

# Excel|Mate Mono

## High Voltage with Inter-Lock



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**ExcelMate Mono (HVBI)**

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**HVS**

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## ExcelMate Mono (HVBI)



### KEY FEATURES

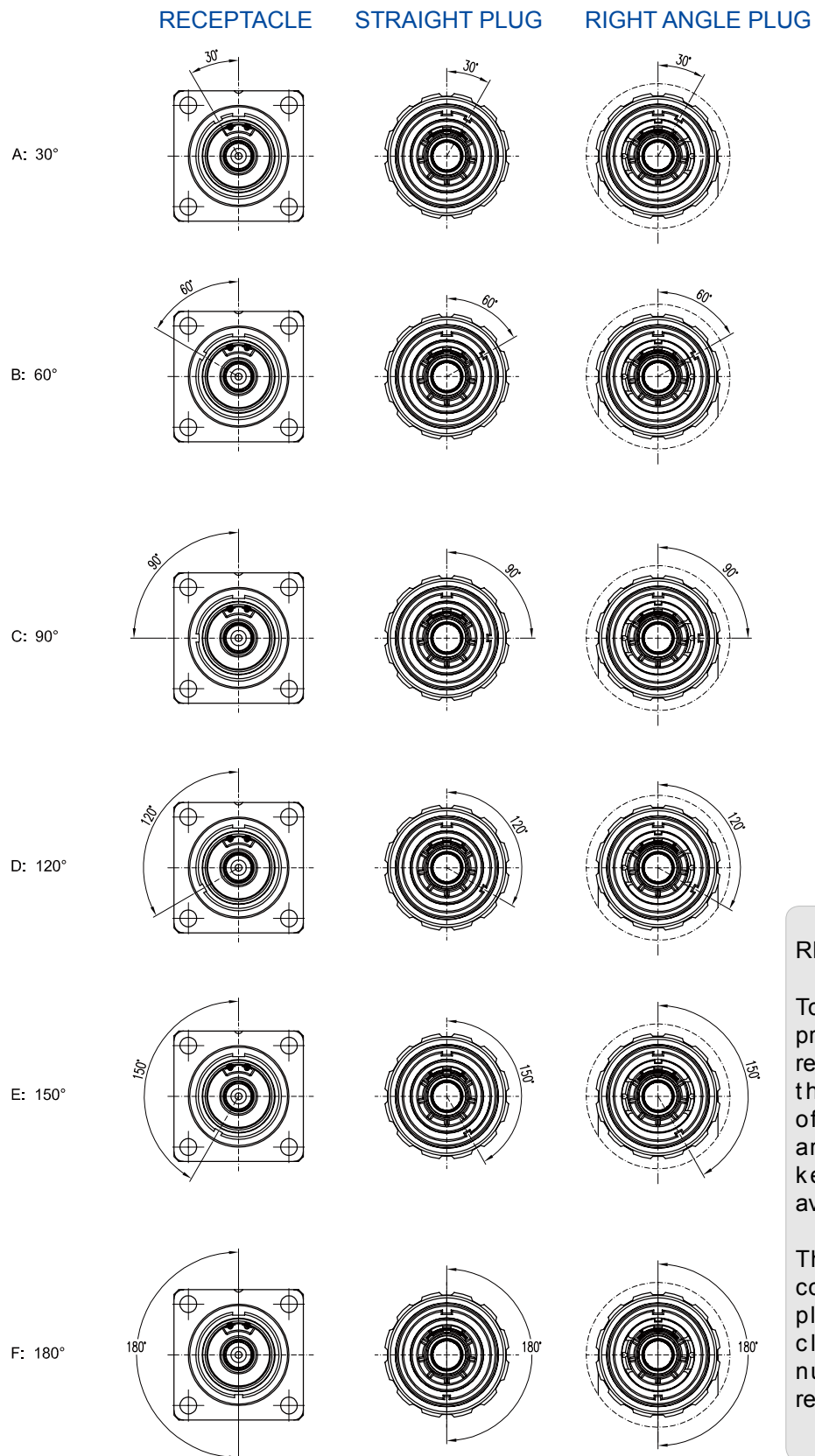
- High voltage with interlock
- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Touch-proof IP2X
- Sealing, IP67 (mated), IP6K9K
- RoHS compliant
- Multiple coding positions

MECHANICAL	
Durability	> 200 mating cycles
Wire range	16 to 70mm <sup>2</sup>
Connection type	Crimping
ELECTRICAL	
Rated voltage	1000V DC
Rated current	250A Max
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	3000V AC
ENVIRONMENTAL	
Sealing	IP67 (mated)
Operating temperature	-40°C to 125°C
Ambient temperature	-40°C to 70°C
Inflammability	UL94V0
Salt spray	48h, 96h
MATERIAL	
Shell	Zinc alloy, zinc plating and anodic oxidation
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber

HOW TO ORDER: RECEPTACLE

	HVBI	0	02R6	A	M	H	B
<b>Shell type:</b> 0: Receptacle							
<b>Insert size:</b> 02R6: 6mm Male contact (Rated current 120A) 03R8: 8mm Male contact (Rated current 180A) 05R10: 10mm Male contact (Rated current 250A)							
<b>HVIL:</b> A: With HVIL B: Without HVIL							
<b>Insert type:</b> M: Male contact							
<b>Termination:</b> H: Copper bar T: Screw							
<b>Alternate keying positions &amp; Color of locking nut:</b> A: 30°, Red B: 60°, Black C: 90°, Yellow D: 120°, Green E: 150°, Blue F: 180°, Purple							

## ALTERNATE KEYING POSITIONS

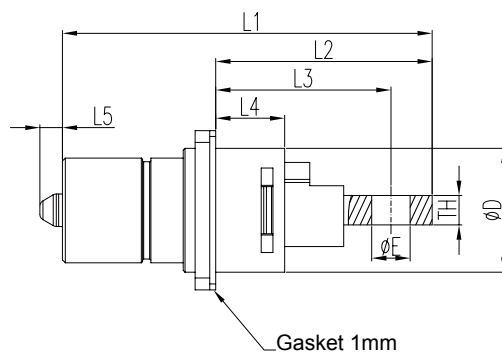
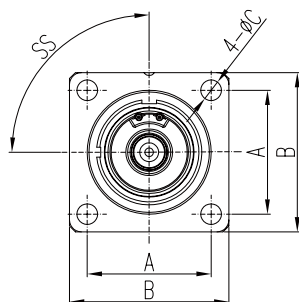


### REMARK

To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

The shell key is rotated counter-clockwise. The plug would be rotated clockwise the same number of degrees in respect to the shell key.

## RECEPTACLE WITH COPPER BAR

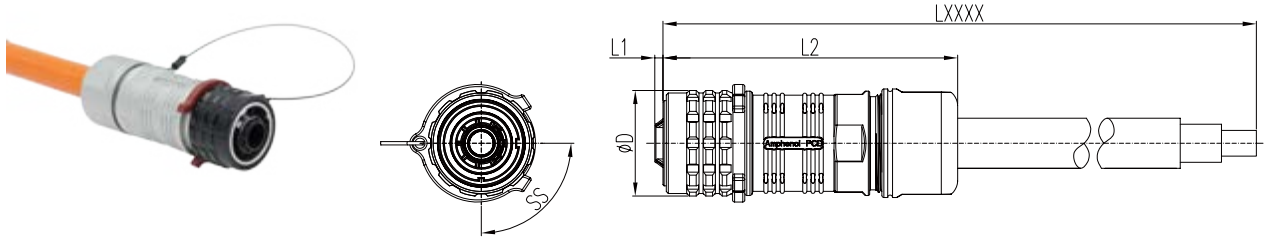


Part number	A	B	C	D	E	L1	L2	L3	L4	L5	TH
HVBI-0-02R6-XMHX	21.0	27.0	3.5	21.0	6.5	62.7	37.7	30.7	12.7	3.8	5.0
HVBI-0-03R8-XMHX	23.0	31.0	4.5	23.0	8.5	76.7	43.7	35.7	15.9	/	5.0
HVBI-0-05R10-XMHX	24.6	33.0	4.5	26.0	10.5	85.9	52.6	40.6	18.4	0.8	6.0

## HOW TO ORDER: PLUG

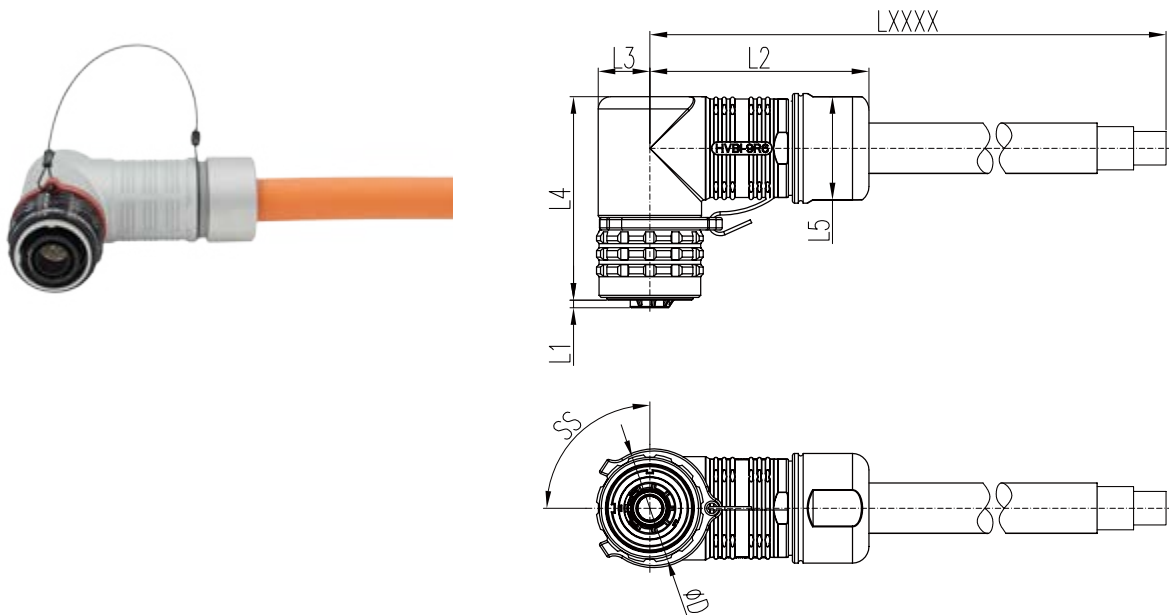
	HVBI	9	02R6	A	F	C	A	FG	25	LXXXX
<b>Shell type:</b> 7: Straight plug 9: Right angle plug										
<b>Insert size:</b> 02R6: 6mm Radsok (Rated current 120A) 03R8: 8mm Radsok (Rated current 180A) 05R10: 10mm Radsok (Rated current 250A)										
<b>HVIL:</b> A: With HVIL B: Without HVIL										
<b>Insert type:</b> F: Female contact										
<b>Contact type:</b> C: Crimp										
<b>Alternate keying positions:</b> A: 30°, Red B: 60°, Black C: 90°, Yellow D: 120°, Green E: 150°, Blue F: 180°, Purple										
<b>FG:</b> Shielded <b>PC:</b> Unshielded										
<b>Cable section:</b> 16: 16mm <sup>2</sup> cable 25: 25mm <sup>2</sup> cable 35: 35mm <sup>2</sup> cable 50: 50mm <sup>2</sup> cable 70: 70mm <sup>2</sup> cable										
<b>Cable length:</b> LXXXX: Cable length (Unit in mm)										

## STRAIGHT PLUG



Part number	D	L1	L2	LXXXX	Cable section(mm²)
HVBI-7-02R6-XFC-XXXX-FG / PC....	26.0	2.0	70	Cable length (mm), custom orders are available	16mm² to 25mm²
HVBI-7-03R8-XFC-XXXX-FG / PC....	27.5	2.0	82		35mm² to 50mm²
HVBI-7-05R10-XFC-XXXX-FG / PC...	32.5	1.5	92		50mm² to 70mm²
Notes: <b>FG</b> : Shielded type <b>PC</b> : Unshielded type					

## RIGHT ANGLE PLUG



Part number	D	L1	L2	L3	L4	L5	LXXXX	Cable section (mm <sup>2</sup> )
HVBI-9-02R6-XFC-XXXX-FG / PC....	26.0	1.8	53.0	12.5	49.3	25.0	Cable length (mm), custom orders are available	16mm <sup>2</sup> to 25mm <sup>2</sup>
HVBI-9-03R8-XFC-XXXX-FG / PC....	27.5	2.0	62.0	13.9	58.5	27.3		35mm <sup>2</sup> to 50mm <sup>2</sup>
HVBI-9-05R10-XFC-XXXX-FG / PC...	32.5	1.5	69.5	16.0	64.0	31.5		50mm <sup>2</sup> to 70mm <sup>2</sup>
Notes: <b>FG</b> : Shielded type <b>PC</b> : Unshielded type								



## HVG SERIES



### KEY FEATURES

- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required to unmate
- Sealing, IP67 (mated)
- Multiple coding positions
- RoHS compliant

APPLICATIONS	
xEV air-conditioner	
DCDC	
PTC	
Power distribution boxes	
MECHANICAL	
Durability	> 200 mating cycles
Connection type	Crimping
ELECTRICAL	
Rated voltage	690V to 800V DC
Rated current	50A Max
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	3000V AC
Shielding	Yes
ENVIRONMENTAL	
Sealing	IP67 (mated)
Temperature range	-40°C to 125°C, short term to 150°C
Inflammability	UL94V0
Salt spray	48h, 96h
MATERIAL	
Shell	Aluminum alloy with zinc, nickel plating and anodic oxidation
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber

## HOW TO ORDER

### RECEPTACLE

	HVG	1S	402	M	C	X
<b>Product type:</b> 1S: Flange receptacle						
<b>Insert arrangement:</b> 402: 2 X (23A to 40A) + 2 X 7.5A 403: 3 X (23A to 40A) + 2 X 7.5A 404: 4 X (23A to 40A) + 2 X 7.5A 406: 6 X (23A to 40A) + 2 X 7.5A 492: 2 X (40A to 50A) + 2 X 7.5A						
<b>Contact type:</b> M: Male contact F: Female contact						
C: Crimp version						
<b>Alternate keying positions:</b> /: Without X: 270° Y: 315° Z: 90° W: 45°						

### CONTACT

	HVG	30	M	4
<b>Contact sizes:</b> 30: 3.0mm 20: #20				
<b>Contact type:</b> M: Male contact F: Female contact				
<b>Crimp cable diameter:</b> 1: 0.5 to 1.0mm <sup>2</sup> 2: 2.5mm <sup>2</sup> 4: 4mm <sup>2</sup> to 6mm <sup>2</sup> 6: 6mm <sup>2</sup> to 10mm <sup>2</sup>				

## HOW TO ORDER

### PLUG

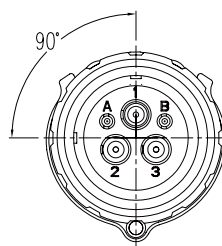
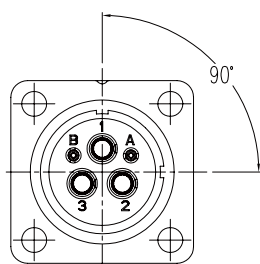
	HVG	1P	402	M	C	X	D	2A	2	LXXXX	H6
<b>Product type:</b>											
1P: Plug											
<b>Insert arrangement:</b>											
402: 2 X (23A to 40A) + 2 X 7.5A											
403: 3 X (23A to 40A) + 2 X 7.5A											
404: 4 X (23A to 40A) + 2 X 7.5A											
406: 6 X (23A to 40A) + 2 X 7.5A											
492: 2 X (40A to 50A) + 2 X 7.5A											
<b>Contact type:</b>											
M: Male contact											
F: Female contact											
<b>Contact type:</b>											
C: Crimp version											
<b>Alternate keying positions:</b>											
/: Standard position											
X: 270°											
Y: 315°											
Z: 90°											
W: 45°											
<b>Gland type:</b>											
/: Straight metal gland											
D: Straight plastic gland											
<b>Cable type:</b>											
1A: 1 single shielded cable											
1B: 1 single unshielded cable											
2A: 2 core shielded cable											
3A: 3 core shielded cable											
2B: 2 core unshielded cable											
3B: 3 core unshielded cable											
2D: 2 single unshielded cable											
3D: 3 single unshielded cable											
<b>Cable section:</b>											
1: 1.5mm <sup>2</sup>											
2: 2.5mm <sup>2</sup>											
4: 4mm <sup>2</sup>											
6: 6mm <sup>2</sup>											
10: 10mm <sup>2</sup>											
<b>Cable length:</b>											
LXXXX: Cable length (Unit in mm)											
<b>Termination:</b>											
H6: Through hole M6											
H8: Through hole M8											

## ALTERNATE KEYING POSITIONS

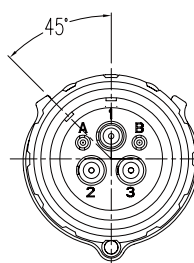
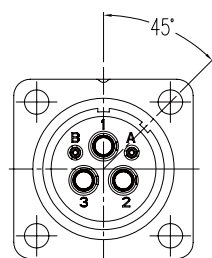
RECEPTACLE

STRAIGHT PLUG

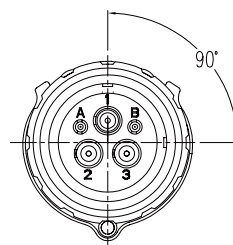
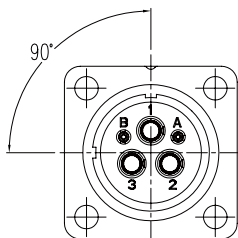
X: 270°



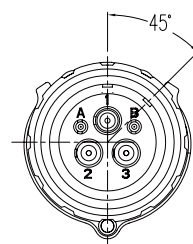
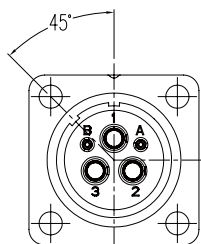
Y: 315°



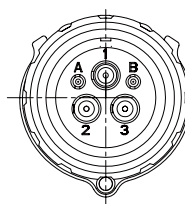
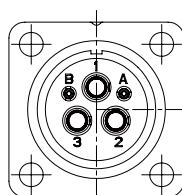
Z: 90°



W: 45°



N: NORMAL

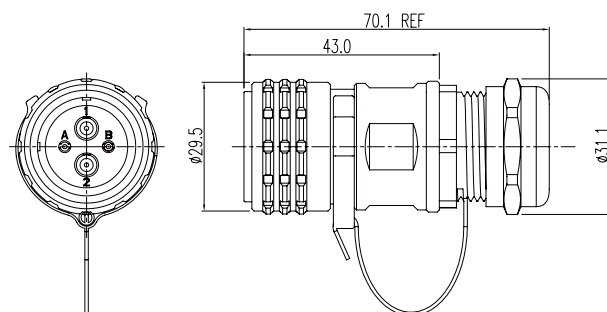
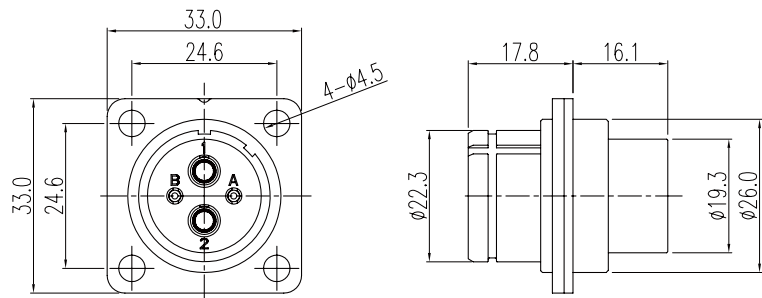


### REMARK

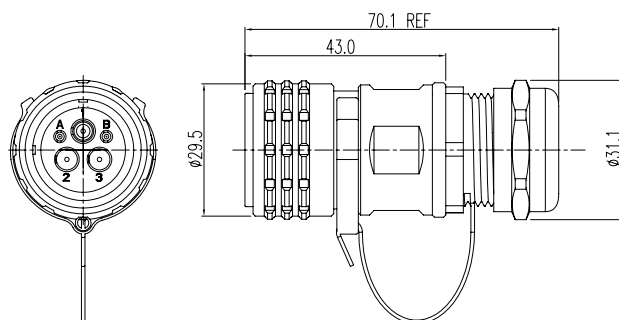
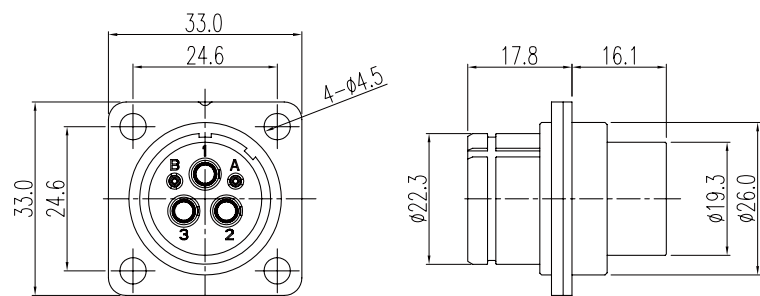
To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

The shell key is rotated counter-clockwise. The plug would be rotated clockwise the same number of degrees in respect to the shell key.

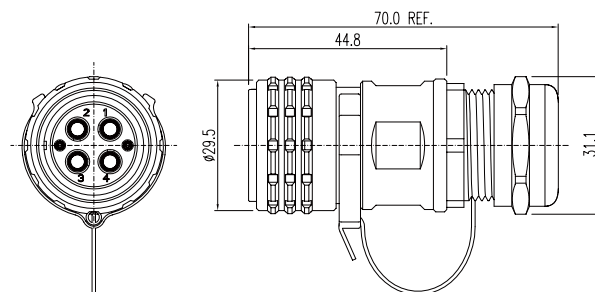
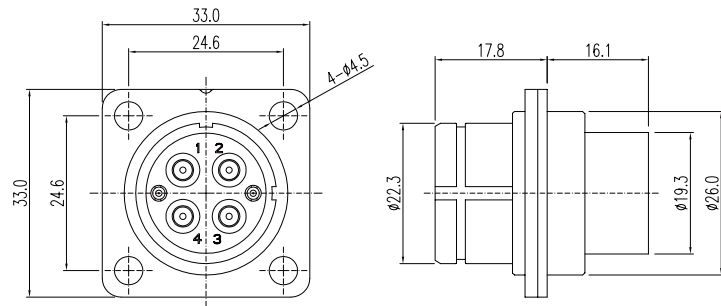
## RECEPTACLE AND PLUG: 402



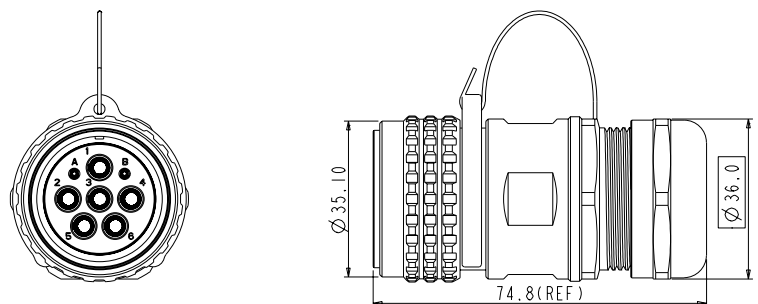
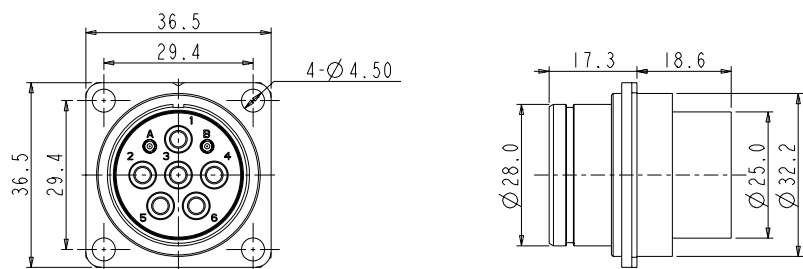
## RECEPTACLE AND PLUG: 403



## RECEPTACLE AND PLUG: 404

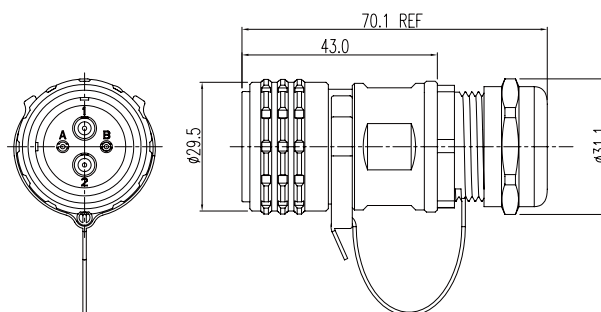
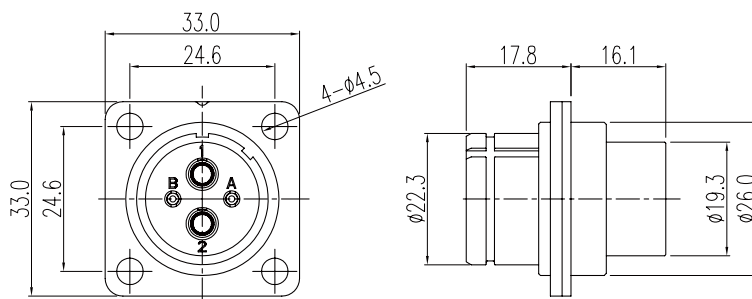


## RECEPTACLE AND PLUG: 406



## RECEPTACLE AND PLUG: 492

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## HVS SERIES



### KEY FEATURES

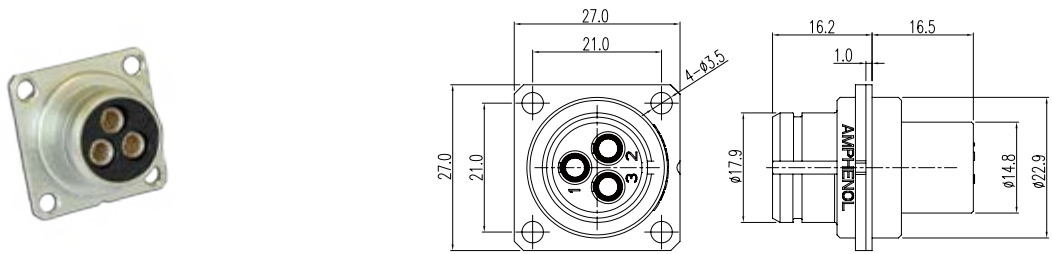
- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Sealing, IP67 (mated)
- Multiple coding positions
- RoHS compliant

APPLICATIONS	
xEV air-conditioner	
DCDC	
PTC	
Power distribution boxes	
MECHANICAL	
Durability	> 200 mating cycles
Connection type	Crimping
ELECTRICAL	
Rated voltage	230V AC / 400V DC
Rated current	32A Max
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	2500V AC
Shielding	Yes
ENVIRONMENTAL	
Sealing	IP67 (mated)
Temperature range	-40°C to 125°C, short term to 150°C
Inflammability	UL94V0
Salt spray	48h, 96h
MATERIAL	
Shell	Aluminum alloy with zinc, nickel plating and anodic oxidation
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber



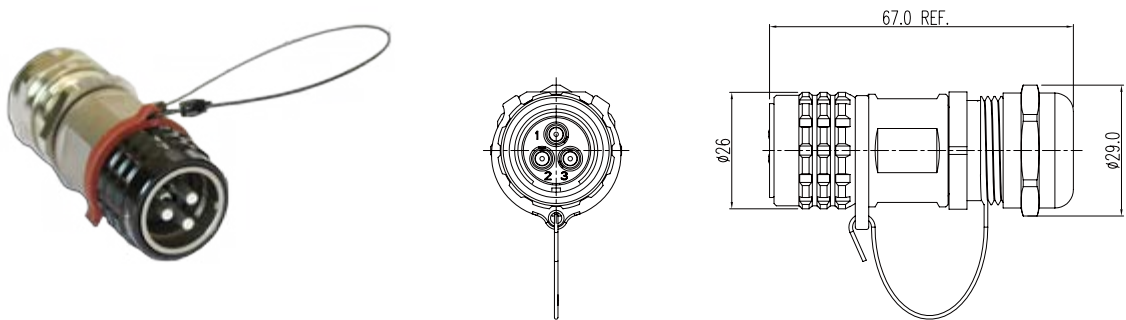
RECEPTACLE

P/N: **HVS1S-203FC** (socket) / **HVS1S-203MC** (pin)



PLUG

P/N: **HVS1P-203MC** (pin) / **HVS1P-203FC** (socket)



TOOLS

Contact size	Cable section (mm <sup>2</sup> )	Extraction tool
#20	0.5 to 1	HV-TOOL-20R
3.0mm	2.5 / 4.0 / 6.0	HV-TOOL-30R
3.6mm	6 / 10.0	HV-TOOL-36R

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Amphenol PCD Shenzhen reserves the right to clarify this catalog.