



# Excel | Mate Mono

## High Voltage with Inter-Lock

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TRUSTED GLOBALLY

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CHD SERIES



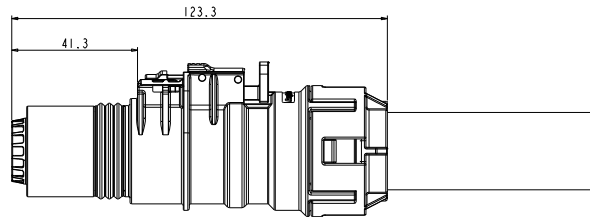
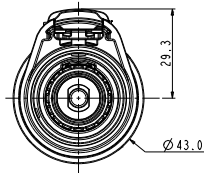
**KEY FEATURES**

- Unmated socket: IP67
- Salt Spray over 500H
- Rated current up to 500A
- Rated voltage up to 1500V

APPLICATIONS	
CHD has been designed for high-power charging in harsh environments.	
MECHANICAL	
Durability	> 50 mating cycles
ELECTRICAL	
Rated voltage	1500V Max. (DC)
<b>Rated current:</b>	
70mm <sup>2</sup> shield cable.....	250A@ Ambient temp. 70°C
95mm <sup>2</sup> shield cable.....	350A@ Ambient temp. 70°C
120mm <sup>2</sup> shield cable.....	430A@ Ambient temp. 70°C
150mm <sup>2</sup> shield cable.....	500A@ Ambient temp. 70°C
Shielding	Yes
ENVIRONMENTAL	
Sealing	IP67, IP6K9K (mated)
Temperature range	-40°C to 125°C
Salt spray	500h Min.
MATERIAL	
Housing	Aluminum alloy
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber

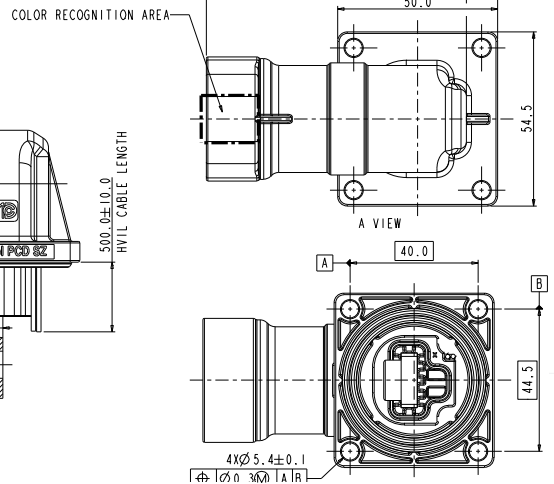
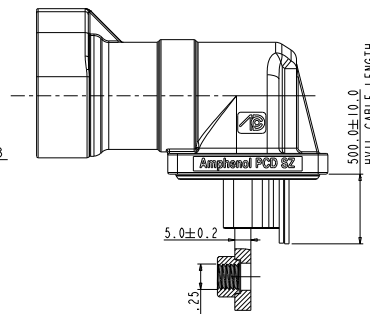
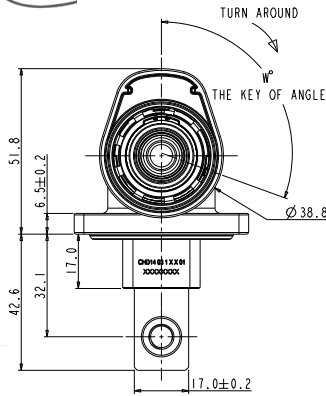
## CHD 1-PIN | PLUG

CHD	14	06	1	X	X	XX
				A: coding A B: coding B C: coding C	D: coding D E: coding E	0: without HVIL 1: with HVIL 01: 150mm <sup>2</sup> 02: 120mm <sup>2</sup> 03: 95mm <sup>2</sup> 04: 70mm <sup>2</sup>

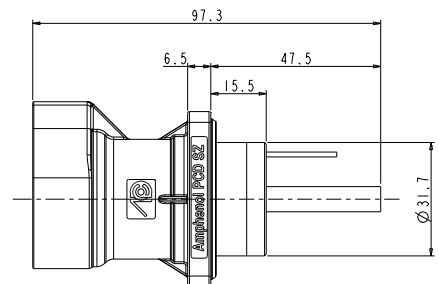
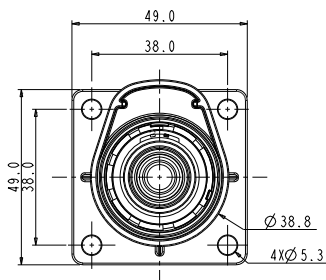


## CHD 1-PIN | RECEPTACLES

CHD	14	03	1	X	X	01
				A: coding A B: coding B C: coding C	D: coding D E: coding E	0: without HVIL 1: with HVIL



CHD	14	02	1	X	X	01
				A: coding A B: coding B C: coding C	D: coding D E: coding E	0: without HVIL 1: with HVIL

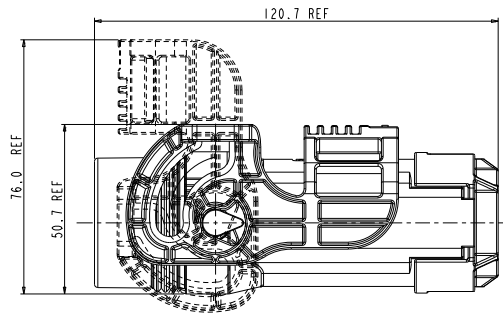
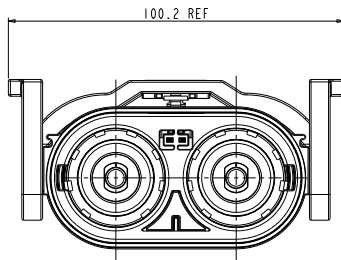


比例 1:1

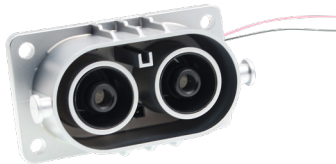
## CHD 2-PIN | PLUG



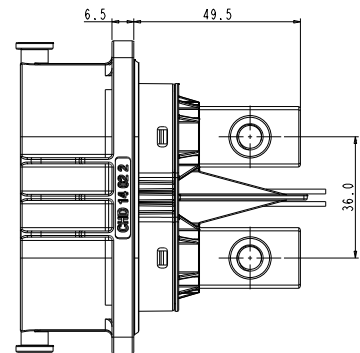
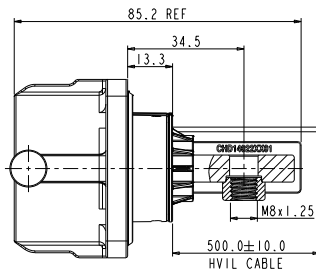
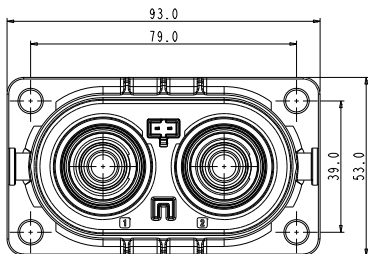
CHD	14	06	2	X	X	XX
				A: coding A	0: without HVIL	01: 150mm <sup>2</sup>
				B: coding B	1: with HVIL	02: 120mm <sup>2</sup>
				C: coding C		03: 95mm <sup>2</sup>
						04: 70mm <sup>2</sup>



## CHD 2-PIN | RECEPTACLE



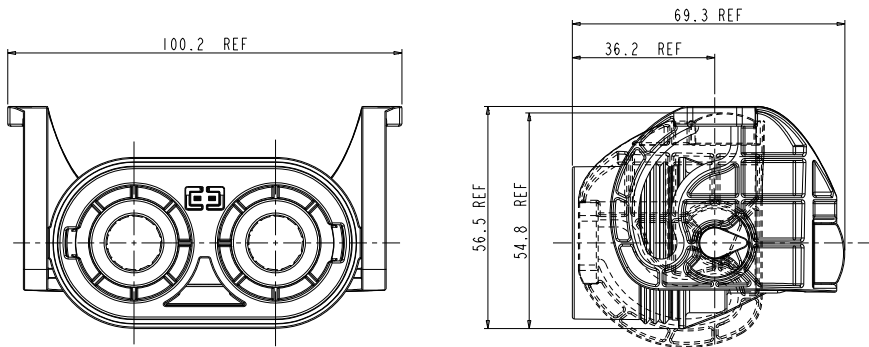
CHD	14	02	2	X	X	01
				A: coding A	0: without HVIL	
				B: coding B	1: with HVIL	
				C: coding C		



## CHD 2-PIN SHUNT | PLUG



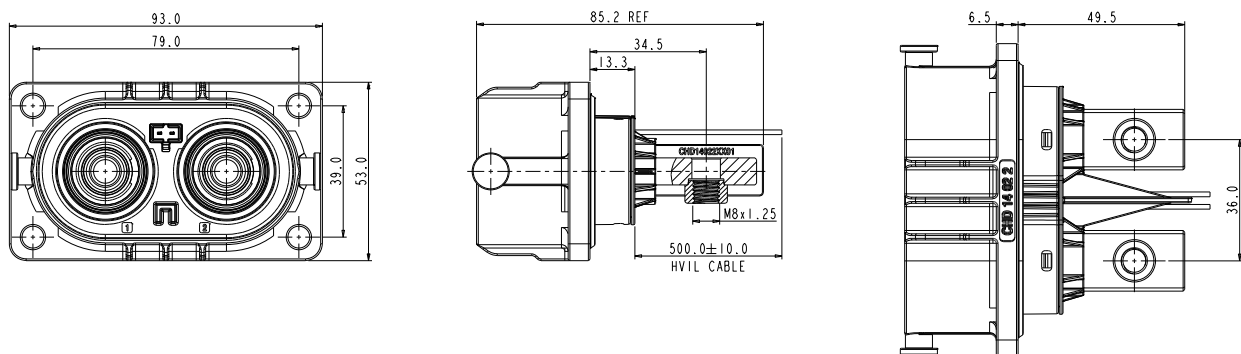
CHD	14	06	2	N	X	X	SC
					0: without HVIL 1: with HVIL	0: without power terminal 1: with power terminal	SC: Short connection



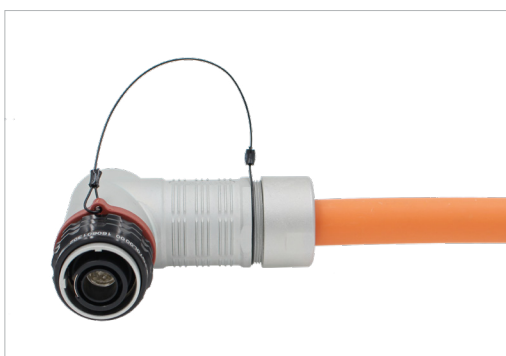
## CHD 2-PIN SHUNT | RECEPTACLE



CHD	14	02	2	X	X	01
				A: coding A B: coding B C: coding C	0: without HVIL 1: with HVIL	



## 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
- Sealing, IP67, IP6K9K (mated)
- Touch-proof IP2XB
- 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 @ Ambient temperature 70°C
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	3000V AC

### ENVIRONMENTAL

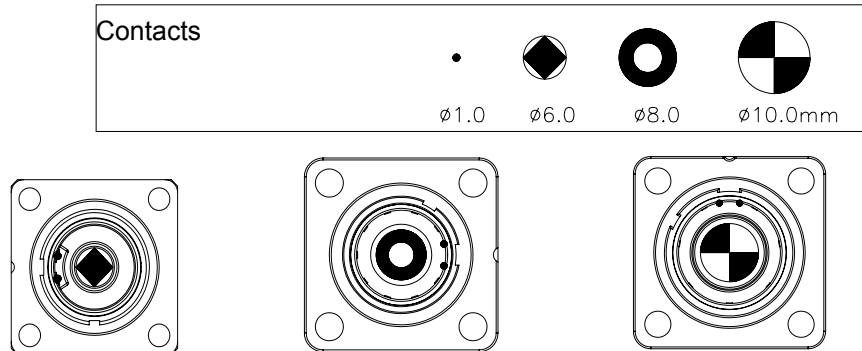
Sealing	IP67, IP6K9K (mated)
Touch-proof	IP2XB
Operating temperature	-40°C to 125°C
Inflammability	UL94V0
Salt spray	48h, 96h

### MATERIAL

Shell	Zinc alloy, zinc plating and anodic oxidation
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber

## INSERT ARRANGEMENT

From front face of receptacle



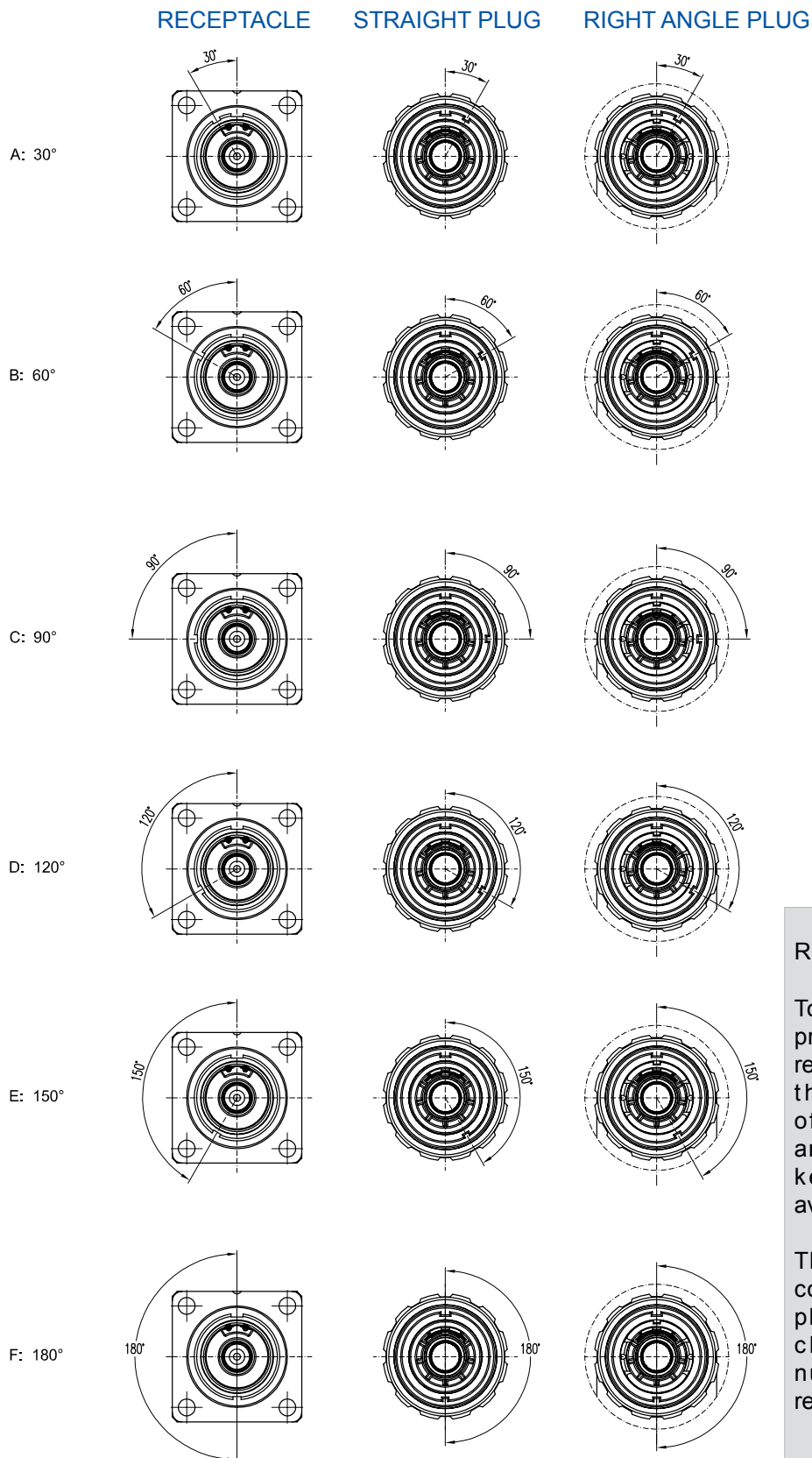
Insert arrangement	HVBI R6	HVBI R8	HVBI R10
Rated voltage	1000V DC	1000V DC	1000V DC
Rated current	120A +2 x 7.5A	180A +2 x 7.5A	250A +2 x 7.5A
Contact number	Power: 1 / Signal: 2	Power: 1 / Signal: 2	Power: 1 / Signal: 2
Withstanding voltage	3000V AC	3000V AC	3000V AC

## HOW TO ORDER: RECEPTACLE

	HVBI	0	02R6	A	M	H	BBK
<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 H6: M6 Thread (For contact insert R6, R8) H8: M8 Thread (For contact insert R10)							
<b>Alternate keying positions &amp; Color of locking nut:</b> ARD: 30°, Red BBK: 60°, Black CYL: 90°, Yellow DGR: 120°, Green EBL: 150°, Blue FPU: 180°, Purple							



## ALTERNATE KEYING POSITIONS

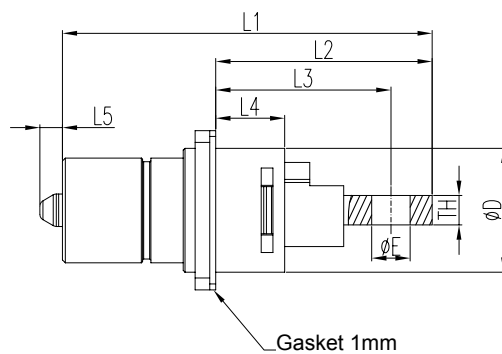
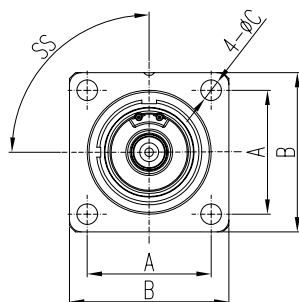


### REMARK

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

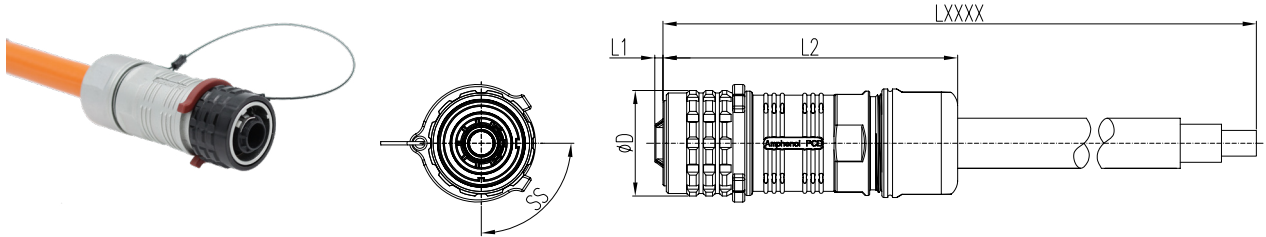


Part number	A	B	C	D	E	L1	L2	L3	L4	L5	TH
HVBI-0-02R6-XMHX-XX	21.0	27.0	3.5	21.0	6.5	62.7	37.7	30.7	12.7	3.8	5.0
HVBI-0-03R8-XMHX-XX	23.0	31.0	4.5	23.0	8.5	76.7	43.7	35.7	15.9	/	5.0
HVBI-0-05R10-XMHX-XX	24.6	33.0	4.5	26.0	10.5	85.9	52.6	40.6	18.4	0.8	6.0
HVBI-0-02R6-XMH6X-XX	21.0	27.0	3.5	21.0	M6	62.7	37.7	30.7	12.7	3.8	5.0
HVBI-0-03R8-XMH6X-XX	23.0	31.0	4.5	23.0	M6	76.7	43.7	35.7	15.9	/	5.0
HVBI-0-05R10-XMH8X-XX	24.6	33.0	4.5	26.0	M8	85.9	52.6	40.6	18.4	0.8	6.0

## HOW TO ORDER: PLUG

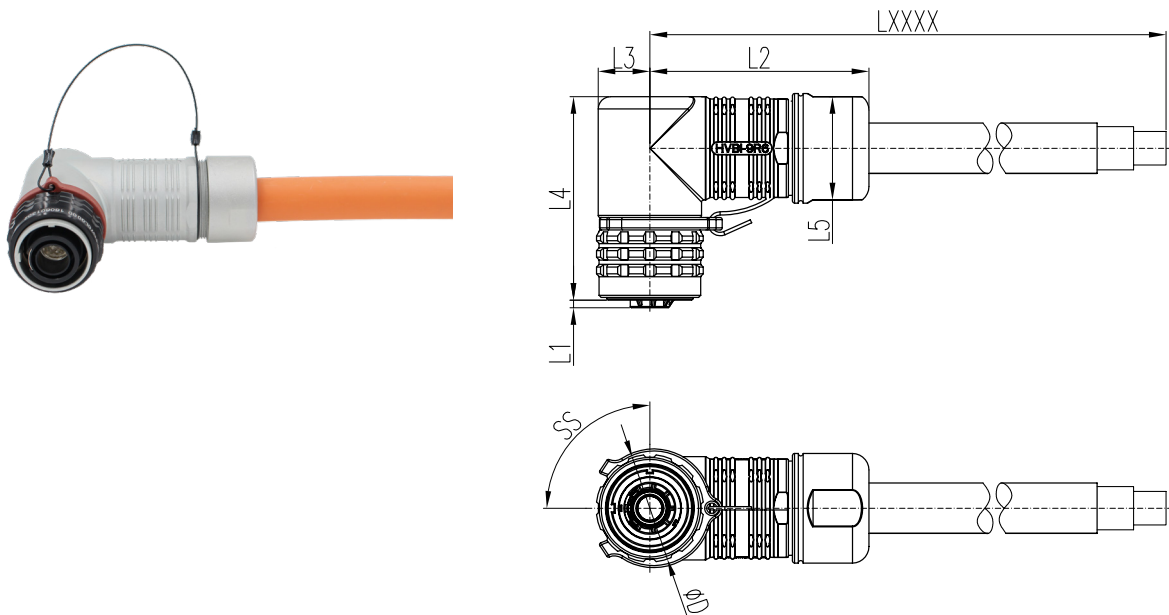
	HVBI	9	02R6	A	F	C	ARD	FG	25	LXXXX
<b>Shell type:</b>										
7: Straight plug										
9: Right angle plug										
<b>Insert size:</b>										
02R6: 6mm Radsok (Rated current 120A)										
03R8: 8mm Radsok (Rated current 180A)										
05R10: 10mm Radsok (Rated current 250A)										
<b>HVIL:</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>										
ARD: 30°, Red										
BBK: 60°, Black										
CYL: 90°, Yellow										
DGR: 120°, Green										
EBL: 150°, Blue										
FPU: 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



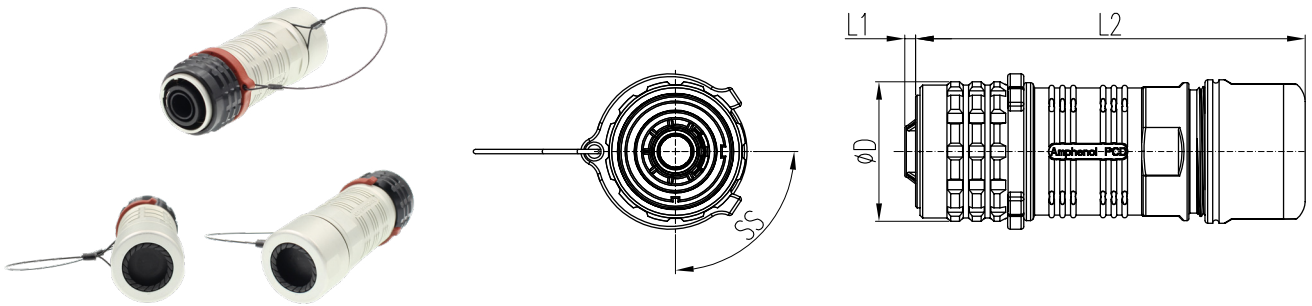
Part number	D	L1	L2	LXXXX	Cable section(mm <sup>2</sup> )
HVBI-7-02R6-XFC-X-XX-FG / PC-XX....	26.0	2.0	70	Cable length (mm), custom orders are available	16mm <sup>2</sup> to 25mm <sup>2</sup>
HVBI-7-03R8-XFC-X-XX-FG / PC-XX....	27.5	2.0	82		35mm <sup>2</sup> to 50mm <sup>2</sup>
HVBI-7-05R10-XFC-X-XX-FG / PC-XX....	32.5	1.5	92		50mm <sup>2</sup> to 70mm <sup>2</sup>
Notes: FG: Shielded type PC: Unshielded type					

## RIGHT ANGLE PLUG



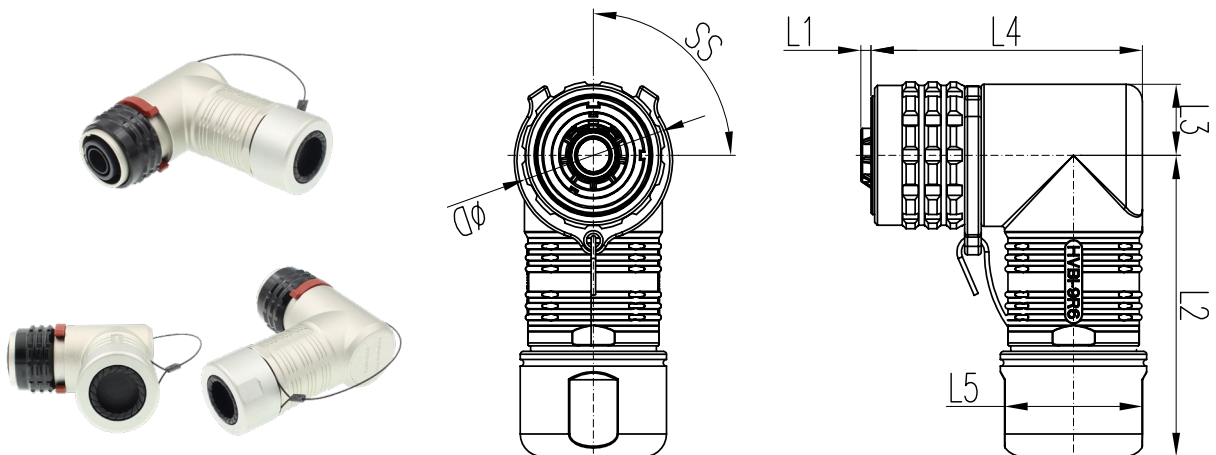
Part number	D	L1	L2	L3	L4	L5	LXXXX	Cable section (mm <sup>2</sup> )
HVBI-9-02R6-XFC-X-XX-FG / PC-XX....	26.0	1.8	53.0	12.5	49.3	25.0	Cable length (mm), custom orders are available	16mm <sup>2</sup> to 25mm <sup>2</sup>
HVBI-9-03R8-XFC-X-XX-FG / PC-XX....	27.5	2.0	62.0	13.9	58.5	27.3		35mm <sup>2</sup>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

## STRAIGHT DUMMY PLUG



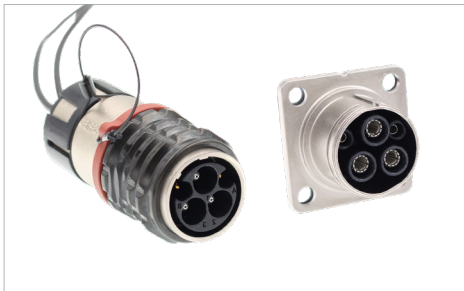
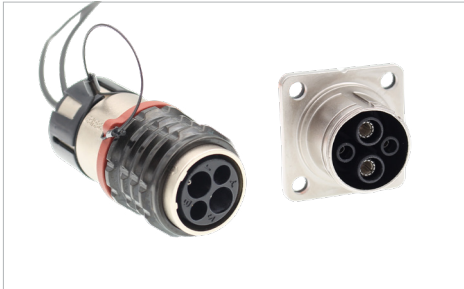
Part number	D	L1	L2
HVBI-7-03R8-XFC-X-XX-S1	27.5	2.0	82
HVBI-7-05R10-XFC-X-XX-S1	32.5	1.5	92

## RIGHT ANGLE DUMMY PLUG



Part number	D	L1	L2	L3	L4	L5
HVBI-9-03R8-XFC-X-XX-S1	27.5	2.0	62.0	13.9	58.5	27.3
HVBI-9-05R10-XFC-X-XX-S1	32.5	1.5	69.5	16.0	64.0	31.5

## EX series

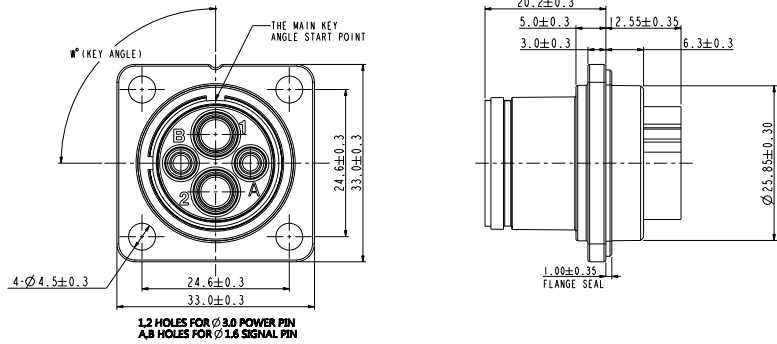


### KEY FEATURES

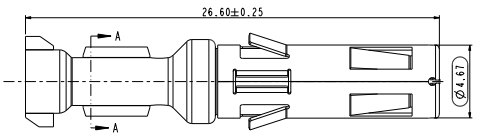
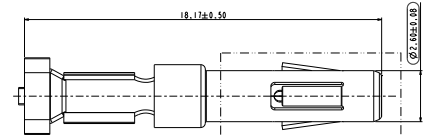
- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required to unmate
- Sealing, IP68, IP6K9K (mated)
- Touch-proof IP2XB
- Multiple coding positions
- RoHS compliant

APPLICATIONS	
EV air-conditioner	
DCDC	
PTC	
Power distribution boxes	
MECHANICAL	
Durability	50 mating cycles
Wire range	2.5 to 6mm <sup>2</sup> (RA plug: 2.5 to 4mm <sup>2</sup> )
Connection type	Crimping
ELECTRICAL	
Rated voltage	1000V DC
Rated current	6.0mm <sup>2</sup> cable shield: 40A Max @ Ambient temperature 70°C 4.0mm <sup>2</sup> cable shield: 32A Max @ Ambient temperature 70°C 2.5mm <sup>2</sup> cable shield: 23A Max @ Ambient temperature 70°C
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	3000V AC
ENVIRONMENTAL	
Sealing	IP68, IP6K9K (mated)
Touch-proof	IP2XB
Operating temperature	-40°C to 125°C
Inflammability	UL94V0
Salt spray	96h
MATERIAL	
Shell	Aluminum alloy with zinc, nickel plating and anodic oxidation
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber

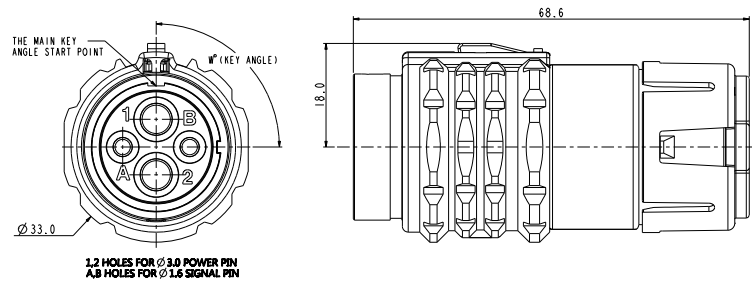
## RECEPTACLE EX 402



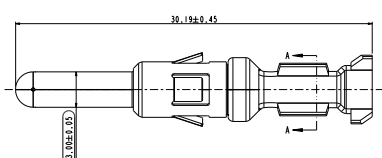
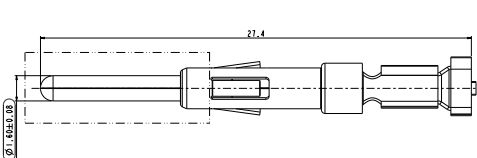
All connectors do not include contacts. Please order them separately (ref: P/N below)

Socket contact ( $\varnothing 3.0$ ): crimping	Socket signal contact ( $\varnothing 1.6$ )
P/N: <b>EX30F4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30F6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16F1</b>
	

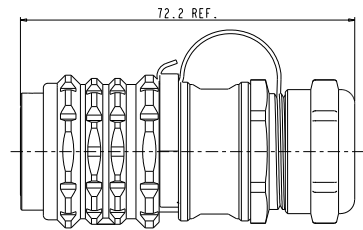
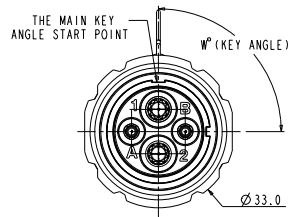
## STRAIGHT PLUG EX 402 (Individual shielded wire)



All connectors do not include contacts. Please order them separately (ref: P/N below)

Pin contact ( $\varnothing 3.0$ ): crimping	Pin signal contact ( $\varnothing 1.6$ )
P/N: <b>EX30M4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30M6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16M1</b>
	

## STRAIGHT PLUG EX 402 (Multicore shielded wire)

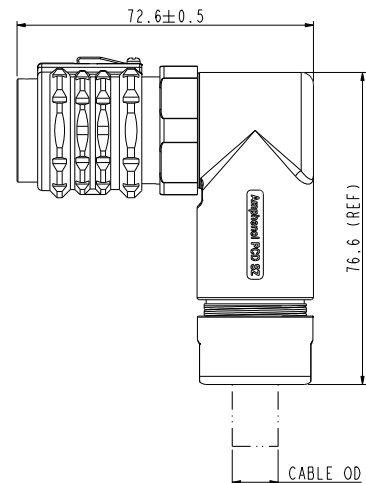
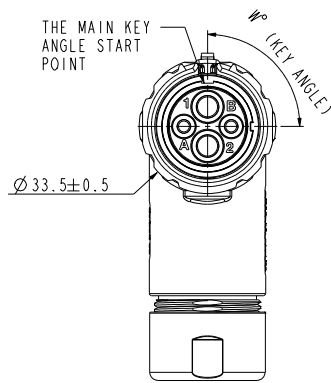


1, 2 HOLES FOR Ø 3.0 POWER PIN  
A, B HOLES FOR Ø 1.6 HVIL PIN

All connectors do not include contacts. Please order them separately (ref: P/N below)

Pin contact (Ø 3.0): crimping	Pin signal contact (Ø 1.6)
P/N: <b>EX30M4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30M6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16M1</b>

## RIGHT-ANGLE PLUG EX 402



1, 2 HOLES FOR Ø 3.0 POWER PIN  
A, B HOLES FOR Ø 1.6 SIGNAL PIN

All connectors do not include contacts. Please order them separately (ref: P/N below)

Pin contact (Ø 3.0): crimping	Pin signal contact (Ø 1.6)
P/N: <b>EX30M4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30M6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16M1</b>

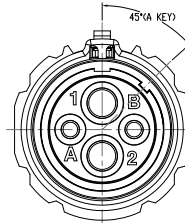
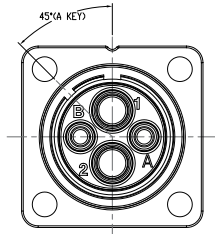


## EX 402: ALTERNATE KEYING POSITIONS

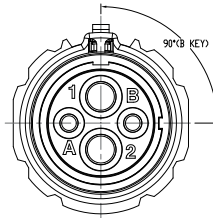
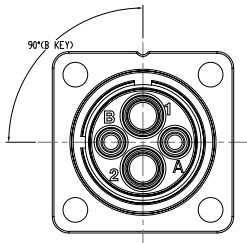
### RECEPTACLE

### STRAIGHT PLUG

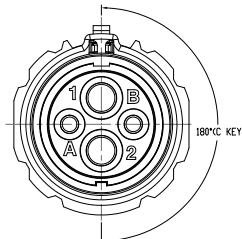
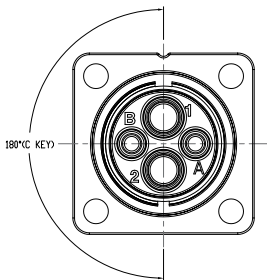
A: 45°



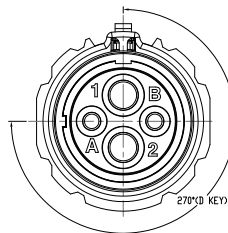
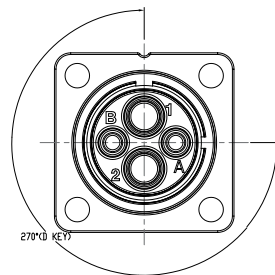
B: 90°



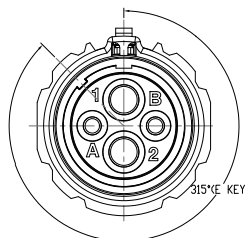
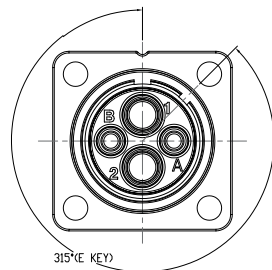
C: 180°



D: 270°



E: 315°

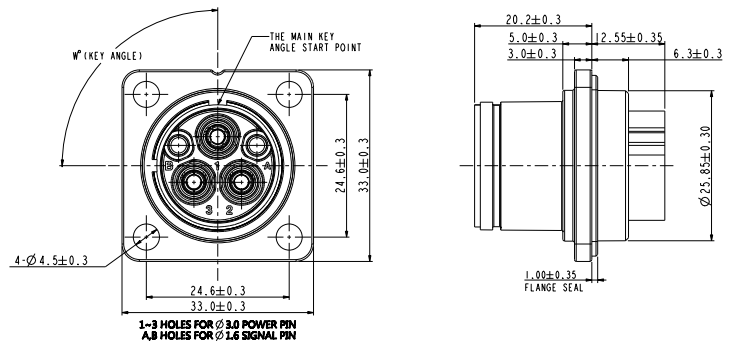


### REMARK

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.

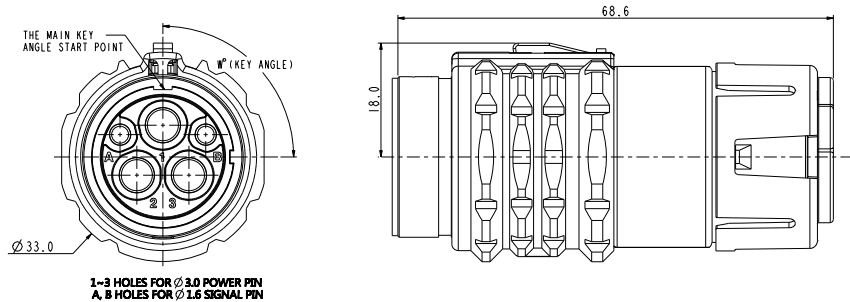
## RECEPTACLE EX 403



All connectors do not include contacts. Please order them separately (ref: P/N below)

Socket contact ( $\varnothing 3.0$ ): crimping	Socket signal contact ( $\varnothing 1.6$ )
P/N: <b>EX30F4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30F6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16F1</b>

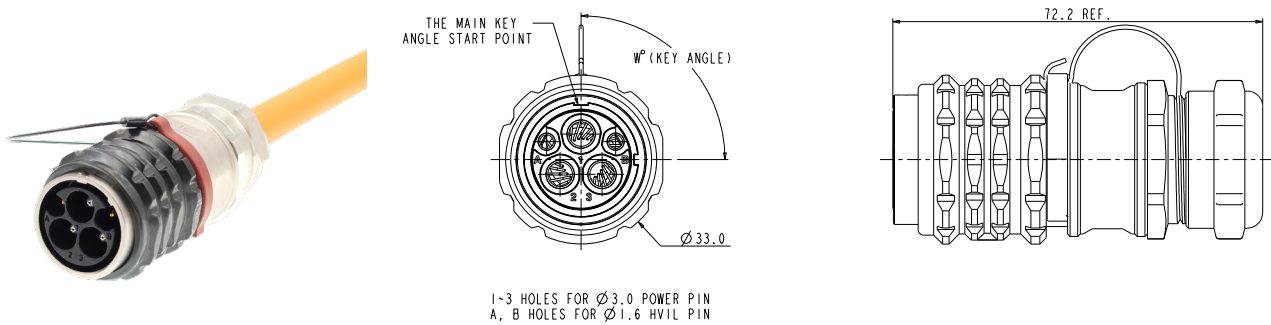
## STRAIGHT PLUG EX 403 (Individual shielded wire)



All connectors do not include contacts. Please order them separately (ref: P/N below)

Pin contact ( $\varnothing 3.0$ ): crimping	Pin signal contact ( $\varnothing 1.6$ )
P/N: <b>EX30M4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30M6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16M1</b>

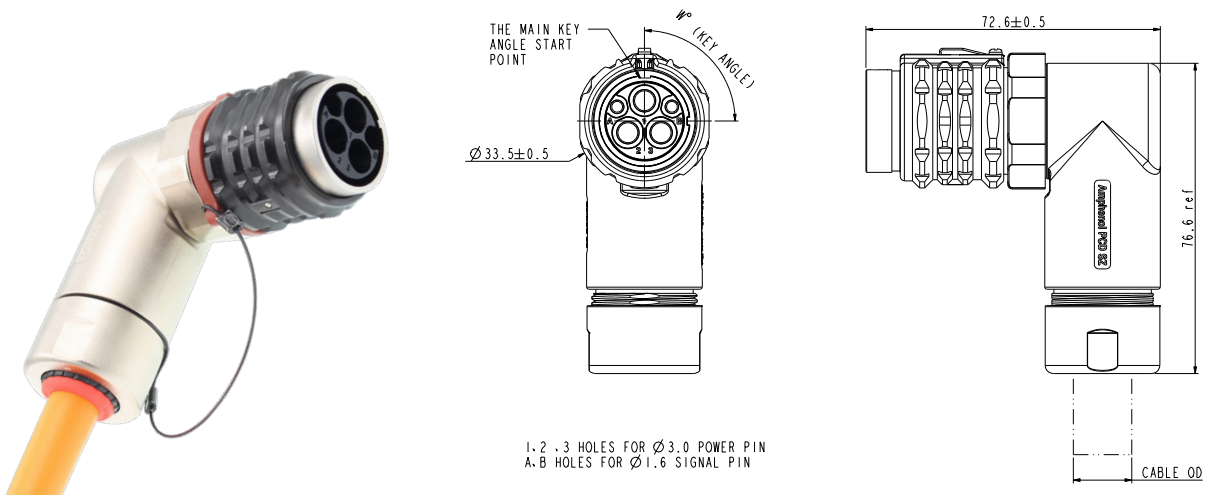
## STRAIGHT PLUG EX 403 (Multicore shielded wire)



All connectors do not include contacts. Please order them separately (ref: P/N below)

Pin contact (Ø 3.0): crimping	Pin signal contact (Ø 1.6)
P/N: <b>EX30M4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30M6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16M1</b>

## RIGHT-ANGLE PLUG EX 403



All connectors do not include contacts. Please order them separately (ref: P/N below)

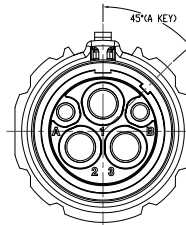
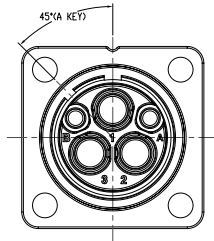
Pin contact (Ø 3.0): crimping	Pin signal contact (Ø 1.6)
P/N: <b>EX30M4</b> (for 2.5 to 4 mm <sup>2</sup> ) P/N: <b>EX30M6</b> (for 6 mm <sup>2</sup> )	P/N: <b>EX16M1</b>

## EX 403: ALTERNATE KEYING POSITIONS

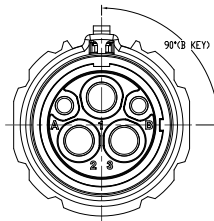
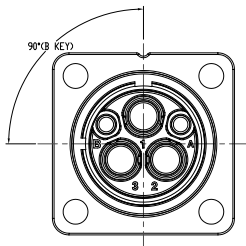
### RECEPTACLE

### STRAIGHT PLUG

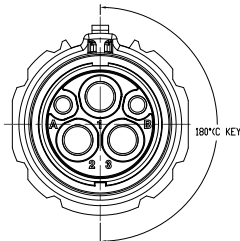
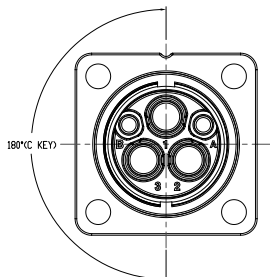
A: 45°



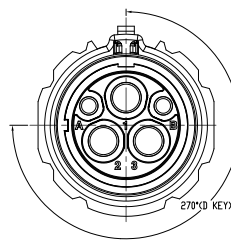
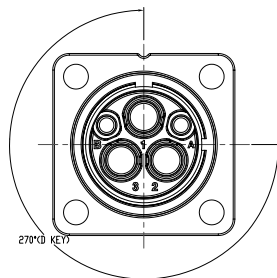
B: 90°



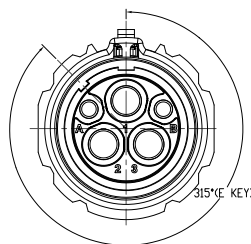
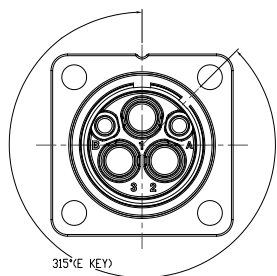
C: 180°



D: 270°



E: 315°



### 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.

## HOW TO ORDER

### STRAIGHT PLUG (Individual shielded wire)

EX	402	06	A	1	2	I
<b>Product series:</b> 402 (2 pin), 403 (3 pin)						
<b>Product type:</b> 06: Straight plug						
<b>Alternate keying positions &amp; Locking nut color:</b> <b>A:</b> Coding A, Red <b>D:</b> Coding D, Green <b>B:</b> Coding B, Black <b>E:</b> Coding E, Blue <b>C:</b> Coding C, Yellow						
<b>Interlock</b> <b>0:</b> Without interlock <b>1:</b> With internal interlock <b>2:</b> With external interlock						
<b>Cable section:</b> <b>2:</b> 2.5mm <sup>2</sup> (23A) <b>4:</b> 4.0mm <sup>2</sup> (32A) <b>6:</b> 6.0mm <sup>2</sup> (40A)						
<b>Cable type:</b> I: Individually						



### STRAIGHT PLUG (Multicore shielded wire)

EX	402	06	A	M
<b>Product series:</b> 402 (2 pin), 403 (3 pin)				
<b>Product type:</b> 06: Straight plug				
<b>Alternate keying positions &amp; Locking nut color:</b> <b>A:</b> Coding A, Red <b>D:</b> Coding D, Green <b>B:</b> Coding B, Black <b>E:</b> Coding E, Blue <b>C:</b> Coding C, Yellow				
<b>Cable type:</b> M: Multicore				



	<b>EX</b>	<b>402</b>	<b>08</b>	<b>A</b>	<b>1</b>	<b>11</b>	<b>M</b>
<b>Product series:</b> 402 (2 pin), 403 (3 pin)							
<b>Product type:</b> 08: Right-angle plug							
<b>Alternate keying positions &amp; Locking nut color:</b> <b>A:</b> Coding A, Red <b>D:</b> Coding D, Green <b>B:</b> Coding B, Black <b>E:</b> Coding E, Blue <b>C:</b> Coding C, Yellow							
<b>Interlock</b> 0: Without interlock 1: With internal interlock 2: With external interlock							
<b>Cable section:</b> <b>11:</b> Cable OD 10 to 10.8mm <b>13:</b> Cable OD 11.9 to 12.8mm <b>12:</b> Cable OD 10.9 to 11.8mm <b>14:</b> Cable OD 12.9 to 14mm							
<b>Cable type:</b> M: Multicore							



## RECEPTACLE

	<b>EX</b>	<b>402</b>	<b>02</b>	<b>A</b>			
<b>Product series:</b> 402 (2 pin), 403 (3 pin)							
<b>Product type:</b> 02: Flange receptacle							
<b>Alternate keying positions &amp; Locking nut color:</b> <b>A:</b> Coding A, Red <b>D:</b> Coding D, Green <b>B:</b> Coding B, Black <b>E:</b> Coding E, Blue <b>C:</b> Coding C, Yellow							



## 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, IP6K9K (mated)
- Multiple coding positions
- RoHS compliant

APPLICATIONS	
EV air-conditioner	
DCDC	
PTC	
Power distribution boxes	
MECHANICAL	
Durability	> 200 mating cycles
Connection type	Crimping
ELECTRICAL	
Rated voltage	800V DC
Rated current	2.5mm <sup>2</sup> : 23A @Ambient temp. 70°C 4mm <sup>2</sup> : 32A @Ambient temp. 70°C 6mm <sup>2</sup> : 40A @Ambient temp. 70°C 10mm <sup>2</sup> : 50A @Ambient temp. 70°C
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	3000V AC
Shielding	Yes
ENVIRONMENTAL	
Sealing	IP67, IP6K9K (mated)
Temperature range	-40°C to 125°C, short term to 150°C
Inflammability	UL94V0
Salt spray	96h
MATERIAL	
Shell	Aluminum alloy with zinc, nickel plating and anodic oxidation
Contacts	Copper alloy, silver plating
Insulator	Flame-retardant thermoplastic composition
Sealing	Rubber

## INSERT ARRANGEMENT

From front face of receptacle

Contacts

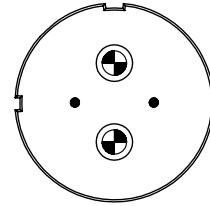
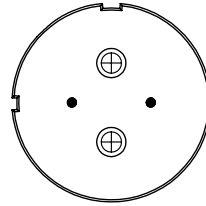
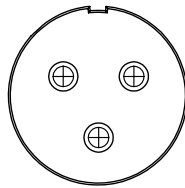


ø1.0

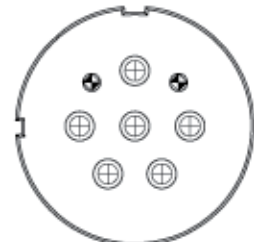
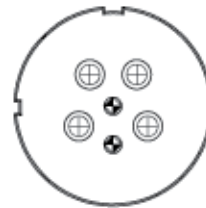
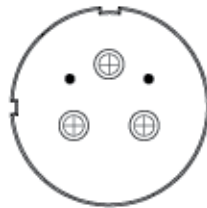
ø1.6

ø3.0

ø3.6mm



Insert arrangement	HVS203	HVG402	HVG492
Rated voltage	800V DC	800V DC	800V DC
Rated current	3 x 32A	2 x 32A + 2 x 7.5A	2 x 50A + 2 x 7.5A
Contact number	Power: 3	Power: 2 / Signal: 2	Power: 2 / Signal: 2
Withstanding voltage	2500V	3000V	3000V



Insert arrangement	HVG403	HVG404	HVG406
Rated voltage	800V DC	800V DC	800V DC
Rated current	3 x 32A + 2 x 7.5A	4 x 32A + 2 x 7.5A	6 x 32A + 2 x 7.5A
Contact number	Power: 3 / Signal: 2	Power: 4 / Signal: 2	Power: 6 / Signal: 2
Withstanding voltage	3000V	3000V	3000V

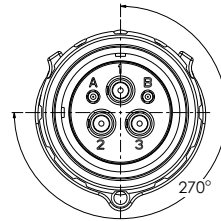
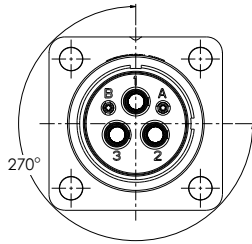


## ALTERNATE KEYING POSITIONS

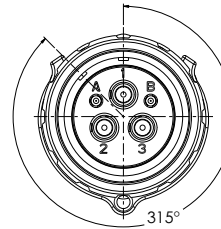
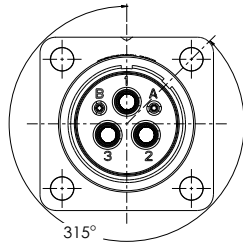
### RECEPTACLE

### STRAIGHT PLUG

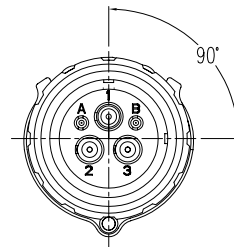
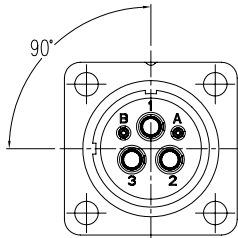
X: 270°



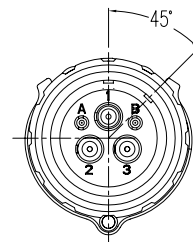
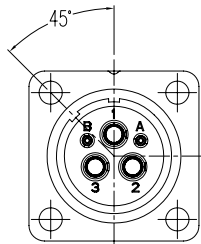
Y: 315°



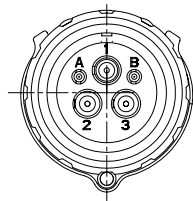
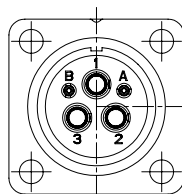
Z: 90°



W: 45°



N: NORMAL

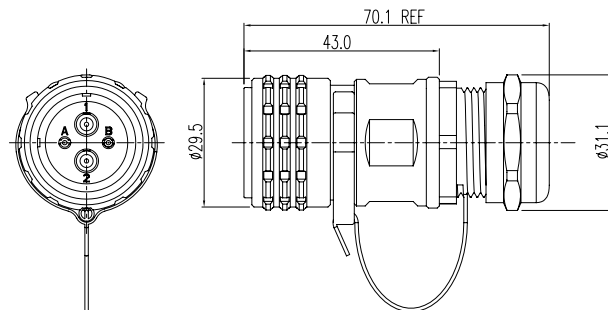
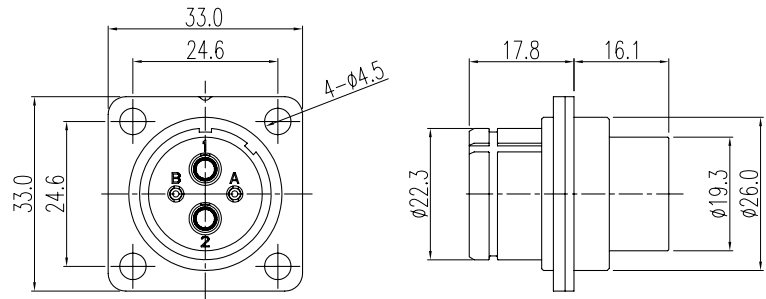


### REMARK

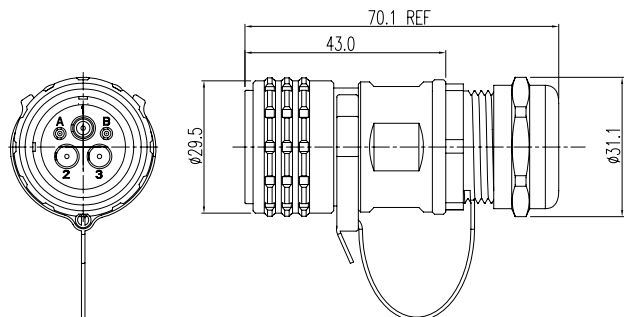
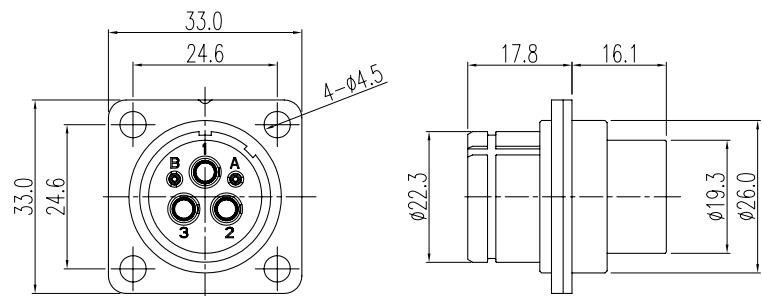
To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

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

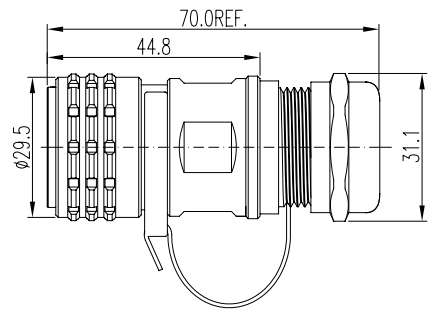
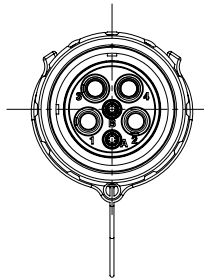
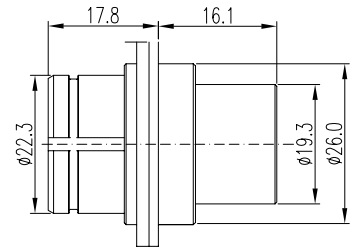
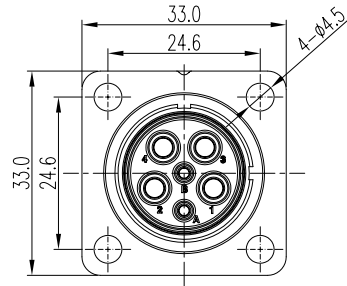
## RECEPTACLE AND PLUG: 402



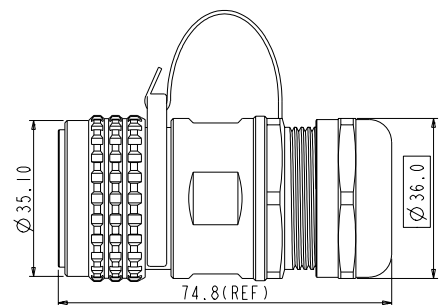
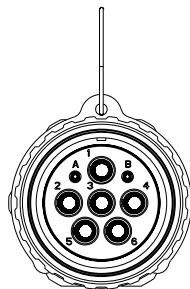
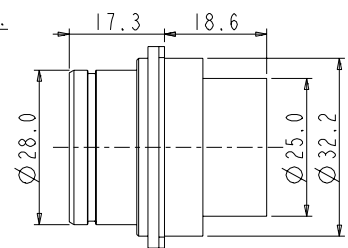
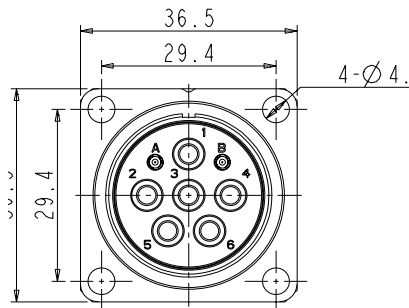
## RECEPTACLE AND PLUG: 403



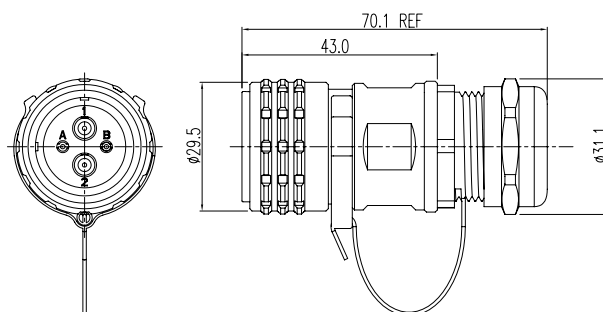
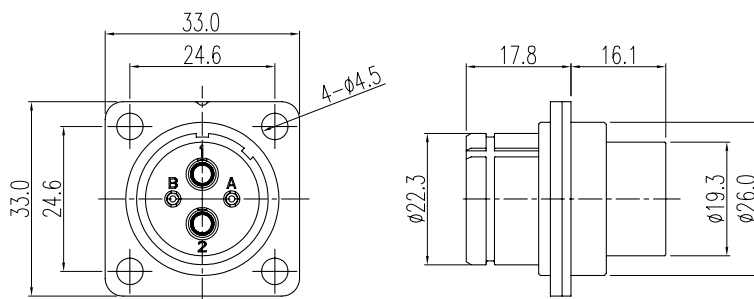
RECEPTACLE AND PLUG: 404



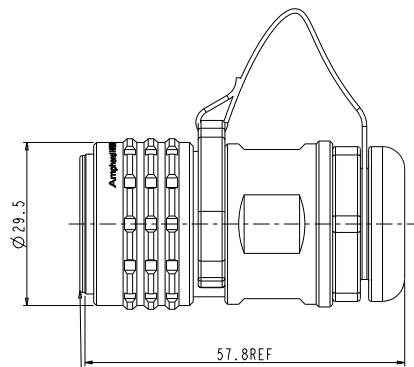
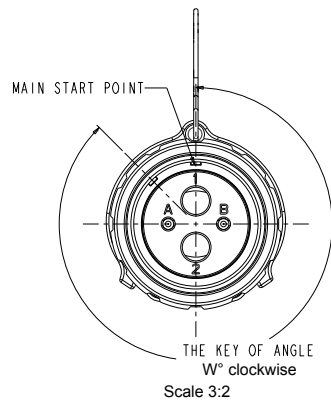
RECEPTACLE AND PLUG: 406



# RECEPTACLE AND PLUG: 492



## DUMMY PLUG: 402



The protective cap must be assembled before the finished product is shipped.  
This protective cap is hidden on this drawing to conveniently mark the angle.

HVG IP 402 M C

X

X

S1

**Key code:**

See table below

**Color code:**

See table below

**Dummy plug:**

S1

KEY CODE	ANGLE OF KEY (W°)	COLOR CODE	COLOR OF LOCKING RING	P/N (FOR EXAMPLE)
NO CODE	0°	NO CODE	BLACK	HVGIP402MC
X	270°	R	RED	HVGIP402MC X R
Y	315°	Y	YELLOW	HVGIP402MC Y Y
Z	90°	B	BLUE	HVGIP402MC Z B
W	45°	G	GREEN	HVGIP402MC W G
X	270°	NO CODE	BLACK	HVGIP402MC X
Y	315°			HVGIP402MC Y
Z	90°			HVGIP402MC Z
W	45°			HVGIP402MC W
X	270°	B	BLUE	HVGIP402MC X B
Y	315°			HVGIP402MC Y B
Z	90°	R	RED	HVGIP402MC Z R

RECEPTACLE

	HVG	1S	402	M	C	XRD
<b>HVG series</b>						
<b>Product type:</b> 1S: Flange receptacle						
<b>Insert arrangement:</b> (HVG Series not include contact, order seperately, P/N please refer to page 30) 402: 2 X (23A to 32A) + 2 X 7.5A 403: 3 X (23A to 32A) + 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 &amp; Shell color:</b> XRD: 270°, Red YYL: 315°, Yellow ZBL: 90°, Blue WGR: 45°, Green						

## HOW TO ORDER: 402, 403, 492 - Shielded cable

### PLUG - shielded cable

	HVG	1P	402	M	C	XRD
<b>HVG series</b>						
<b>Product type:</b> 1P: 1-PIN Plug						
<b>Insert arrangement:</b> (HVG Series not include contact, order seperately, P/N please refer to page 30) 402: 2 X (23A to 32A) + 2 X 7.5A 403: 3 X (23A to 32A) + 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 &amp; Shell color:</b> XRD: 270°, Red YYL: 315°, Yellow ZBL: 90°, Blue WGR: 45°, Green						

HOW TO ORDER: 402, 403, 492 - unshielded cable

PLUG - unshielded cable

	<b>HVG</b>	<b>1P</b>	<b>402</b>	<b>M</b>	<b>C</b>	<b>XRD</b>	<b>2</b>	<b>D</b>	<b>4</b>	<b>L0000</b>
<b>HVG series</b>										
<b>Product type:</b> 1P: 1-PIN Plug										
<b>Insert arrangement</b> (HVG series not include contact, order seperately, P/N please refer to page 30) 402: 2 X (23A to 32A) + 2 X 7.5A 403: 3 X (23A to 32A) + 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 &amp; Locking nut color:</b> XRD: 270°, Red YYL: 315°, Yellow ZBL: 90°, Blue WGR: 45°, Green										
<b>Cable cores:</b> 2, 3										
<b>Cable gland type:</b> D: Unshielded wire										
<b>Cable section:</b> 2: 2.5mm <sup>2</sup> (rated voltage of 23A) 4: 4mm <sup>2</sup> (rated voltage of 32A) 6: 6mm <sup>2</sup> (rated voltage of 40A) A: 10mm <sup>2</sup> (rated voltage of 50A)										
<b>Cable length:</b> L0000: Cable length (Unit in mm)										



RECEPTACLE

	HVS	1S	203	M	C	X
<b>HVS series</b>						
<b>Product type:</b> 1S: Flange receptacle						
<b>Insert arrangement:</b> 203: 3 X 32A						
<b>Contact type:</b> M: Male contact F: Female contact						
C: Crimp version						
<b>Alternate keying positions:</b> Omit: Without X: 270° Y: 315° Z: 90° W: 45°						

PLUG

	HVS	1P	203	M	C	X
<b>HVS series</b>						
<b>Product type:</b> 1P: 1-PIN Plug						
<b>Insert arrangement:</b> 203: 3 X 32A						
<b>Contact type:</b> M: Male contact F: Female contact						
<b>C:</b> Crimp version						
<b>Alternate keying positions:</b> Omit: Without X: 270° Y: 315° Z: 90° W: 45°						

RECEPTACLE

	HVG	1S	404	M	C	XRD	4	D	4	L0000
<b>HVG series</b>										
<b>Product type:</b> 1S: Flange receptacle										
<b>Insert arrangement:</b> (HVG Series not include contact, order seperately, P/N please refer to page P30) 404: 4 X (23A to 32A) + 2 X 7.5A										
<b>Contact type:</b> M: Male contact										
C: Crimp version										
<b>Alternate keying positions &amp; Shell color:</b> XRD: 270°, Red YGR: 315°, Green ZBL: 90°, Blue WYL: 45°, Yellow										
<b>Cable cores:</b> 4										
<b>Cable gland type:</b> D: Unshielded wire										
<b>Cable section:</b> 2: 2.5mm <sup>2</sup> (rated voltage of 23A) 4: 4mm <sup>2</sup> (rated voltage of 32A)										
<b>Cable length:</b> L0000: Cable length (Unit in mm)										

RECEPTACLE

	HVG	1S	406	M	C	XRD
<b>HVG series</b>						
<b>Product type:</b> 1S: Flange receptacle						
<b>Insert arrangement</b> (HVG series not include contact, order separately, P/N please refer to page P30) 406: 6 X (23A to 32A) + 2 X 7.5A						
<b>Contact type:</b> M: Male contact						
C: Crimp version						
<b>Alternate keying positions &amp; Locking nut color:</b> XRD: 270°, Red YGR: 315°, Green ZBL: 90°, Blue WYL: 45°, Yellow						

PLUG

	<b>HVG</b>	<b>1P</b>	<b>404</b>	<b>F</b>	<b>C</b>	<b>XRD</b>	<b>4</b>	<b>D</b>	<b>4</b>	<b>L0000</b>
<b>HVG series</b>										
<b>Product type:</b> 1P: 1-PIN Plug										
<b>Insert arrangement</b> (HVG series not include contact, order seperately, P/N please refer to page 32) 404: 4 X (23A to 32A) + 2 X 7.5A 406: 6 X (23A to 32A) + 2 X 7.5A										
<b>Contact type:</b> F: Female contact										
C: Crimp version										
<b>Alternate keying positions &amp; Locking nut color:</b> XRD: 270°, Red YGR: 315°, Green ZBL: 90°, Blue WYL: 45°, Yellow										
<b>Cable cores:</b> 4, 6										
<b>Cable gland type:</b> A: Shielded cable D: Unshielded wire										
<b>Cable section:</b> 2: 2.5mm <sup>2</sup> (rated voltage of 23A) 4: 4mm <sup>2</sup> (rated voltage of 32A)										
<b>Cable length:</b> L0000: Cable length (Unit in mm)										

## HVS SERIES



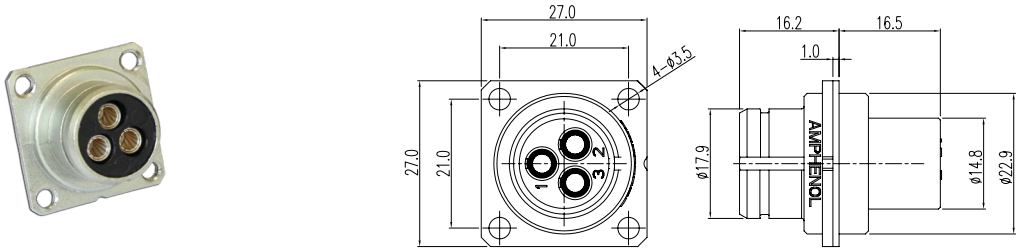
### KEY FEATURES

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

APPLICATIONS	
EV 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 @ Ambient temperature 70°C
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	2500V AC
Shielding	Yes
ENVIRONMENTAL	
Sealing	IP67, IP6K9K (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

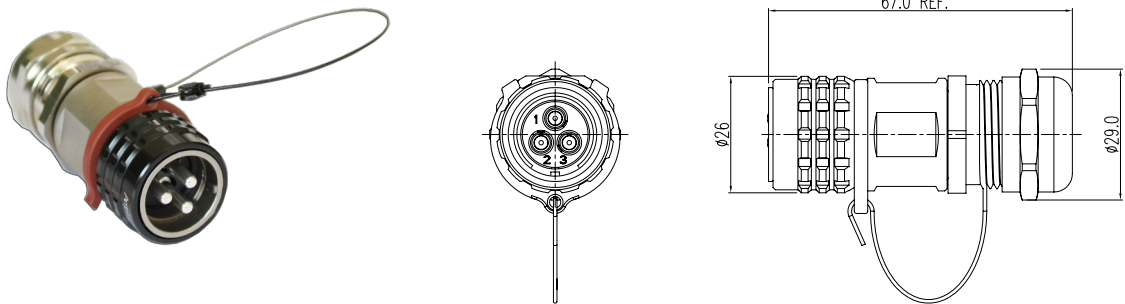
RECEPTACLE

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



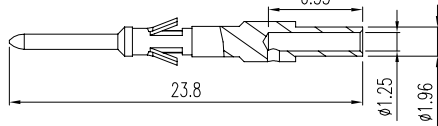
PLUG

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

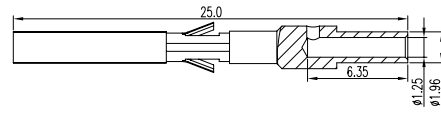


**CONTACTS** Notice: HVG series connectors do not include contacts, please order separately.

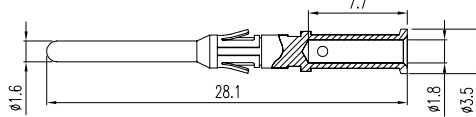
HVG20M1



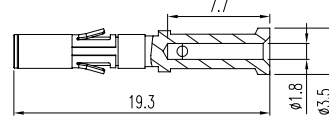
HVG20F1



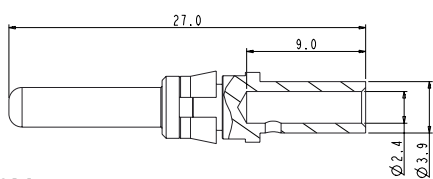
ASRC16P001AU



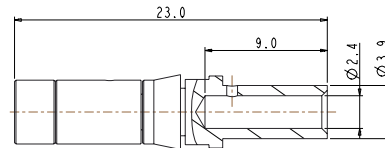
ASRC16SC001AU



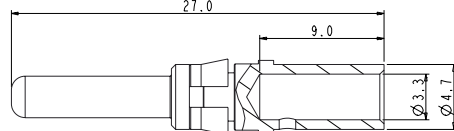
HVG30M2



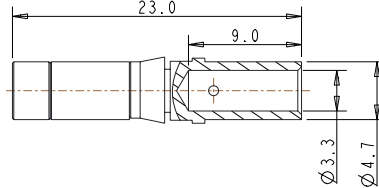
HVG30F2



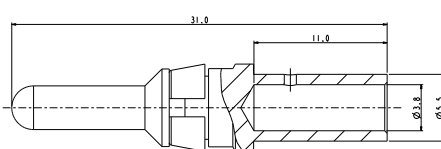
HVG30M4



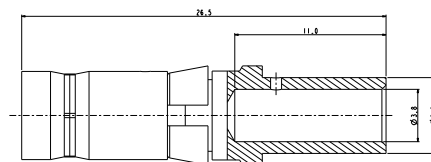
HVG30F4



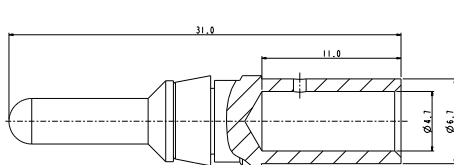
HVG30M6



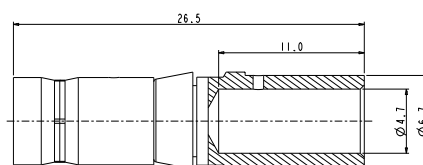
HVG30F6



HVG30M10



HVG30F10



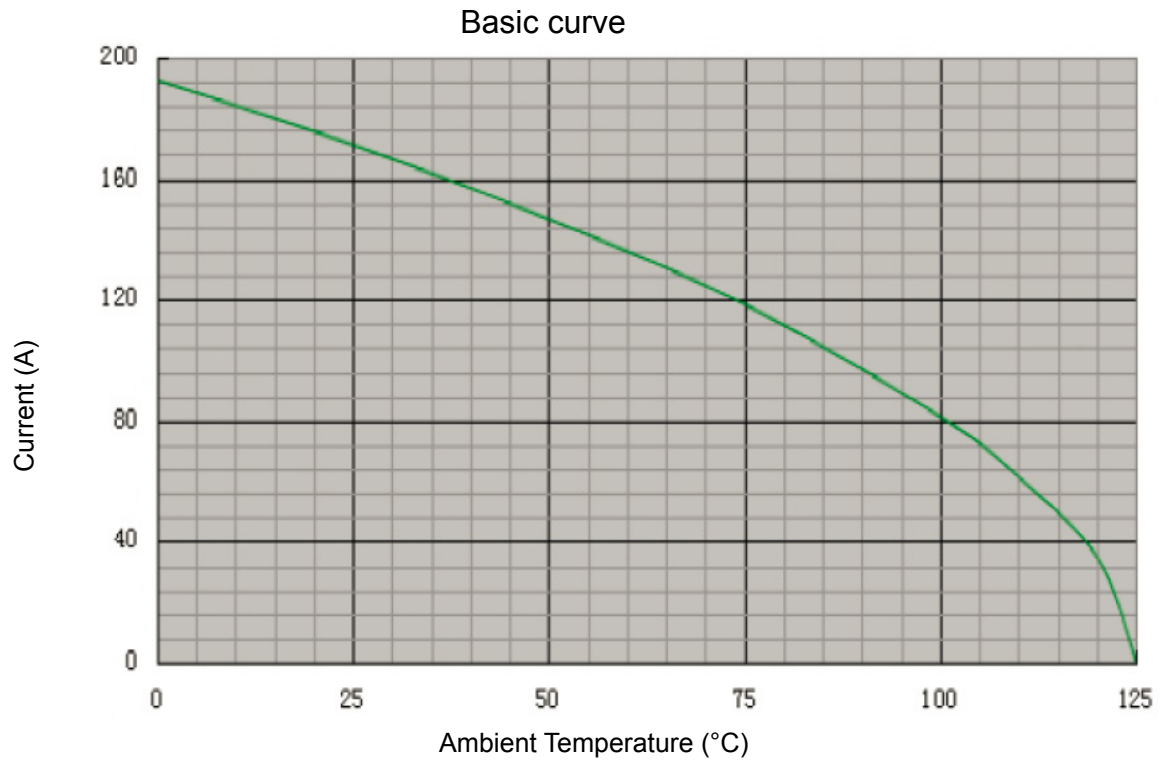
**PART NUMBER**

Contact type for connector	Contact size	Part number		Rated Current	For cable section	Extraction tool
		Pin	Socket			
Signal: HVG402/403/492	1.0mm	HVG20M1	HVG20F1	7.5A max	0.5 to 1.0 mm <sup>2</sup>	HV-TOOL-10R
Signal: HVG404/406	1.6mm	ASRC16PC001AU	ASRC16SC001AU	13A max	0.75 to 1.5 mm <sup>2</sup>	ASGTC-R-16S
Power: HVS, HVG402/403/404/406	3.0mm	HVG30M2	HVG30F2 / HVG30FS2	23A max	2.5 mm <sup>2</sup>	HV-TOOL-30R
Power: HVS HVG402/403/404/406	3.0mm	HVG30M4	HVG30F4 / HVG30FS4	40A max	4.0 mm <sup>2</sup>	HV-TOOL-30R
Power: HVG492	3.6mm	HVG30M6	HVG30F6	50A max	6.0 mm <sup>2</sup>	HV-TOOL-36R
		HVG30M10	HVG30F10		10.0 mm <sup>2</sup>	
Signal: EX SERIES	1.6mm	EX16M1	EX16F1	7.5A max	0.75 to 1.5 mm <sup>2</sup>	ASGTC-R-16S
	3.0mm	EX30M4	-	32A max	2.5 to 4.0 mm <sup>2</sup>	HV-TOOL-30R
	3.0mm	EX30M6	-	40A max	6.0 mm <sup>2</sup>	HV-TOOL-30R
Power: EX SERIES	3.0mm	-	EX30F4	32A max	2.5 to 4.0 mm <sup>2</sup>	EX-TOOL-30R
	3.0mm	-	EX30F6	40A max	6.0 mm <sup>2</sup>	EX-TOOL-30R

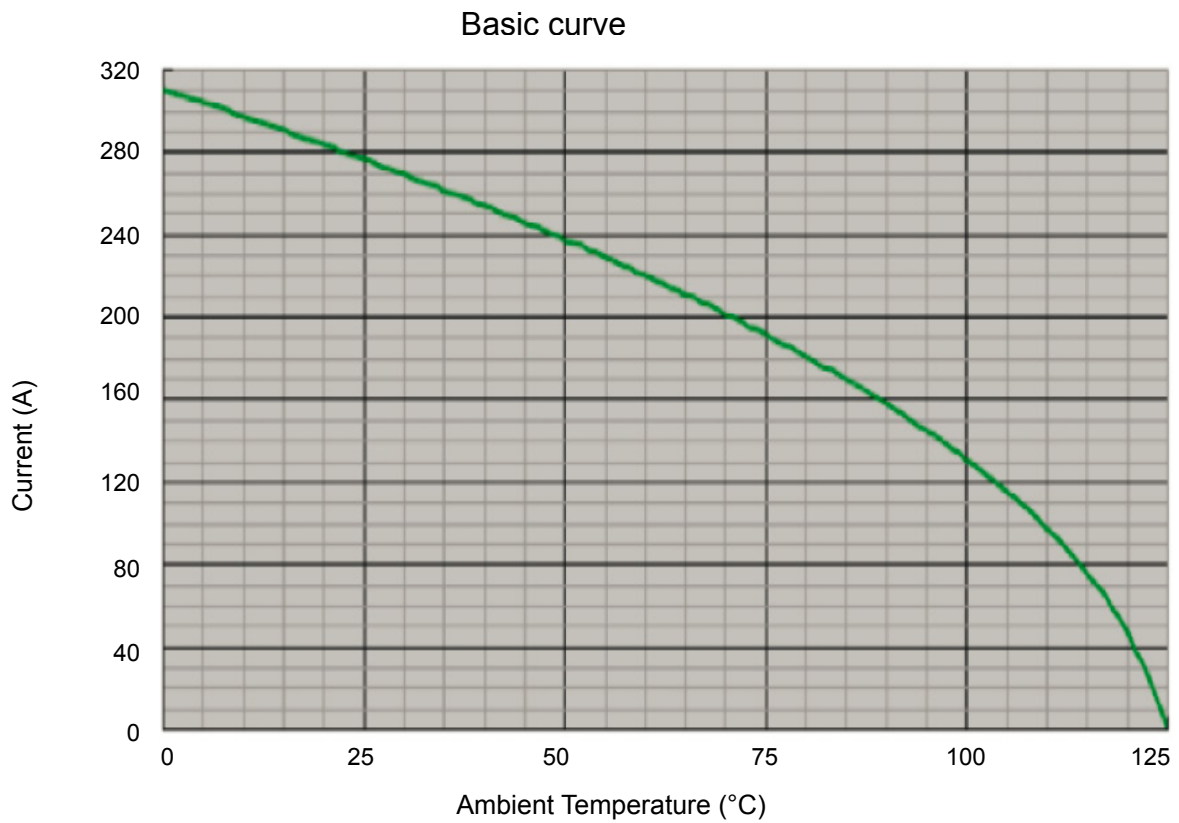


## TEMPERATURE RISE CURVE

HVBI R6 (25mm<sup>2</sup>)

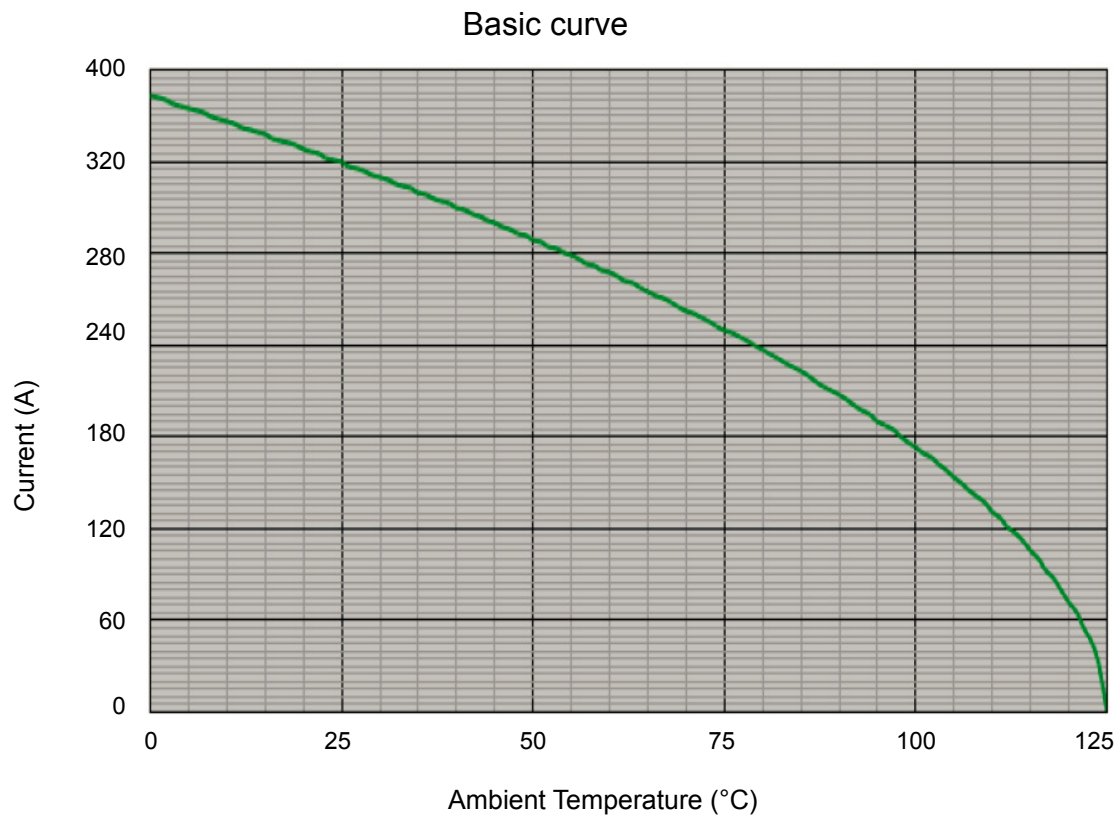


HVBI R8 (50mm<sup>2</sup>)



## TEMPERATURE RISE CURVE

HVBI R10 (70mm<sup>2</sup>)



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