

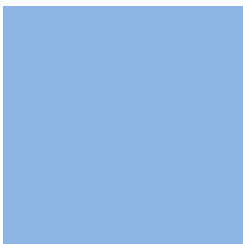


# AMPHENOL INDUSTRIAL PRODUCTS GROUP HEV MARKET PRESENTATION AND CAPABILITIES

# AMPHENOL CORPORATION

## TOTAL SALES

- OVER 80 YEAR HISTORY, LISTED ON NYSE SINCE 1991
- SECOND LARGEST INTERCONNECT MANUFACTURER IN THE WORLD



- HIGH TECHNOLOGY INTERCONNECT SOLUTIONS
- LEADING POSITIONS IN DIVERSE MARKETS



- BROAD GLOBAL PRESENCE AND CAPABILITY
- OVER 90,000 EMPLOYEES WORLDWIDE
- TOTAL NET SALES 2021: US \$ 10,9 BILLION

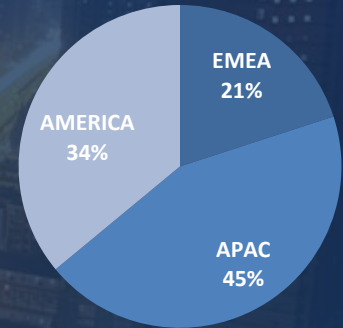


# GLOBAL PRESENCE IN THE MARKET

## SALES BY REGION



### % SALES BY REGION



**2021 SALES \$ 10,876 BIL**



**90,000 EMPLOYEES**

Manufacturing Operations & Sales				Sales			
Australia	France	Italy	Morocco	Switzerland	Argentina	Russia	
Brazil	Germany	Japan	New Zealand	Taiwan	Austria	Spain	
Canada	Hungary	Korea	Poland	Tunisia	Finland	South Africa	
China	India	Macedonia	Puerto Rico	UAE	Ireland	Turkey	
Czech Republic	Indonesia	Malaysia	Singapore	United Kingdom	Saudi Arabia	Vietnam	
Estonia	Israel	Mexico	Slovakia	United States			

# EXCELLENT RECORD OF ACHIEVEMENTS

AMPHENOL 10 Year CAGR

Sales 11 %  
> 2x Industry Growth



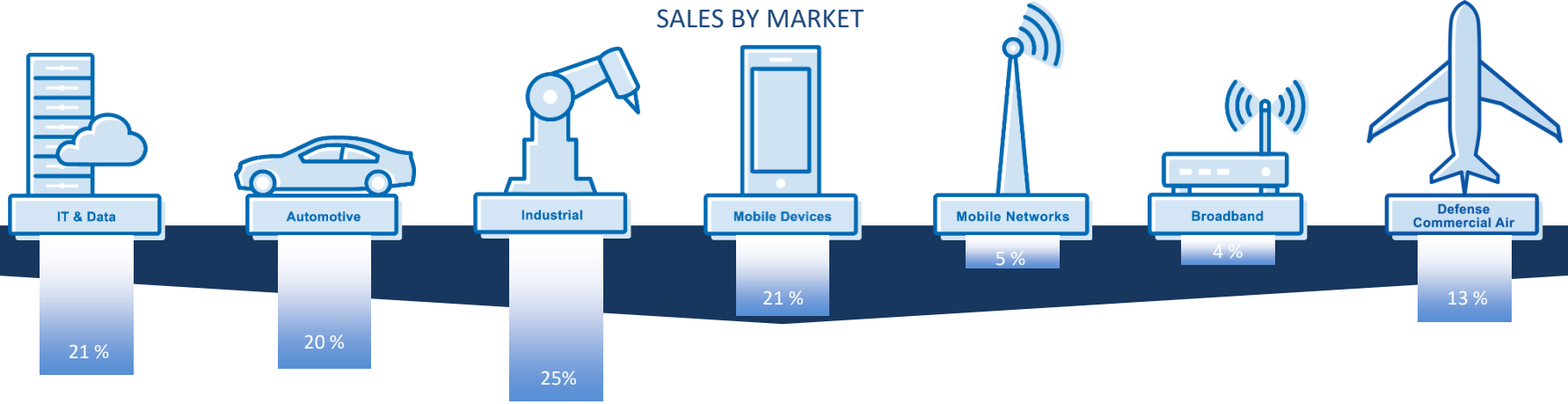
Net Sales (\$ in millions)

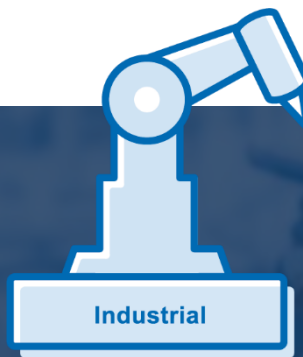
- INDUSTRY LEADING GROWTH FOR OVER A DECADE
- INDUSTRY LEADING OPERATING PROFIT MARGINS IN ALL BUSINESS CYCLES
- STRONG CASH FLOW GENERATION
- SUCCESSFUL ACQUISITION PROGRAM IN CONSOLIDATING INDUSTRY



# GLOBAL LEADER IN THE MARKET

## SALES BY MARKET





# AMPHENOL INDUSTRIAL PRODUCTS GROUP

24 OPERATIONS GLOBALLY IN EMEA, AMERICA AND APAC

LEADING POSITIONS IN DIVERSE INDUSTRIAL SUB MARKETS

TOTAL NET SALES INDUSTRIAL MARKET FOR AMPHENOL 2021: US \$ 2.725 BILLION

# AMPHENOL INDUSTRIAL MANUFACTURING OPERATIONS



Amphenol Bernd Richter  
Wipperfurth, Germany



Amphenol TPI  
Winnipeg, Canada



Amphenol Tuchel Industrial  
Heilbronn, Germany/Ostrov, CZ



Amphenol NeLson Dunn  
Houston TX, USA



Amphenol Industrial Operations  
Nogales, Mexico/Endicott-NY



Amphenol Alden  
Brockton-MA, USA



Amphenol Sine  
Nogales, Mexico/Clinton Twp-MI



Amphenol Middle East  
UnitedArab Emirates



Amphenol EEC  
Chicago-IL, USA



Amphenol Sincere Industrial  
Pecs, Hungary



Amphenol DC Electronics  
San Jose-CA, USA



Amphenol Australia  
Carrum Downs,Australia



Amphenol MPI  
Morgan Hill CA, USA



Amphenol Conec  
Lippstadt, Germany



Amphenol Sincere  
Guangzhou, China



Amphenol PCD  
Shenzhen, China



Amphenol Goldstar  
Baicheng / Yulin, China



Amphenol Daeshin  
Bucheon-City, South Korea



Amphenol Onaon  
Milpitas, USA



Amphenol GEC  
Changzhou, China



Amphenol Technology SZ  
Shenzhen, China



Amphenol Anytek  
Shenzhen, China



Amphenol Technology Zh  
Zuhai, China



Amphenol LTW  
Taipei ,TW/ Kunshan, China



Cable Assemblies

Connectors

Testing

Flex Circuits

# AMPHENOL INDUSTRIAL VERTICAL FOCUS MARKETS

HEAVY  
EQUIPMENT



RENEWABLE  
ENERGY



AUTOMATION &  
ROBOTICS



HYBRID &  
ELECTRIC VEHICLES



MARINE



TEST, MEASUREMENT &  
INSTRUMENTATION



LIGHTING &  
ENTERTAINMENT



OIL & GAS



MEDICAL



RAIL MASS  
TRANSIT





VERTICAL MARKET

# HYBRID & ELECTRIC VEHICLES

- High voltage
- High power
- Connection solution for electric vehicles
- Integrated high voltage safety locking
- 360° shielding
- Vibration resistant
- IP67 / IP69K



# AMPHENOL INDUSTRIAL SOLUTION FOR BATTERIES & HEV



EPOWER



HVPT



HVPTB



HVPTM



HVBI



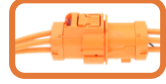
HVG



RADLOK



HVSL



HVSL - AUX



HVSL PCB



SURLOK PLUS



CABLE ASSEMBLY



BUSBAR



EPOWER LITE



UPC



POWER TO BOARD



CCS



FPCA



HVPC



HVSLS



PDU



POWERLOK G1



POWERLOK G2



ACTIVE PIN|LOK



MSD



CHD14



CHARGING



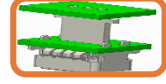
LVRC



HC32



BSM



SFBC



HEV

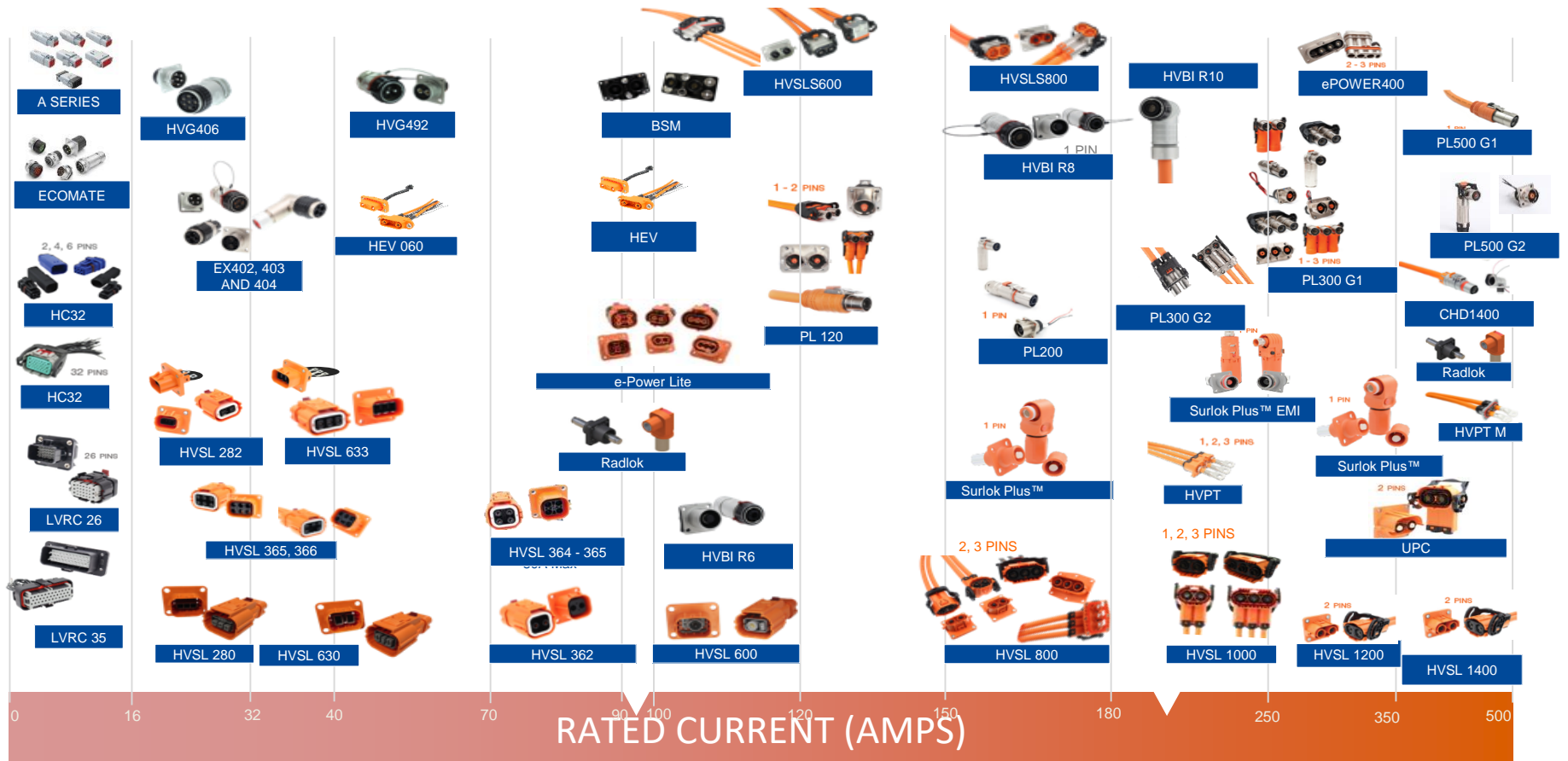


BATTERY MATE

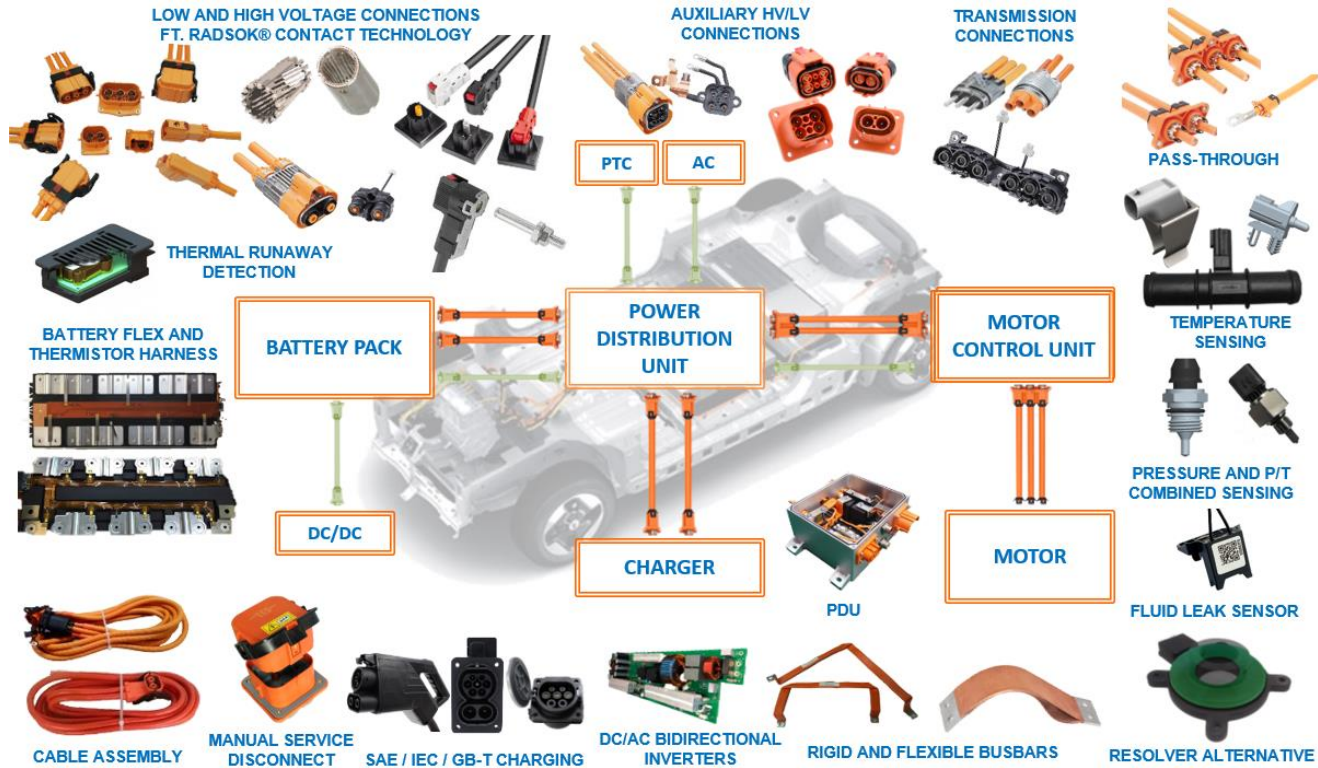


CONDUITS





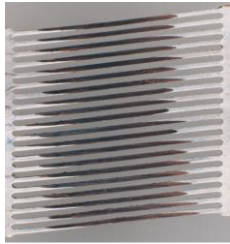
# AMPHENOL INDUSTRIAL FULL SOLUTION FOR BATTERIES & HEV



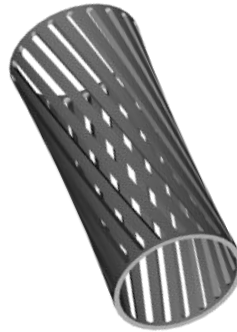


# RADSOK® TECHNOLOGY

## HOW IS A RADSOK® CONTACT MADE?



STAMPED GRID

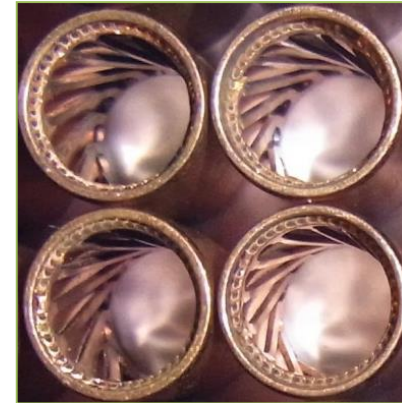
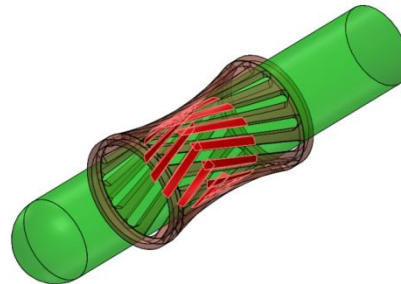


TWISTED GRID

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

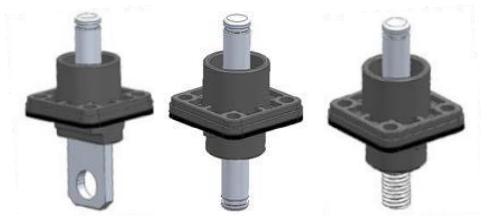
## KEY BENEFITS OF RADSOK® TECHNOLOGY

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



# RAD|LOK™

- ❑ CURRENT RATING UP TO 500AMP
- ❑ VOLTAGE RATING 1000V DC
- ❑ QUICK AUDIBLE LOCKING CLIP
- ❑ FROM 10MM<sup>2</sup> TO 150MM<sup>2</sup> CABLE SIZE
- ❑ 3 COLORS OPTIONS (RED, BLACK & ORANGE)
- ❑ FIELD CRIMPABLE, OVERMOLDED OR SOFT-BUSBAR
- ❑ RADSOK® CONTACTS FROM 3.6MM TO 14MM



Catalog



Presentation

BUSBAR PIN

SEALED FEED-  
THROUGH

OVERMOLDED CABLES

SOFT-BUSBARS



# SUR|LOK PLUS®

- ❑ VOLTAGE RATING FROM 1.000 TO 1.500V DC
- ❑ **3.6MM RADSOK**®: UP TO 70A (6 AND 10MM<sup>2</sup>)
- ❑ **5.7MM RADSOK**®: UP TO 120A (16 AND 25MM<sup>2</sup>)
- ❑ **8.0MM RADSOK**®: UP TO 200A (35 AND 50MM<sup>2</sup>)
- ❑ **10.3MM RADSOK**®: UP TO 300AMP (50, 70 AND 95MM<sup>2</sup>)
- ❑ **14MM RADSOK**®: UP TO 500AMP (95, 120 AND 150MM<sup>2</sup>)
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ CRIMP / LUG / BUSBAR TERMINATION
- ❑ MECHANICAL KEYS & COLOR CODING
- ❑ UL4128
- ❑ EMI SHIELDING + HVIL (8.0 & 14MM METAL ONLY)



8MM – EMI SHIELDED



14MM – EMI SHIELDED



5.7M 8.00 AND 10.3MM INLINE



3.6MM RADSOK



Catalog



Presentation



## ACTIVE PIN | LOK

- ❑ LV VOLTAGE
- ❑ UP TO 200A
- ❑ FIELD CRIMPABLE
- ❑ 3.6, 6.0 AND 8.00 RADSOK<sup>®</sup>
- ❑ BLIND MATING POSSIBLE, AUTOMATIC CENTERING
- ❑ CORROSION RESISTANT
- ❑ VIBRATION PROOF
- ❑ COLOR CODING
- ❑ AVAILABLE FOR POWER-TO-BOARD APPLICATION



Catalog



Presentation





## BATTERY | MATE

- ❑ VOLTAGE RATING 1.500V DC
- ❑ UP TO 200A@40C
- ❑ FIELD CRIMPABLE
- ❑ 35-50MM2 CABLE
- ❑ IP30 (MATED CONDITIONS)
- ❑ COLORED & MECHANICAL CODING
- ❑ TOUCH PROTECTION
- ❑ UL 4128 & 1973



Catalog

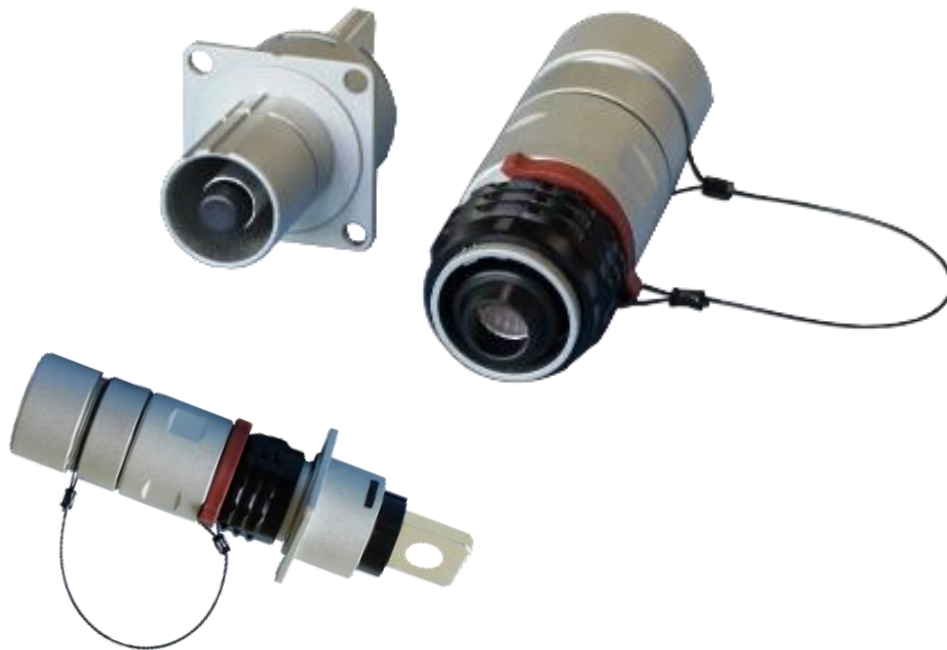


Presentation



# HVBI

- ❑ VOLTAGE RATING 1000V DC
- ❑ **6MM** : UP TO 120A (16 AND 25MM<sup>2</sup>)
- ❑ **8.0MM**: UP TO 180A (35 AND 50MM<sup>2</sup>)
- ❑ **10.0 MM**: UP TO 250A (50 AND 70 MM<sup>2</sup>)
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ MECHANICAL KEYS
- ❑ EMI SHIELDING
- ❑ HVIL
- ❑ PUSH-PULL CONNECTION + SECONDARY LOCK



# HVG

- ❑ VOLTAGE RATING 690V DC
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ MECHANICAL KEYS
- ❑ EMI SHIELDING
- ❑ PUSH-PULL CONNECTION + SECONDARY LOCK



**403**  
3 X (23A to 40A) + 2 X 7.5A



**404**  
4 X (23A to 40A) + 2 X 7.5A



**402**  
2 X (23A to 40A) + 2 X 7.5A



**492**  
2 X (40A to 50A) + 2 X 7.5A



**406**  
6 X (23A to 40A) + 2 X 7.5A



Catalog



Presentation



## HVSL 800/1000/1200/1400

- ❑ VOLTAGE RATING 1000V DC
- ❑ 8MM STD CONTACTS, 10MM AND 12MM RADSOK<sup>®</sup>
- ❑ **8.0MM:** UP TO 180A (25, 35 AND 50MM<sup>2</sup>)
- ❑ **10.0 MM:** UP TO 270A (50 AND 70 MM<sup>2</sup>)
- ❑ **12.0MM:** UP TO 350A (70 AND 95MM<sup>2</sup>)
- ❑ **14.0MM:** UP TO 350A (95, 120 AND 150MM<sup>2</sup>)
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ MECHANICAL KEYS
- ❑ EMI SHIELDING
- ❑ HVIL
- ❑ SECONDARY LOCK



Catalog



Presentation





## HVSLs 600/800

- ❑ VOLTAGE RATING 1000V DC
- ❑ 6MM AND 8MM CONTACTS
- ❑ **6.0MM:** UP TO 120A (16 AND 25MM<sup>2</sup>)
- ❑ **8.0MM:** UP TO 180A (25, 35 AND 50MM<sup>2</sup>)
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ MECHANICAL KEYS
- ❑ EMI SHIELDING
- ❑ HVIL
- ❑ SECONDARY LOCK



# HVSL 282/633/364/365/366/280/630/635

- ❑ VOLTAGE RATING UP TO 1000V DC
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ MECHANICAL KEYS
- ❑ EMI SHIELDING
- ❑ SECONDARY LOCK
- ❑ HVIL



**HVSL280**



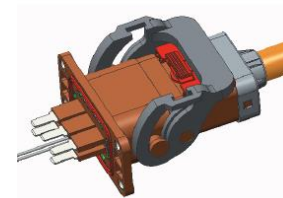
**HVSL630**



**HVSL366**



**HVSL364 INLINE**



**HVSL635 INLINE**



**HVSL282**



**HVSL633**



**HVSL364**



**HVSL365**



Catalog



Presentation



# HVSLW 282/633/362

- VOLTAGE RATING 1000V DC
- IP67/IP69K MATED – IP2X UNMATED
- MECHANICAL KEYS
- EMI SHIELDING
- SECONDARY LOCK
- HVIL
- SOLDERED PINS FOR POWER CIRCUIT BOARD



**HVSLW282**



**HVSL362**



**HVSLW633**



Catalog



Presentation



# CHD14

- ❑ VOLTAGE RATING 1.500V DC
- ❑ UP TO 500A
- ❑ FROM 95 TO 150MM<sup>2</sup> CABLE
- ❑ EMI SHIELDING
- ❑ IP67 & IP6K9K MATED, IP2XB
- ❑ IP67 (UNMATED)
- ❑ 1 AND 2 POLES
- ❑ UP TO 1000V VOLTAGE RATING



# HVPT

- ❑ PASS THROUGH CONNECTION
- ❑ EMI SHIELDING
- ❑ IP67 & IP6K9K MATED
- ❑ 1 TO 3 POLES
- ❑ UP TO 1000V VOLTAGE RATING
- ❑ FROM 2.5 UP TO 70MM2 CABLE



Catalog



Presentation





## HVPT-B

- ❑ PASS THROUGH CONNECTION
- ❑ ALTERNATIVE TO THE MARKET STANDARDS
- ❑ EMI SHIELDING
- ❑ IP67 & IP6K9K MATED
- ❑ 2 AND 3 POLES
- ❑ UP TO 1.000V VOLTAGE RATING
- ❑ UP TO 70MM2 CABLE
- ❑ USCAR2/37 COMPLIANT



Catalog



Presentation



## HVPT-M

- ❑ PASS THROUGH CONNECTION, ALUMINUM BODY
- ❑ 360° EMI SHIELDING
- ❑ IP67 & IP6K9K MATED
- ❑ 2 POLES
- ❑ UP TO 1.000V VOLTAGE RATING
- ❑ FROM 95 TO 120 MM2 CABLE



Catalog



Presentation



# HVPC

- ❑ CURRENT RATING UP TO 180A
- ❑ UP TO 1000V VOLTAGE RATING
- ❑ FROM 35MM<sup>2</sup> TO 50MM<sup>2</sup> CABLE SIZE
- ❑ **8.0MM** ®: UP TO 180A (35 AND 50MM<sup>2</sup>)
- ❑ **14.0MM** ®: UP TO 400A (95 AND 120MM<sup>2</sup>)
- ❑ EMI SHIELDING
- ❑ IP67 / IP6K9K MATED – IP2X
- ❑ MECHANICAL KEYS
- ❑ PASS THROUGH CONNECTION



Catalog



Presentation



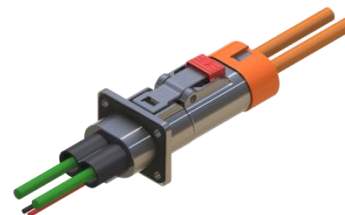
## POWER | LOK FOR MAIN POWER

- ❑ CURRENT RATING UP TO 500A
- ❑ VOLTAGE RATING 1.000V
- ❑ FROM 16MM<sup>2</sup> TO 150MM<sup>2</sup> CABLE SIZE
- ❑ **5.7MM** RADSOK<sup>®</sup>: UP TO 120A (16 AND 25MM<sup>2</sup>)
- ❑ **8.0MM** RADSOK<sup>®</sup>: UP TO 200A (25, 35 AND 50MM<sup>2</sup>)
- ❑ **10.0 MM** RADSOK<sup>®</sup>: UP TO 300A (35, 50, 70 AND 95 MM<sup>2</sup>)
- ❑ **12.0MM** RADSOK<sup>®</sup>: UP TO 400A (95 AND 120MM<sup>2</sup>)
- ❑ **14.0MM** RADSOK<sup>®</sup>: UP TO 500A (95, 120 AND 150MM<sup>2</sup>)
- ❑ EMI SHIELDING
- ❑ MECHANICAL KEYS & COLOR CODING
- ❑ IP67 MATED – IP2X UNMATED
- ❑ CRIMPABLE AND OVERMOLDED



# POWER|LOK FOR AUXILIARY POWER

- ❑ CURRENT RATING UP TO 60AMP
- ❑ VOLTAGE RATING 1000V
- ❑ FROM 2.5MM<sup>2</sup> TO 10MM<sup>2</sup> CABLE SIZE
- ❑ EMI SHIELDING
- ❑ MECHANICAL KEYS & COLOR CODING
- ❑ IP67 MATED – IP2X UNMATED
- ❑ CRIMPABLE
- ❑ HVIL
- ❑ 2, 3, 4 AND 2+5 CONFIGURATION



POWERLOK 60



POWERLOK 40 – 3 WAYS





## POWER | LOK G2

- ❑ CURRENT RATING UP TO 400AMP
- ❑ VOLTAGE RATING 1000V
- ❑ FROM 2.5MM<sup>2</sup> TO 120MM<sup>2</sup> CABLE SIZE
- ❑ **3.6MM** RADSOK<sup>®</sup>: UP TO 60A (2.5, 4, 6 AND 10MM<sup>2</sup>)
- ❑ **10.0MM** RADSOK<sup>®</sup>: UP TO 300A (25, 35,50, 70 AND 95MM<sup>2</sup>)
- ❑ **14.0MM** RADSOK<sup>®</sup>: UP TO 400A (70, 95 AND 120MM<sup>2</sup>)
- ❑ EMI SHIELDING
- ❑ MECHANICAL KEYS & COLOR CODING
- ❑ IP67 AND IP6K9K MATED – IP2X UNMATED
- ❑ SECONDARY LOCK
- ❑ HVIL



Catalog



Presentation



## E-POWER

- ❑ CURRENT RATING UP TO 700A
- ❑ VOLTAGE RATING 1000V
- ❑ FROM 25MM<sup>2</sup> TO 300MM<sup>2</sup> CABLE SIZE
- ❑ **8.0MM** RADSOK<sup>®</sup>: UP TO 200A (25, 35 AND 50MM<sup>2</sup>)
- ❑ **11.1 MM** RADSOK<sup>®</sup>: UP TO 400A (50, 70 AND 95 MM<sup>2</sup>)
- ❑ **18.0MM** RADSOK<sup>®</sup>: UP TO 700A (240 AND 300MM<sup>2</sup>)
- ❑ EMI SHIELDING
- ❑ HVIL
- ❑ MECHANICAL KEYS
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ GREY-ZINC NICKEL OPTION PLATING



Catalog

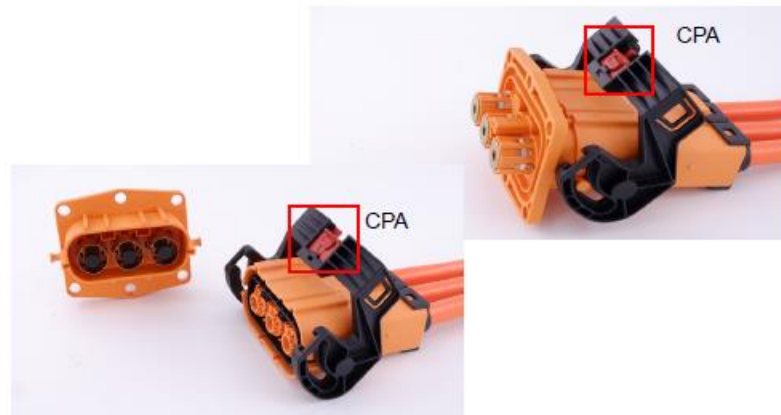


Presentation



# UPC

- ❑ CURRENT RATING UP TO 450A
- ❑ VOLTAGE RATING 1000V
- ❑ FROM 25MM<sup>2</sup> TO 150MM<sup>2</sup> CABLE SIZE
- ❑ **9.1MM RADSOK**®: UP TO 250A (35 AND 50MM<sup>2</sup>)
- ❑ **14MM RADSOK**®: UP TO 450A (95, 120 AND 150 MM<sup>2</sup>)
- ❑ EMI SHIELDING
- ❑ HVIL & CPA
- ❑ MECHANICAL KEYS
- ❑ IP67/IP69K MATED – IP2X UNMATED



Catalog



Presentation



## E-POWER | LITE

- ❑ CURRENT RATING UP TO 120A
- ❑ VOLTAGE RATING 1000V
- ❑ FROM 2.5MM<sup>2</sup> TO 25MM<sup>2</sup> CABLE SIZE
- ❑ **2.4MM** RADSOK®: UP TO 40A (2.5 AND 4MM<sup>2</sup>)
- ❑ **3.6MM** RADSOK®: UP TO 70A (2.5, 4, 6 AND 10MM<sup>2</sup>)
- ❑ **5.7MM** RADSOK®: UP TO 120A (16 AND 25MM<sup>2</sup>)
- ❑ EMI SHIELDING
- ❑ HVIL
- ❑ MECHANICAL KEYS
- ❑ IP67/IP69K MATED – IP2X UNMATED



EPOWER LITE 5.7



Catalog



Presentation



# HEV060/080/120/200

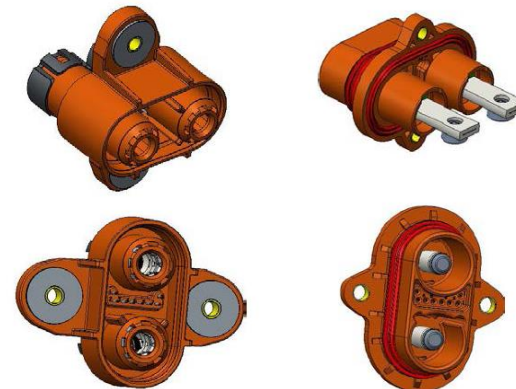
- ❑ CURRENT RATING UP 120A
- ❑ MIX SIGNAL AND POWER CONFIGURATIONS
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ UP TO 3.000 CYCLES



HEV060



HEV080



HEV200





# BSM

- ❑ CURRENT RATING UP TO 300A
- ❑ VOLTAGE RATING 1000V DC
- ❑ IP67/IP69K MATED – IP2X UNMATED
- ❑ UP TO 5.000 CYCLES
- ❑ UP TO IP67 – IP2XB



HEV5



HEV100



HEV300



Catalog

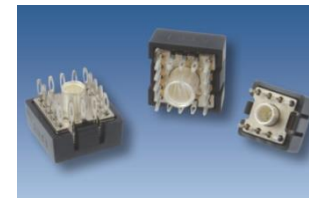


Presentation

## ADDITIONAL EV PRODUCTS

## BOARD | POWER

- POWER TO BOARD
- POWER TO BUSBARS
- WIRE TO BOARD
- SOLDER OR PRESSURE, ROHS COMPLIANT
  - 2.4MM RADSOK® (35 AMP @ 85C)
  - 3.6MM RADSOK® (80 AMP @ 85C)
  - 4,8MM RADSOK® (100 AMP @ 85C)
  - 5,7MM RADSOK® (120 AMP @ 85C)
  - 8,00MM RADSOK® (200 AMP @ 85C)
  - 10,00MM RADSOK® (300 AMP @ 85C)
  - 12,00MM RADSOK® (400 AMP @ 85C)
  - 14,00MM RADSOK® (500 AMP @ 85C)
  - 18,00MM RADSOK® (750 AMP @ 85C)



Catalog

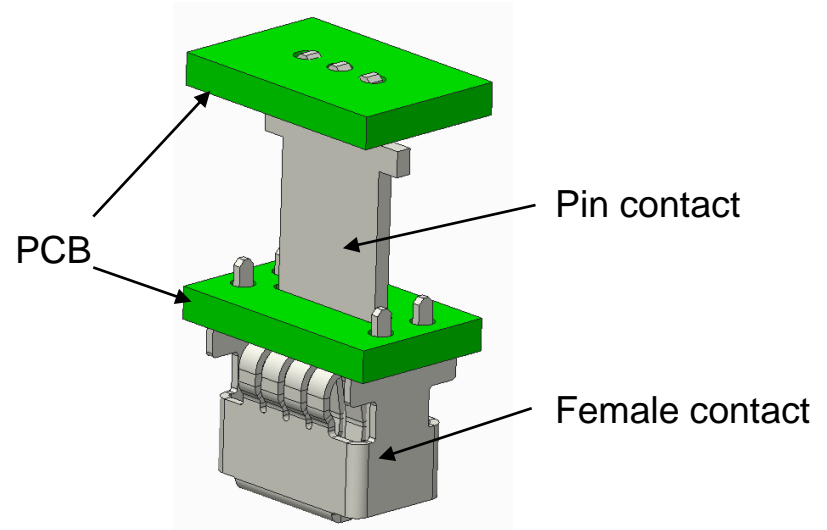
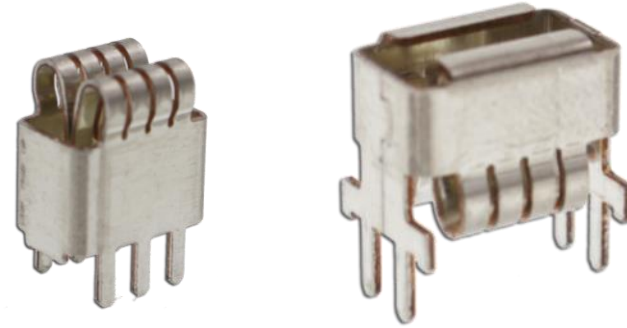


Presentation



# SFBC

- BOARD TO BOARD
- CURRENT RATING UP TO 80A
- OVER 50 MATING CYCLES
- SMALL AND LIGHT LOW COST SOLUTION
- CUSTOM SOLUTION QUICKLY AVAILABLE



# LVRC12, 26 and 35

- ❑ CURRENT RATING UP TO 13A
- ❑ **12, 26 AND 35 WAYS**
- ❑ SEALED FRONT & REAR PANEL MOUNTING
- ❑ MECHANICAL KEYS
- ❑ IP67 & IP6K9K MATED
- ❑ PLASTIC SHELL



LVRC 35



LVRC 26





# HC32

- ❑ CURRENT RATING UP TO 13A
- ❑ **32 WAYS**
- ❑ SEALED REAR PANEL MOUNTING
- ❑ MECHANICAL KEYS
- ❑ IP67 & IP6K9K MATED
- ❑ PLASTIC SHELL
- ❑ MIX POWER & SIGNAL



# MSD - MANUAL SERVICE DISCONNECT



700 VDC (below 315A) / 600 VDC (350A & 400A)  
170A without fuse

**MINI MSD**

750 VDC  
220A without fuse

**MINI MSD V**



800 VDC ALL  
260A without fuse

**MSD V**



1000 VDC ALL  
With fuse: 300A (350@30min) / With shunt 350A (400A@30min)

**MSD XL**



FUSE RATED CURRENT (A)

80

315

350

400

550

630



Catalog



Presentation

# Amphenol

INDUSTRIAL PRODUCTS GROUP

## EV Charging



**MCS**



-  MCS LVL 1 Passive +350A
-  MCS LCC Liquid Cooled LVL 2 1000A LVL 3 3000A
-  MCS Inlet Passive LVL 2 1000A
-  MCS Inlet Liquid Cooled LVL 3 3000A

★ NPI Q4 2022

**CCS1 UL**



-  CCS1 Plug HPC LCC 600A
-  CCS1 Copper 125A, 150A, 200A, 250A, 300A, 350A, 400A★
-  CCS1 Ultra Thin 40A, 65A, 80A
-  CCS1 Inlet 65A - 500A

★ NPI 2023 Q2/Q3

**AC SAE J1772**



-  AC SAE Plug 16A to 80A
-  AC SAE - CAC 32A
-  AC SAE Portable Mode 1 16A to 32A
-  AC SAE Inlet 16A to 80A

**CCS2 IEC**



-  CCS2 Plug HPC LCC 550A
-  CCS2 Copper 200A, 250A, 400A, 150A★
-  CCS2 Ultra Thin 40A, 65A, 80A
-  CCS2 Inlet 65A - 500A

**AC IEC**



-  IEC Plug 16A to 80A
-  IEC Jumper 16A to 80A
-  IEC Shutter 32A
-  IEC AC Portable Mode 1 16A to 32A

AC	GB/T	DC
		
		
		
		
		
		
		
		



# FLEXIBLE CONDUITS



## Harnessflex on Heavy Automotive and Special Vehicles

MAXIMUM CABLE PROTECTION – **EVolving** Cable / Connetivity Risk Covered

### Harnessflex EVO

Specialist range of conduit, fittings and backshells for full compliance of use within the electric vehicle industry.



**Harnessflex Standard**

Classic offering by Harnessflex which provides a comprehensive range of cable protection products for heavy automotive 12v and 24v systems.



### Harnessflex X-Temp

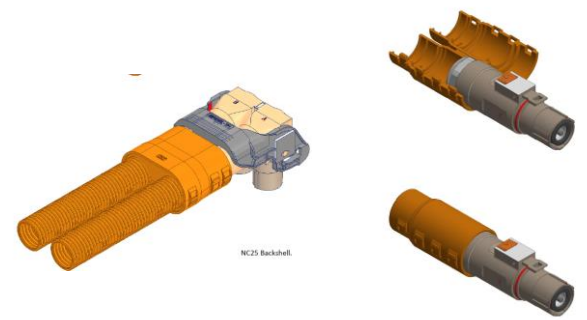
A range of extreme temperature conduit, fittings and backshells that can withstand both high (190°C) and low (-50°C) temperatures, as well as continued vibration and flexing.



(190°C)



(-50°C)



### Features & Benefits:

- -40C to +185C (+200C short term)
- High pull-out strength
- Protects expensive EV connectors
- Low smoke & Halogen free
- CE Mark to the low voltage directive
- RoHS Compliant to 2011/65/EU
- Conforms with end of life vehicle directive (ELV) EU200/53/EC



Catalog



Presentation



## PDU – POWER DISTRIBUTION BOX

- ❑ POWER DISTRIBUTION UNIT (PDU)
- ❑ BATTERY DISCONNECT UNIT (BDU)
- ❑ JUNCTION BOX
- ❑ BUILD TO PRINT
- ❑ CUSTOM DESIGN
- ❑ SHIELDING ALUMINUM HOUSING
- ❑ PLASTIC MOULDED HOUSING



Catalog

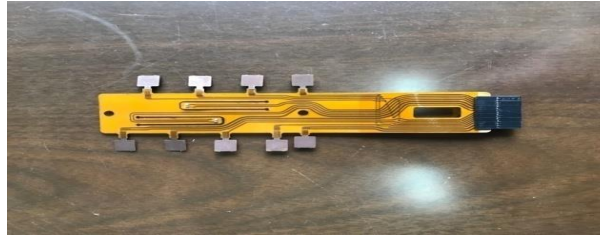


Presentation



# FLEXIBLE CIRCUITS

- ❑ REPLACE CABLES & PCB CIRCUITS
- ❑ SAVE SPACE & WEIGHT
- ❑ HIGH RELIABILITY
- ❑ HIGH HEAT DISSIPATION
- ❑ EASY & LOW COST ASSEMBLY



## Product Application – HEV & Better



PCB+Cable design Solution



FPC Solution



Catalog



Presentation



## CCS – CELL CONNECTION SYSTEM

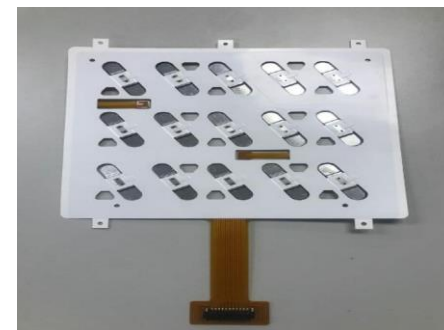
- ❑ TEMPERATURE AND VOLTAGE SENSING OF BATTERY CELLS
- ❑ CABLES, FPC & LAMINATED BUSBARS CONSTRUCTION
- ❑ FULL ASSEMBLY DESIGN (FPC, PLASTIC COVER, BUSBARS, CONNECTION)



BUSBAR HOLDER

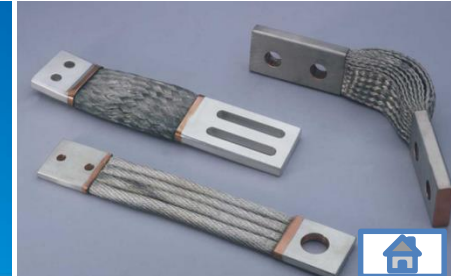
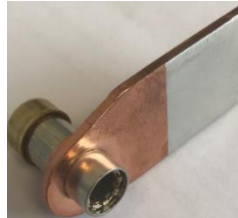


LAMINATED BUSBARS



# BUSBAR: FLEXIBLE & RIGID

- ❑ RIGID BUSBARS
- ❑ FLEXIBLE BUSBARS (SOFTENED, COPPER-FOIL, BRAIDED)
- ❑ STAMPED BUSBARS
- ❑ MULTIPLE CONNECTION TYPE
- ❑ RADSOK® FEATURE
- ❑ INSULATION MATERIAL
- ❑ ALUMINUM / COPPER MATERIAL



Catalog

Presentation

# HV CABLE ASSEMBLIES



Catalog



Presentation

A 3D rendered image of two white robotic hands, each holding a silver interconnect cable. The hands are positioned on the left and right sides of the frame, with their fingers gripping the cables. The background is a dark blue gradient with faint, out-of-focus images of interconnect components. The text 'YOUR PARTNER FOR INTERCONNECT SOLUTIONS' is centered in the middle of the image in a bold, white, sans-serif font.

# YOUR PARTNER FOR INTERCONNECT SOLUTIONS