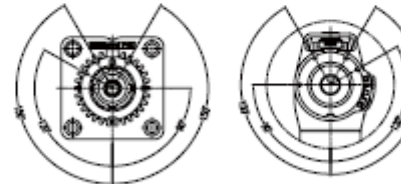
Coding B



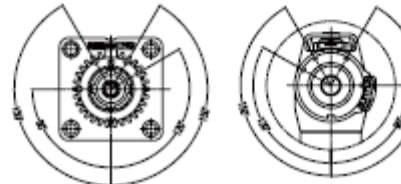
Coding C



Coding D



Coding E



POWERLOK – E



Assembly, Right Angle



Assembly, Straight Angle



Overmolded, Right Angle



Termination Type: Busbar



Termination Type: Thread Bolt



Termination Type: Tubular Lug










KEY FEATURES

- ☐ CURRENT RATING UP TO 300AMP*
- ☐ VOLTAGE RATING 1000V
- ☐ QUICK AUDIBLE LOCKING CLIP
- ☐ FROM 25MM² TO 50MM² CABLE SIZE
- ☐ FIELD CRIMPABLE
- ☐ RADSOK[®] 8MM CONTACT
- ☐ PLASTIC VERSION
- ☐ 5 MECHANICAL KEYS & COLOR CODING
- ☐ STRAIGHT AND RIGHT ANGLE VERSION
- ☐ IP6K9K MATED – IP2X UNMATED

*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

EMI PRODUCTS FOR EV APPLICATIONS

PRODUCT SERIES	HVSL	POWERLOK	UPC	EPOWER	EPOWER LITE	HVBI	HVG
PICTURE							
VOLTAGE	UP TO 1000V	UP TO 1000V	UP TO 1000V	UP TO 1000V	UP TO 1000V	UP TO 1000V	UP TO 400V AC
TEMP RATING	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C	FROM -40C TO +125C
RADSOK CONTACT SIZE	FROM 2.8MM TO 10MM	FROM 4MM TO 14MM	9.1MM / 12MM	8MM / 11.1MM	3.6MM	FROM 6MM TO 10MM	NA
OPERATING CURRENT*	UP TO 330AMP	UP TO 650AMP	UP TO 600AMP	UP TO 600AMP	UP TO 120AMP	UP TO 400AMP	UP TO 50AMP
SECONDARY LOCKING	YES	YES	NO	SCREW	NO	NO	YES
HVIL	YES	YES	YES	YES	YES	YES	NA
SEALING	IP67 / IP69K	IP67 / IP69K	IP67 / IP69K	IP67 / IP69K	IP67 / IP69K	IP67 / IP69K	IP67
WIRE SIZE	FROM 2.5MM2 TO 70MM2	FROM 2.5MM2 TO 150MM2	FROM 35MM2 TO 70MM2	FROM 35MM2 TO 95MM2	FROM 2.5MM2 TO 6MM2	FROM 16MM2 TO 70MM2	FROM 2.5MM2 TO 10MM2
OVERMOLDING	NO	YES	NO	NO	NO	NO	NO
MATERIAL	PLASTIC & METAL	METAL	PLASTIC	METAL	PLASTIC	METAL	METAL
TOUCH PROOF (IP2x)	YES	YES	YES	YES	YES	YES	YES

*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

HVBI SERIES

KEY FEATURES

- ❑ PUSH-PULL WITH HVIL
- ❑ SHIELDED
- ❑ IP67 & IP6K9K MATED
- ❑ IP2X TOUCH PROOF
- ❑ UP TO 1000V VOLTAGE RATING
- ❑ UP TO 70MM² CABLE

AVAILABLE CONTACT SIZES*

6MM: UP TO 160AMP FOR CABLE SIZE 16 AND 25MM²

8MM: UP TO 300AMP FOR CABLE SIZE 35 AND 50MM²

10MM: UP TO 400AMP FOR CABLE SIZE 50 AND 70MM²



**OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE*

HVG SERIES

KEY FEATURES

- ❑ PUSH-PULL WITH AUDIBLE CLICK
- ❑ EMI SHIELDING
- ❑ IP67 MATED
- ❑ IP2X TOUCH PROOF
- ❑ UP TO 50A CURRENT RATING*
- ❑ UP TO 400VAC / 690VDC VOLTAGE RATING
- ❑ FROM 2.5MM2 TO 10MM2 CABLE

AVAILABLE CONFIGURATIONS

2 X (40A) + 2 X 7.5A

3 X (40A) + 2 X 7.5A

2 X (50A) + 2 X 7.5A

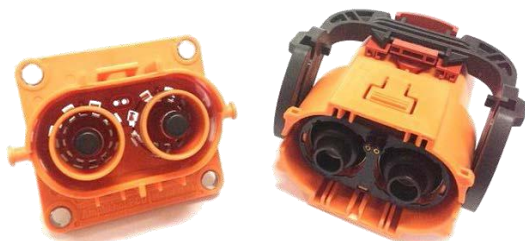


**OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE*

HVSL

KEY FEATURES

- ☐ EMI & RFI SHIELDING
- ☐ INTERLOCK
- ☐ IP67 & IP6K9K MATED – IP2X UNMATED
- ☐ 1, 2 AND 3 POLES
- ☐ LATCHING STYLE (FINGER ACTUATED, 2 STAGE LEVER ASSIST)
- ☐ UP TO 330AMP CURRENT RATING*
- ☐ UP TO 1000V VOLTAGE RATING
- ☐ STRAIGHT AND RIGHT ANGLE
- ☐ MECHANICAL CODING



**IN-LINE TYPE WITH
EXTERNAL HVIL**

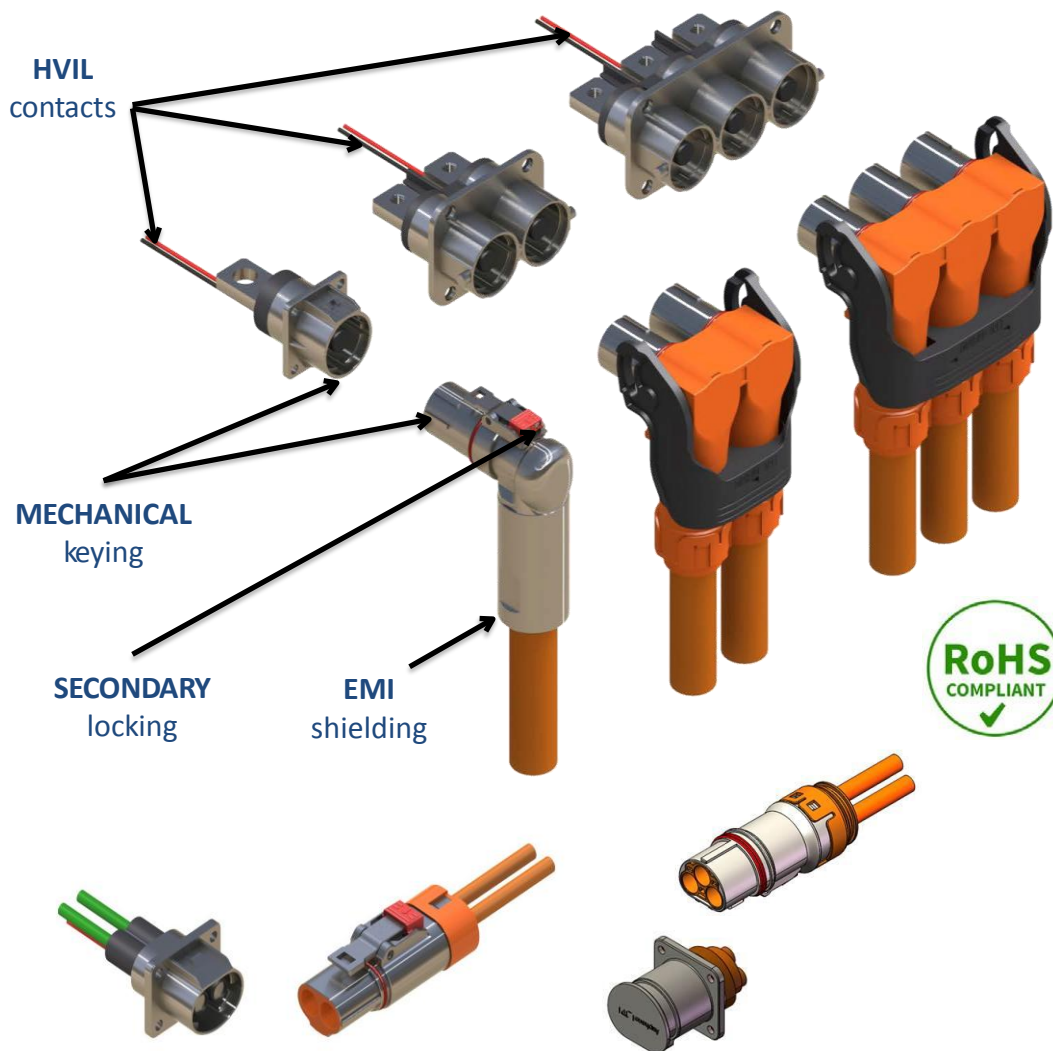


**BOX MOUNT TYPE WITH
EXTERNAL HVIL**



**OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE*

POWERLOK



KEY FEATURES

- ☐ CURRENT RATING UP TO 650AMP*
- ☐ VOLTAGE RATING 1000V
- ☐ QUICK AUDIBLE LOCKING CLIP
- ☐ FROM 2.5MM² TO 150MM² CABLE SIZE
- ☐ EMI SHIELDING
- ☐ FIELD CRIMPABLE OR OVERMOLDED
- ☐ RADSOK[®] CONTACTS
- ☐ METAL & PLASTIC VERSION
- ☐ 5 MECHANICAL KEYS & COLOR CODING
- ☐ IP6K9K MATED – IP2X UNMATED
- ☐ 1 TO 4 POLES

*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

UPC



KEY FEATURES

- ☐ **TOUCH PROOF** UL 2251
- ☐ **+500 MATING CYCLES**
- ☐ **1000V OPERATING VOLTAGE**
- ☐ **IP67 MATED**
- ☐ **EMI SHIELDING**
- ☐ **HVIL (HIGH VOLTAGE INTERLOCK)**
- ☐ **FLAMMABILITY UL 94V-0**

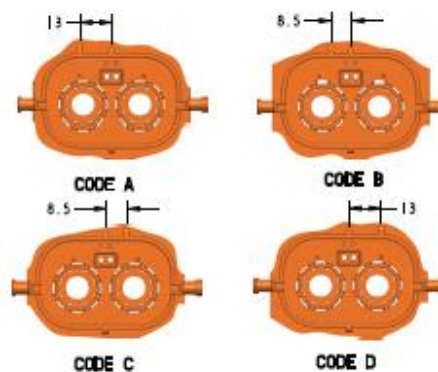


AVAILABLE CONTACT SIZES*

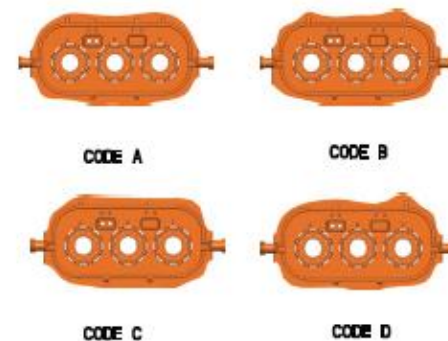
9.1MM: UP TO 400AMP FOR CABLE SIZE 35 AND 50 MM2

12.0MM: UP TO 600AMP FOR CABLE SIZE 70 AND 95MM2

2-Pole Receptacle



3-Pole Receptacle



*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

EPOWER

KEY FEATURES

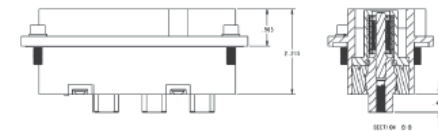
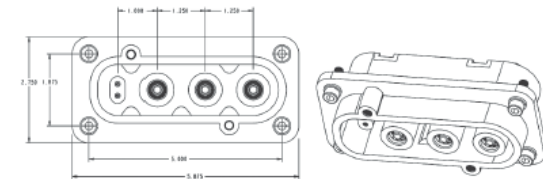
- ☐ VOLTAGE RATING 1000V
- ☐ 2 & 3 POLES
- ☐ CRIMP / LUG / BUSBAR TERMINATION
- ☐ EMI SHIELDING
- ☐ RADSOK® CONTACTS
- ☐ 2 HVIL CIRCUITS
- ☐ IP67
- ☐ ALUMINIUM SHELL

AVAILABLE CONTACT SIZES*

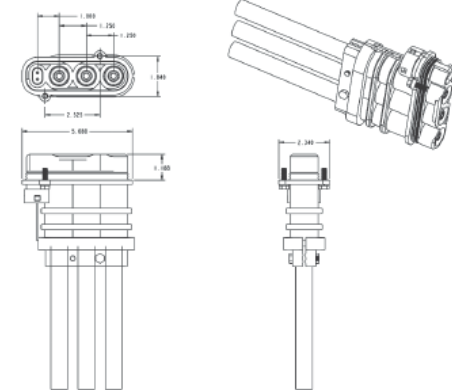
8.0MM: UP TO 300AMP FOR CABLE SIZE 25, 35 AND 50MM2

11.0MM: UP TO 600AMP FOR CABLE SIZE 50, 70 AND 95MM2

Receptacle



Plug



*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE

EPOWER LITE

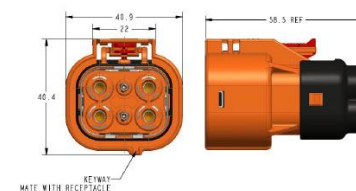
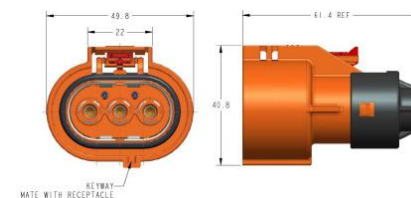
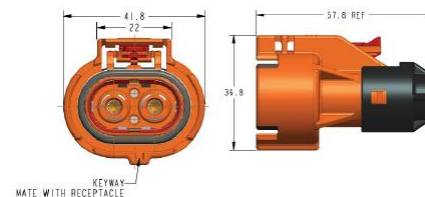
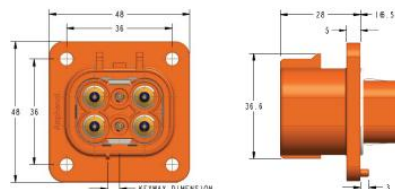
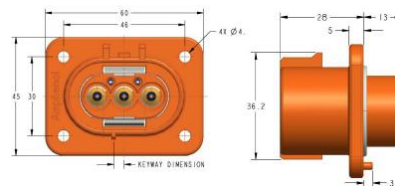
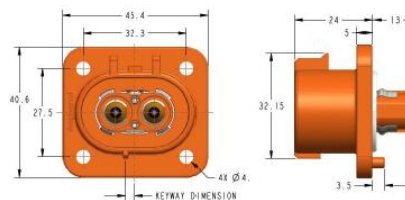


KEY FEATURES

- ☐ 2, 3 AND 4 POLES
- ☐ **EMI SHIELDING**
- ☐ FIELD CRIMPABLE OR OVERMOLDED
- ☐ RADSOK® CONTACTS SIZE **3.6MM**
- ☐ PLASTIC HOUSING
- ☐ **IP67 MATED**
- ☐ TOUCH PROOF
- ☐ HIGH VOLTAGE INTERLOCK (HVIL)
- ☐ **SECONDARY LOCKING**
- ☐ **MECHANICAL KEYWAYS**



*OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE



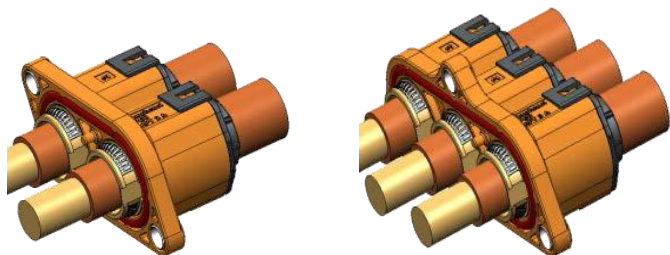
AVAILABLE CONTACT SIZES*

3.6MM: UP TO 120AMP FOR CABLE SIZE 2.5, 4, 6 AND 10MM²

FEEDTHRU SOLUTIONS

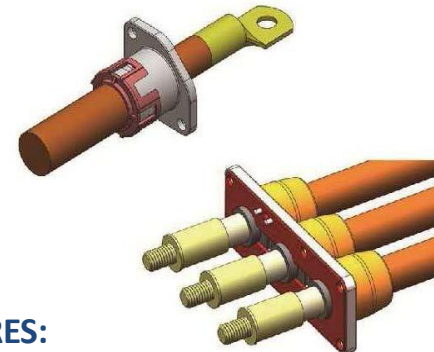
PRODUCT SERIES	HVPT	HV FLANGE
PICTURE		
VOLTAGE	UP TO 1000V	UP TO 1000V
TEMP RATING	FROM -40C TO +125C	FROM -40C TO +125C
RADSOK CONTACT SIZE	NA	NA
OPERATING CURRENT*	NA	NA
SECONDARY LOCKING	NA	NA
HVIL	NA	NA
SEALING	IP67 / IP69K	IP67 / IP69K
WIRE SIZE	FROM 25MM2 TO 50MM2	FROM 16MM2 TO 95MM2
OVERMOLDING	NA	NA
MATERIAL	PLASTIC	METAL
TOUCH PROOF (IP2x)	YES	YES

HVPT & HV FLANGE



HVPT KEY FEATURES:

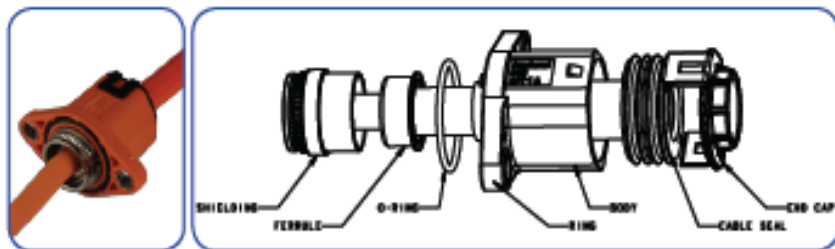
- ☐ EMI SHIELDING
- ☐ PLASTIC MATERIAL
- ☐ IP67 & IP6K9K MATED
- ☐ 1 TO 3 POLES
- ☐ UP TO 1000V VOLTAGE RATING
- ☐ UP TO 50MM2 CABLE



HV FLANGE KEY FEATURES:

- ☐ EMI SHIELDING
- ☐ METAL MATERIAL
- ☐ IP67 & IP6K9K MATED
- ☐ 1 TO 3 POLES
- ☐ UP TO 1000V VOLTAGE RATING
- ☐ CUSTOMIZED MOLDED SOLUTION AVAILABLE

1 POSITION PASS-THROUGH

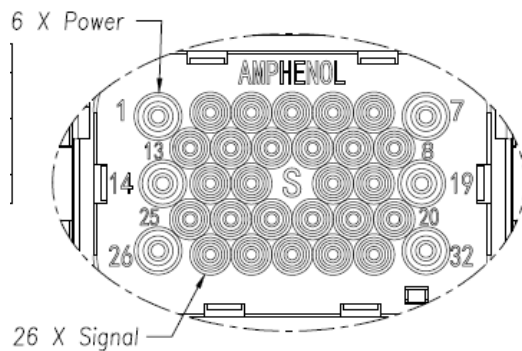
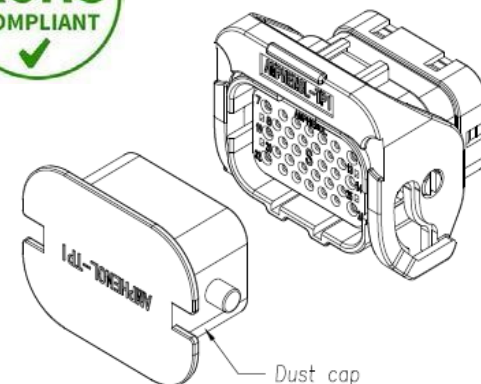
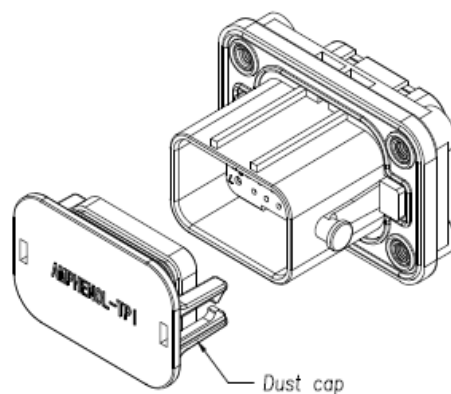


ADDITIONAL EV PRODUCTS

HC SERIES (32 WAYS)

KEY FEATURES

- ❑ CONTACT SIZE 16 & 20
- ❑ IP67
- ❑ **PLASTIC SHELL**
- ❑ 32 WAY
- ❑ SEALED REAR PANEL MOUNT
- ❑ CURRENT RATING 13AMP (POWER) & 5AMP (SIGNAL)
- ❑ CABLE SIZE 14-18AWG (POWER) & 20-22AWG (SIGNAL)
- ❑ OPERATING TEMPERATURE: -40C UP TO 125C



BSM (BATTERY SWAPPING MODULE)



KEY FEATURES

- ☐ QUICK MATING
- ☐ IP67 MATED
- ☐ IP2X UNMATED
- ☐ FOR BLIND MATING WITH TOLERANCE
ADJUSTMENT OF +/-5MM IN X,Y AND Z DIRECTION

Type	Operating Voltage	Operating Current
BMS-100A	600 DC	100A
BMS-400A	750 DC	400A

MSD (MANUAL SERVICE DISCONNECT) & MINI MSD

MSD KEY FEATURES

- ☐ LATCHING STYLE: FINGER ACTUATED, 2 STAGE LEVER ASSIST
- ☐ 50+ MATING CYCLES
- ☐ IPX7, IP69K (MATED) - IP2XB (UNMATED)
- ☐ HIGH VOLTAGE INTERLOCK
- ☐ FUSE RATING: UP TO 630A
- ☐ VOLTAGE RATING: 1000 DC WITHOUT FUSE
- ☐ CURRENT RATING: UP TO 230A WITHOUT FUSE



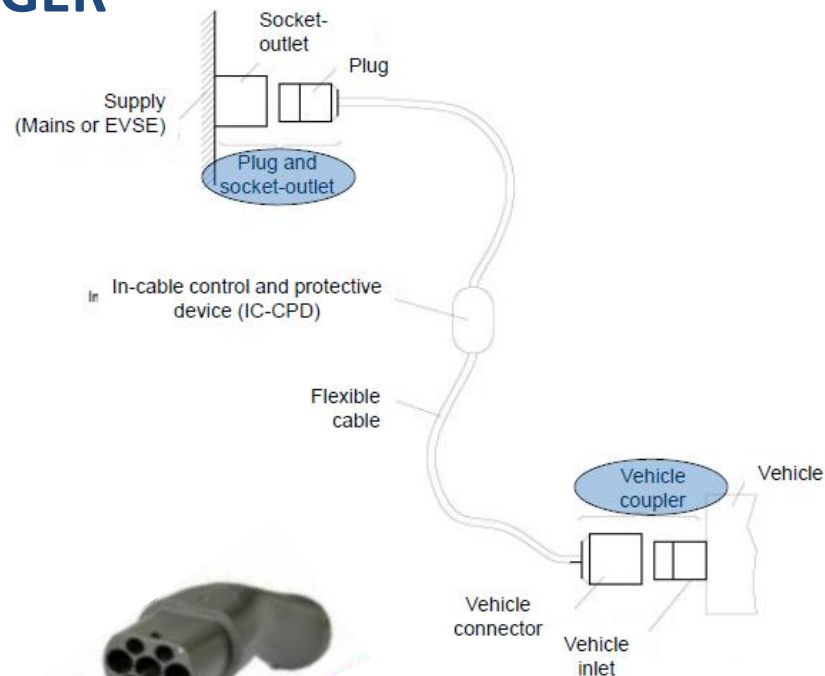
MINI MSD KEY FEATURES

- ☐ LATCHING STYLE: FINGER ACTUATED, 2 STAGE LEVER ASSIST
- ☐ 50+ MATING CYCLES
- ☐ IPX7, IP69K (MATED) - IP2XB (UNMATED)
- ☐ HIGH VOLTAGE INTERLOCK
- ☐ FUSE RATING: UP TO 400A
- ☐ VOLTAGE RATING: 1500 DC WITHOUT FUSE
- ☐ CURRENT RATING: UP TO 170A WITHOUT FUSE

HVCO CHARGER

KEY FEATURES

- ☐ INTERCHANGEABLE WITH ALL SUPPLIER INTERFACE
- ☐ DRIVE – OVER PERFORMANCE
- ☐ IP55 MATED
- ☐ WATER DRAINAGE
- ☐ TEMPERATURE SENSOR FOR OVER HEAT PROTECTION
- ☐ ERGONOMIC DESIGNED PLUG



IEC COMBO



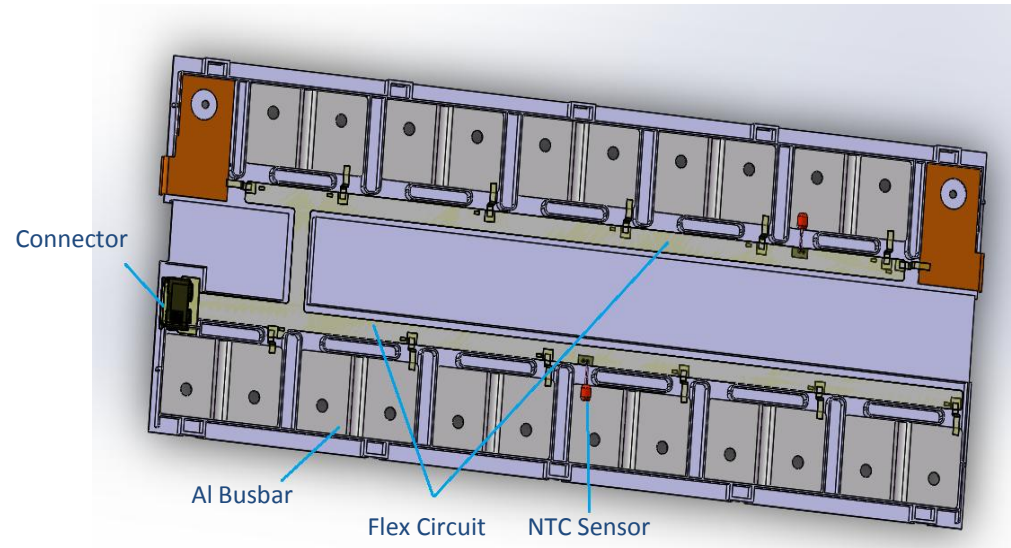
IEC 62196-2



BATTERY FLEX

KEY FEATURES

- ☐ SENSES CELL VOLTAGE
- ☐ SENSES CELL TEMPERATURE
- ☐ SAVES SPACE
- ☐ SAVES WEIGHT
- ☐ IMPROVES EASE OF INSTALLATION
- ☐ ELIMINATES WIRING ERRORS (REPEATABLE)
- ☐ OPERATING TEMPERATURE: -45C UP TO 200C





CLICK-FIT

- ☐ POWER / PE CONNECTIONS
- ☐ 3.6 MM, 6 MM AND 8MM CONTACTS
- ☐ WORKING CURRENT UP TO 260A
- ☐ CAN BE USED ALSO FOR GROUNDING
- ☐ PLASTIC HOUSINGS AS OPTION AVAILABLE
- ☐ CAN ALSO BRING POWER TO BOARD

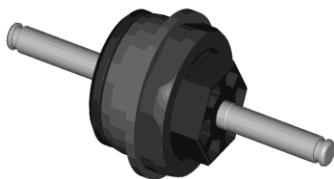
ACTIVE PIN-LOCK

- ☐ RADSOK CONTACTS 3.6 /6.0/8.0 MM UP TO 300A
- ☐ BLIND MATING POSSIBLE – AUTOMATIC CENTERING
- ☐ CORROSION RESISTANT
- ☐ VIBRATION PROOF



WALL - BUSHING

- ☐ UP TO 250A
- ☐ IP67 FEEDTHROUGH SOLUTION TO BE USED WITH CLICKFIT
- ☐ NO SPECIAL TOOLING REQUIRED
- ☐ IP65/IP67



**OPERATING CURRENT MEASURED AT 25C WITH MAXIMUM WIRE SIZE AVAILABLE*

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