

HV

HV Series Connector and cable assembly



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PRODUCT INTRODUCTION: HV SERIES



KEY FEATURES

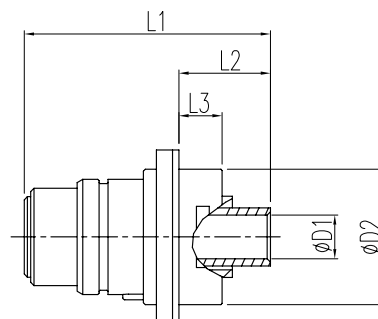
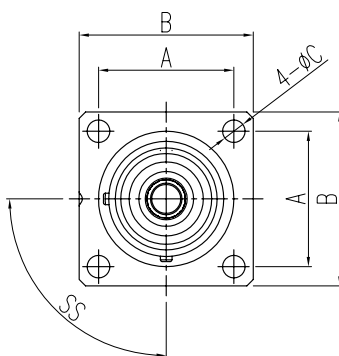
- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Sealing, IP67 (mated)
- Shock and vibration resistant
- Multiple coding positions
- RoHS compliant

MECHANICAL	
Durability	> 500 mating cycles (up to 1000)
Wire range	16 to 70mm ²
Connection type	Crimping
ELECTRICAL	
Rated voltage	230V to 400V AC 400V to 690V DC
Rated current	250A Max
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	2500V AC
Shielding	Available in shielded & unshielded variants
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

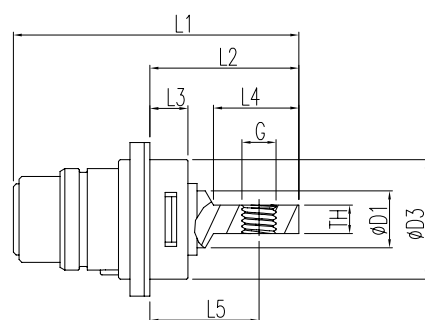
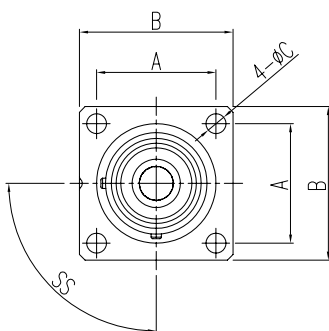
	HV	0	R6	1	F	C	X	R
Shell type: 0: Receptacle								
Insert size: R6: 6mm Radsok (Max current 120A) R8: 8mm Radsok (Max current 150A) R7: 8mm Radsok (Max current 180A) RA: 10mm Radsok (Max current 250A)								
Number of position: 1: 1 position receptacle								
Insert type: F: Socket (Recommended) M: Pin								
Termination: C: Crimp cable H: Copper bar T: Screw								
Alternate keying positions: X: 90° Y: 180° Z: 135° W: 120° U: 155° N: Normal								
R: Right angle socket, only for HV0RA-1FC*-R								

RECEPTACLE WITH CRIMP CABLE



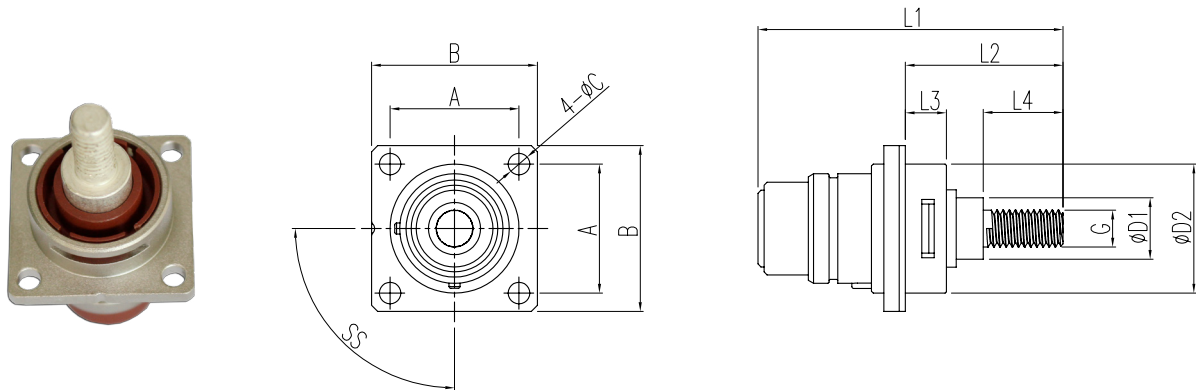
Part number	A	B	C	D1	D2	L1	L2	L3	Crimp cable (mm ²)
HV0R6-1FCX	21.0	27.0	3.5	7.2	21.0	38.2	14.2	6.7	16mm ² to 25mm ²
HV0R7-1FCX	24.6	33.0	4.5	10.5	26.0	75.4	37.7	12.0	35mm ² to 50mm ²
HV0R8-1FCX	23.0	31.0	4.5	9.0	23.0	53.7	20.5	5.5	25mm ² to 35mm ²
HV0RA-1FCX	29.4	36.5	4.5	12.5	32.0	63.4	26.2	13.0	50mm ² to 70mm ²

RECEPTACLE WITH COPPER BAR



Part number	A	B	C	D1	D3	L1	L2	L3	L4	L5	TH	G	Crimp cable (mm ²)
HV0R6-1FHX	21.0	27.0	3.5	10.0	21.0	50.2	26.2	6.7	15.0	19.2	5.0	M6 X 1	25mm ²
HV0R7-1FHX	24.6	33.0	4.5	15.0	26.0	73.9	36.2	12.1	25.0	28.2	4.0	8.5	50mm ²
HV0R8-1FHX	23.0	31.0	4.5	11.8	23.0	58.9	25.7	5.5	14.8	18.2	6.0	M6 X 1	35mm ²
HV0RA-1FHX	29.4	36.5	4.5	22.5	32.2	82.2	45.0	13.0	32.0	33.0	5.0	10.5	70mm ²

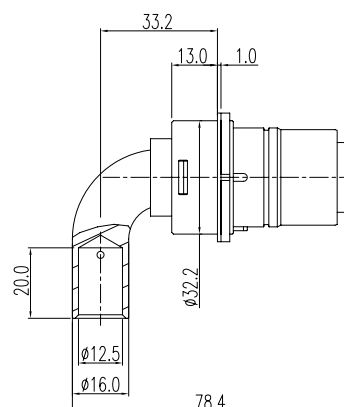
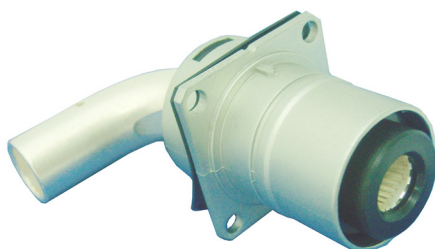
RECEPTACLE WITH SCREW



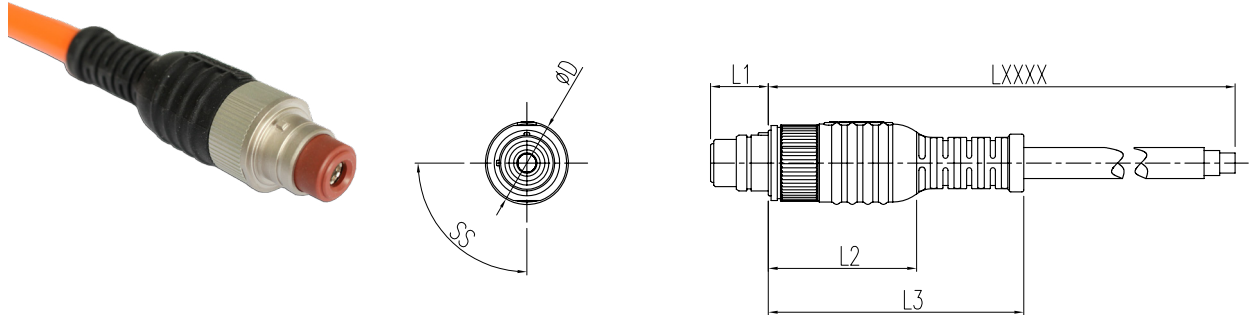
Part number	A	B	C	D1	D2	L1	L2	L3	L4	G
HV0R6-1FTX	21.0	27.0	3.5	10.0	21.0	49.7	25.7	6.7	13.0	M6x1
HV0R7-1FTX	24.6	33.0	4.5	15.0	26.0	71.7	34.0	12.1	12.5	M8.0x1.25
HV0R8-1FTX	23.0	31.0	4.5	11.8	23.0	63.7	30.5	5.5	16.5	M8.0x1.25
HV0RA-1FTX	29.4	36.5	4.5	22.5	32.2	80.2	43.0	13.0	20.0	M10x1.5

Receptacle with right angle socket: [HVORA-1FC*-R](#)

(Remark: custom orders are available)

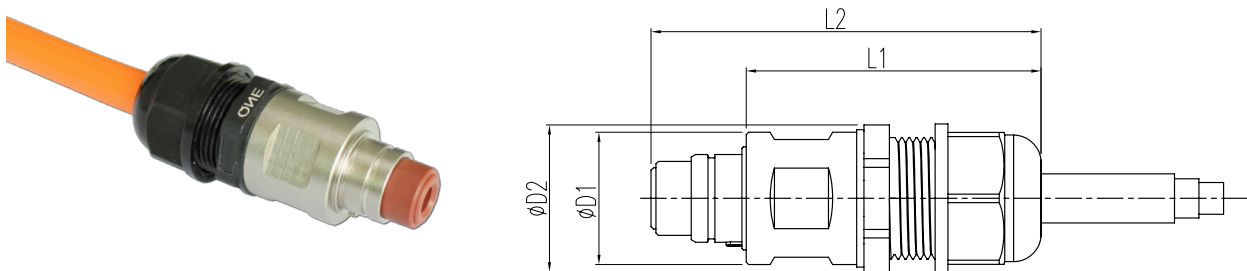


CABLE MOUNTED RECEPTACLE WITH CABLE (SHIELDED)



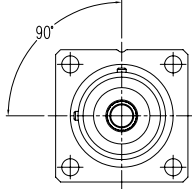
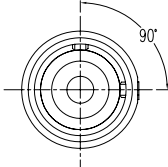
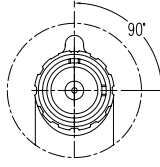
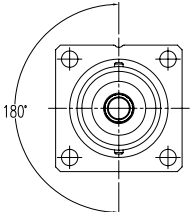
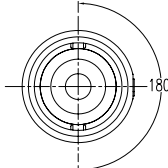
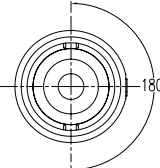
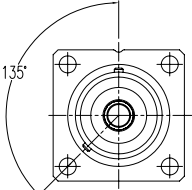
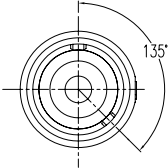
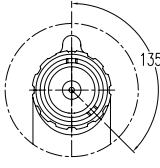
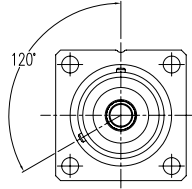
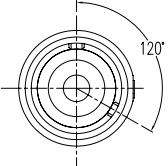
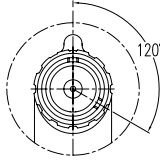
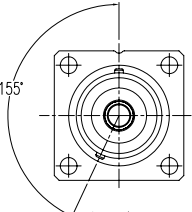
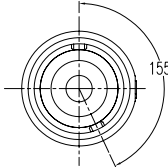
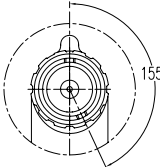
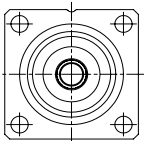
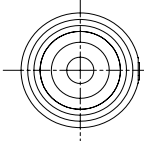
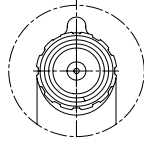
Part number	D	L1	L2	L3	LXXXX
HV1R6-1FCX-FG-...	26.0	18.5	47.4	72.4	Cable length (mm), custom orders are available
HV1R7-1FCX-FG-...	30.8	32.7	50.0	79.0	
HV1R8-1FCX-FG-...	27.5	27.2	47.3	72.3	
HV1RA-1FCX-FG-...	36.0	32.7	56.0	81.0	

CABLE MOUNTED RECEPTACLE (UNSHIELDED)



Part number	D1	D2	L1 REF	L2 REF	LXXXX
HV1R6-1FCX-PC-...	TBD				Cable length (mm), custom orders are available
HV1R7-1FCX-PC-...	TBD				
HV1R8-1FCX-PC-...	27.0	30.0	63.0	90.0	
HV1RA-1FCX-PC-...	TBD				

ALTERNATE KEYING POSITIONS

	RECEPTACLE	STRAIGHT PLUG	RIGHT ANGLE PLUG
X: 90°			
Y: 180°			
Z: 135°			
W: 120°			
U: 155°			
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.

HOW TO ORDER: PLUG AND CABLE MOUNT RECEPTACLE

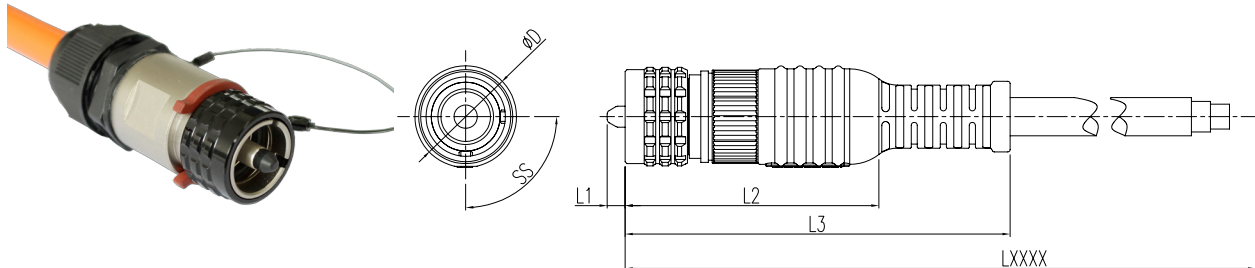
	HV	1	R6	1MCX	FG	25	LXXXX
Shell type: 1: Cable mount receptacle 7: Straight plug 9: Right angle plug							
Insert size: R6: 6mm Radsok (Max current 120A) R8: 8mm Radsok (Max current 150A) R7: 8mm Radsok (Max current 180A) RA: 10mm Radsok (Max current 250A)							
Number of position: 1: 1 position							
Type of insert: M: Male (Recommended) F: Female							
Contact tails: C: Crimp							
Alternate keying positions: X: 90° Y: 180° Z: 135° W: 120° U: 155° N: Normal							
Backshell type: FG: Flex grip (Shielded, backshell with glue type) PC: Plastic grand (Unshielded)							
Cable section: 25: 25mm ² cable 35: 35mm ² cable 50: 50mm ² cable 70: 70mm ² cable							
Cable length: LXXXX: Cable length (Unit in mm)							

Remarks:

To find the suitable cable for your model, please refer to the instructions below:

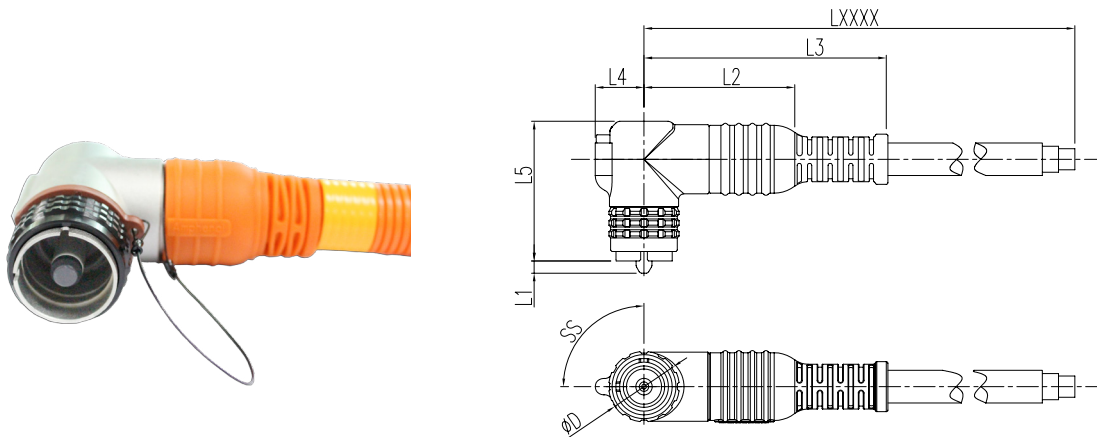
- R6: 25mm²
- R8: 35mm²
- R7: 50mm²
- RA: 70mm²

STRAIGHT PLUG (SHIELDED)



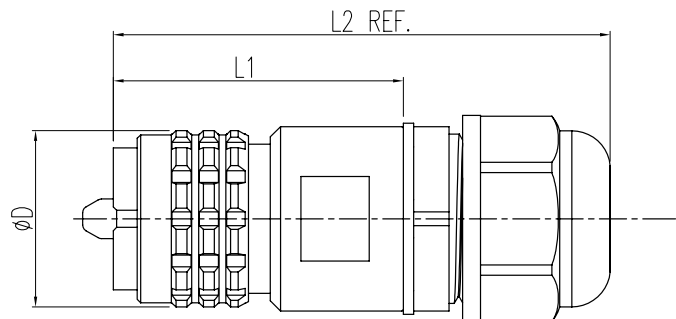
Part number	D	L1	L2	L3	LXXXX
HV7R6-1MCX-FG-...	26.0	4.5	66.5	91.5	Cable length (mm), custom orders are available
HV7R7-1MCX-FG-...	32.5	0.3	84.5	109.5	
HV7R8-1MCX-FG-...	27.5	1.7	74.1	99.1	
HV7RA-1MCX-FG-...	37.5	0	88.0	113.0	

RIGHT ANGLE PLUG (SHIELDED)



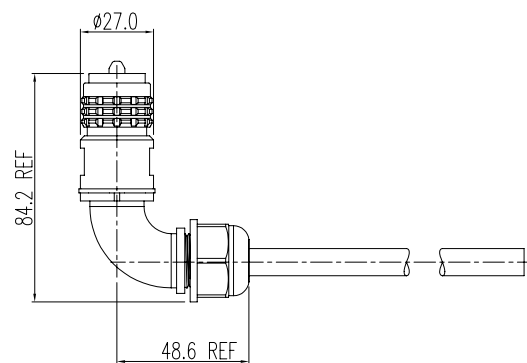
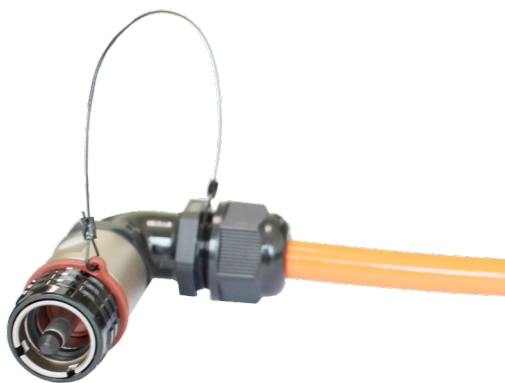
Part number	D	L1	L2	L3	L4	L5	LXXXX
HV9R6-1MCX-FG-...	26.0	5.5	55.5	80.5	18.0	51.5	Cable length (mm), custom orders are available
HV9R7-1MCX-FG-...	32.5	0	59.5	91.0	19.5	68.5	
HV9R8-1MCX-FG-...	27.5	4.3	60.3	90.0	18.5	59.0	
HV9RA-1MCX-FG-...	37.5	0	59.5	84.5	22.5	75.5	

STRAIGHT PLUG (UNSHIELDED)

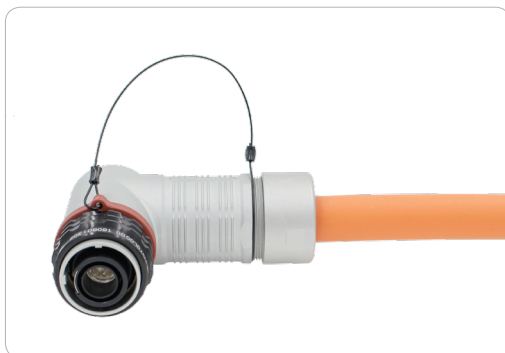


Part number	D	L1	L2 REF	LXXXX
HV7R6-1MCX-PC-...	27.0	42.5	80.0	Cable length (mm), custom orders are available
HV7R7-1MCX-PC-...	TBD			
HV7R8-1MCX-PC-...	29.0	55.0	90.0	
HV7RA-1MCX-PC-...	TBD			

RIGHT ANGLE PLUG (UNSHIELDED)



Part number	LXXXX
HV9R6-1MC**-PC-...	Cable length (mm), custom orders are available



KEY FEATURES

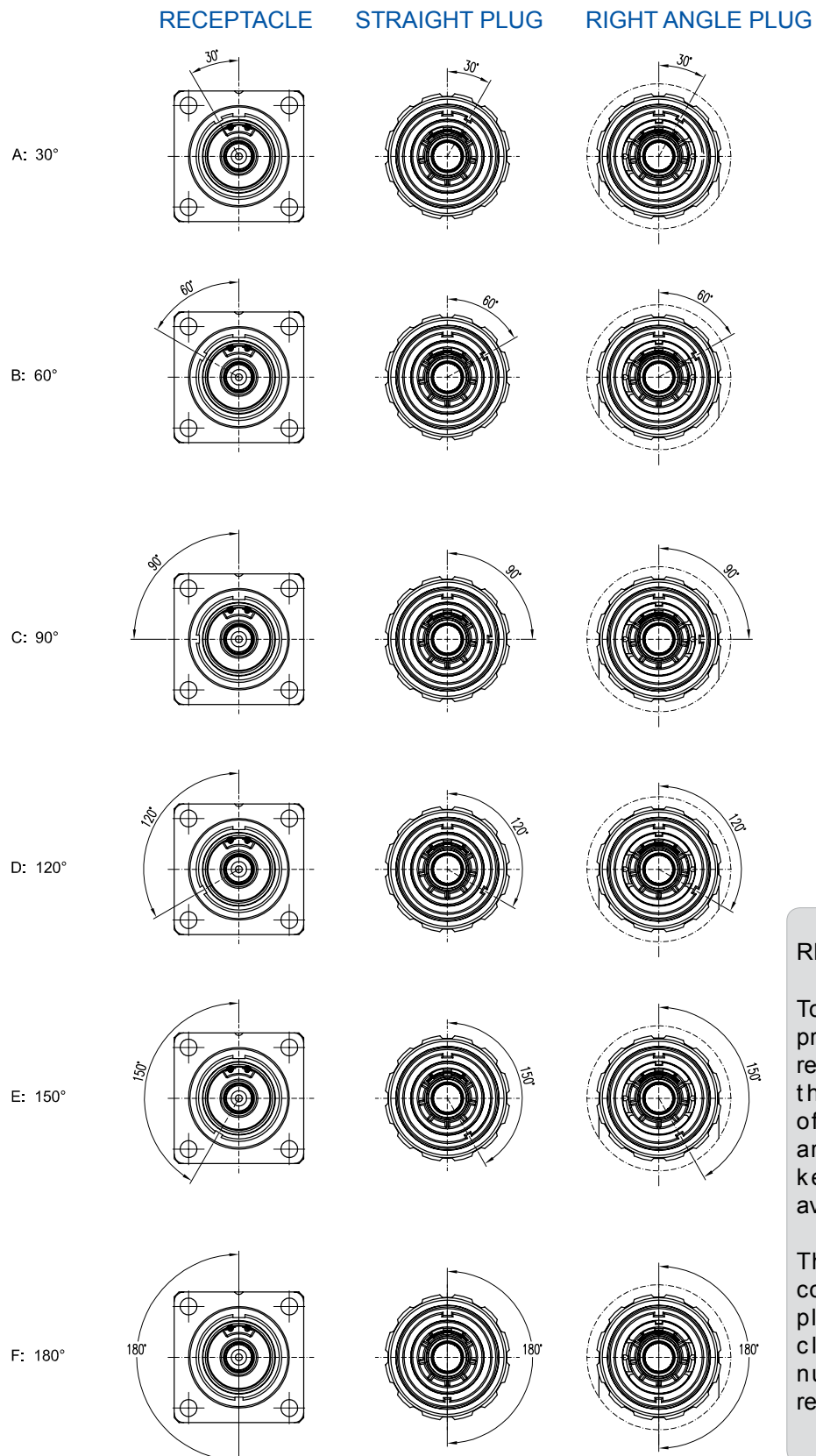
- High voltage with interlock
- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Sealing, IP67 (mated)
- RoHS compliant
- Multiple coding positions

MECHANICAL	
Durability	> 200 mating cycles
Wire range	16 to 70mm ²
Connection type	Crimping
ELECTRICAL	
Rated voltage	1000V DC
Rated current	250A Max
Insulator resistance	> 2000MΩ
Dielectric withstand voltage	3000V AC
ENVIRONMENTAL	
Sealing	IP67 (mated)
Temperature range	-40°C to 125°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

	HVBI	0	02R6	A	M	H	X	BK
Shell type: 0: Receptacle								
Insert size: 02R6: 6mm Radsok (Max current 120A) 03R8: 8mm Radsok (Max current 180A) 05R10: 10mm Radsok (Max current 250A)								
HVIL: A: With HVIL B: Without HVIL								
Insert type: M: Pin								
Termination: H: Copper bar T: Screw								
Alternate keying positions: A: 30° B: 60° C: 90° D: 120° E: 150° F: 180°								
Color of locking nut: BK: Black RD: Red YL: Yellow GR: Green BL: Blue								

ALTERNATE KEYING POSITIONS

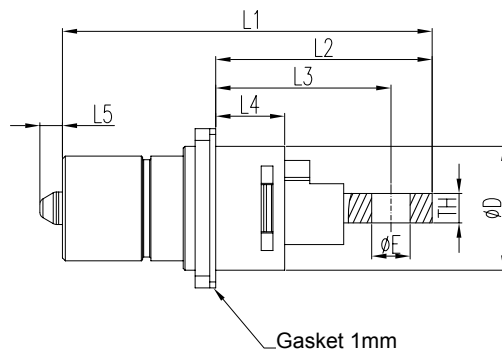
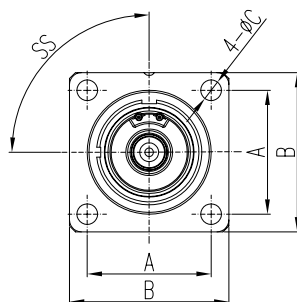


REMARK

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

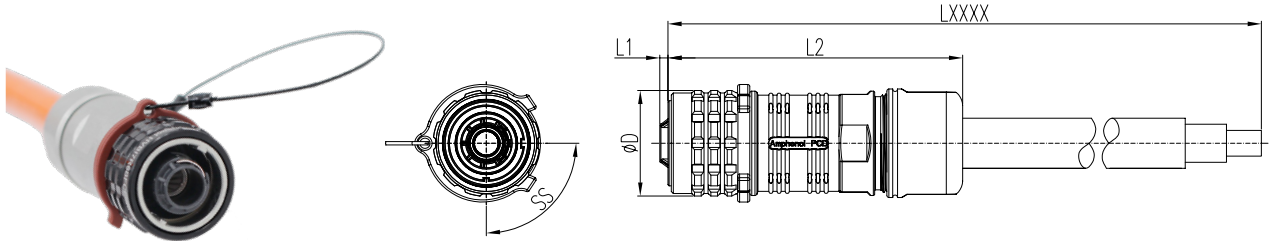


Part number	A	B	C	D	E	L1	L2	L3	L4	L5	TH
HVBI-0-02R6-XMHX	21.0	27.0	3.5	21.0	6.5	62.7	37.7	30.7	12.7	3.8	5.0
HVBI-0-03R8-XMHX	23.0	31.0	4.5	23.0	8.5	76.7	43.7	35.7	15.9	/	5.0
HVBI-0-05R10-XMHX	24.6	33.0	4.5	26.0	10.5	85.9	52.6	40.6	18.4	0.8	6.0

HOW TO ORDER: PLUG

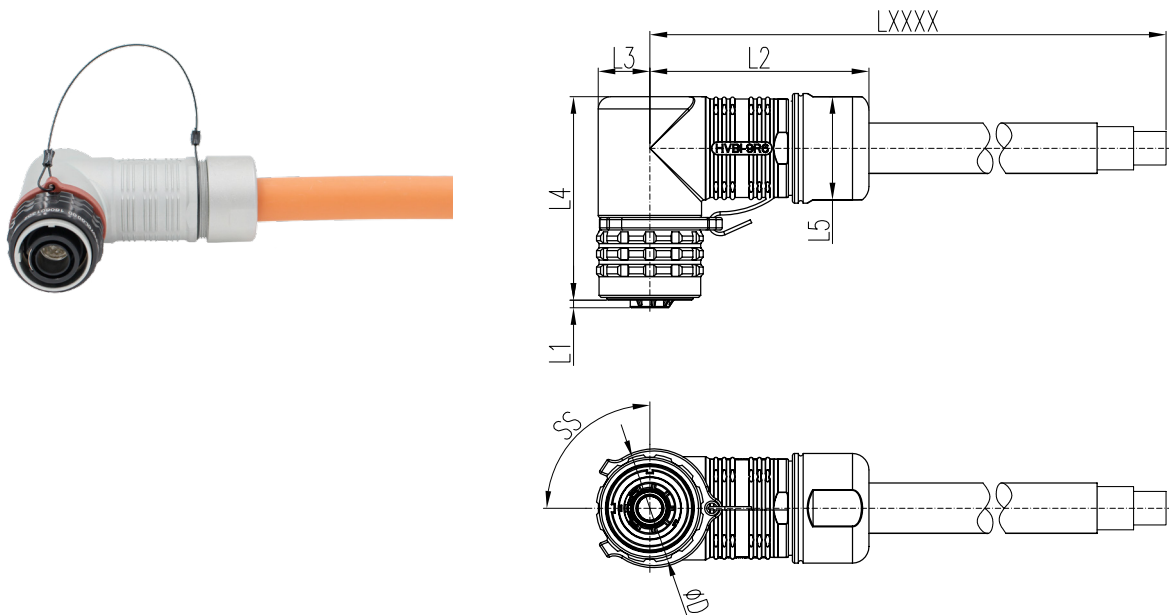
	HVBI	9	02R6	A	F	C	A	BK	FG	25	LXXXX
Shell type: 7: Straight plug 9: Right angle plug											
Insert size: 02R6: 6mm Radsok (Max current 120A) 03R8: 8mm Radsok (Max current 180A) 05R10: 10mm Radsok (Max current 250A)											
HVIL: A: With HVIL B: Without HVIL											
Insert type: M: Pin											
Contact type: C: Crimp											
Alternate keying positions: A: 30° B: 60° C: 90° D: 120° E: 150° F: 180°											
Color of locking nut: BK: Black RD: Red YL: Yellow GR: Green BL: Blue											
FG: Shielded PC: Unshielded											
Cable section: 16: 16mm ² cable 25: 25mm ² cable 5: 35mm ² cable 50: 50mm ² cable 70: 70mm ² cable											
Cable length: LXXXX: Cable length (Unit in mm)											

STRAIGHT PLUG



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

RIGHT ANGLE PLUG



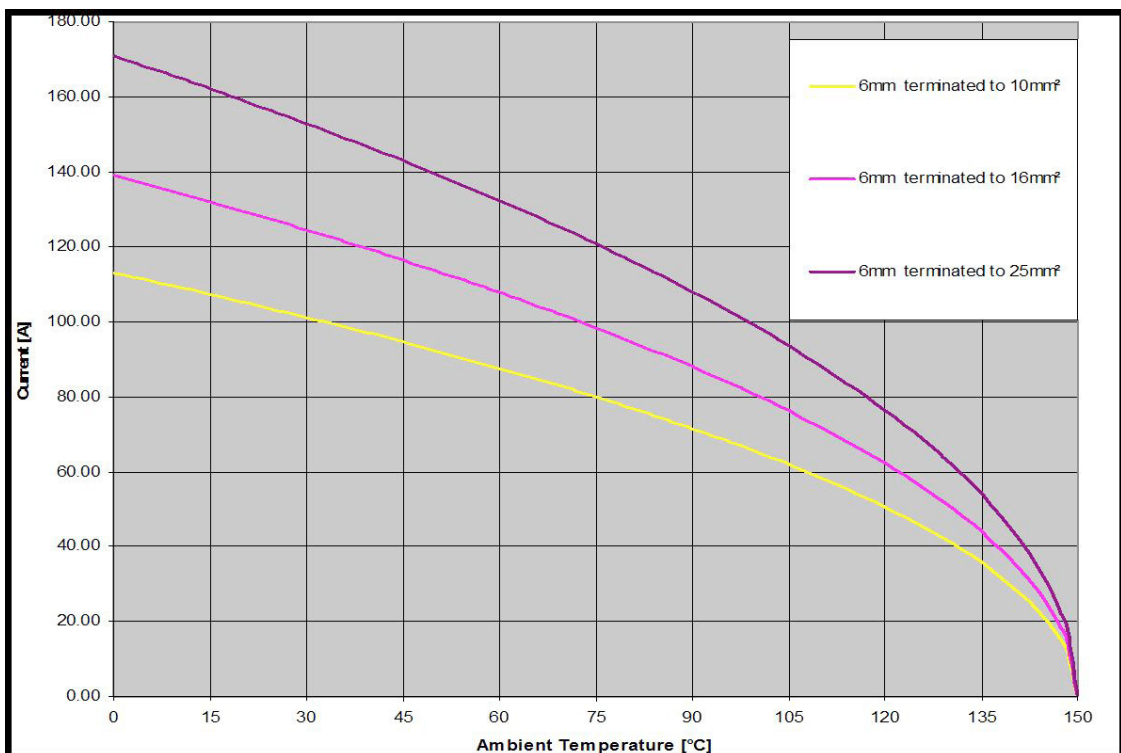
Part number	D	L1	L2	L3	L4	L5	LXXXX	Cable section (mm ²)
HVBI-9-02R6-XFC-XXXX-FG / PC....	26.0	1.8	53.0	12.5	49.3	25.0	Cable length (mm), custom orders are available	16mm ² to 25mm ²
HVBI-9-03R8-XFC-XXXX-FG / PC....	27.5	2.0	62.0	13.9	58.5	27.3		35mm ² to 50mm ²
HVBI-9-05R10-XFC-XXXX-FG / PC...	32.5	1.5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

RADSOK SOCKET CONTACT WITH CABLE SECTION AND RATING CURRENT

6mm Radsok socket: 16mm² to 25mm²

Rated current

Insert size	Cable	Rated current
R6	6mm Radsok (16mm ² cable)	80A
R6	6mm Radsok (20mm ² cable)	100A
R6	6mm Radsok (25mm ² cable)	120A



Remark:

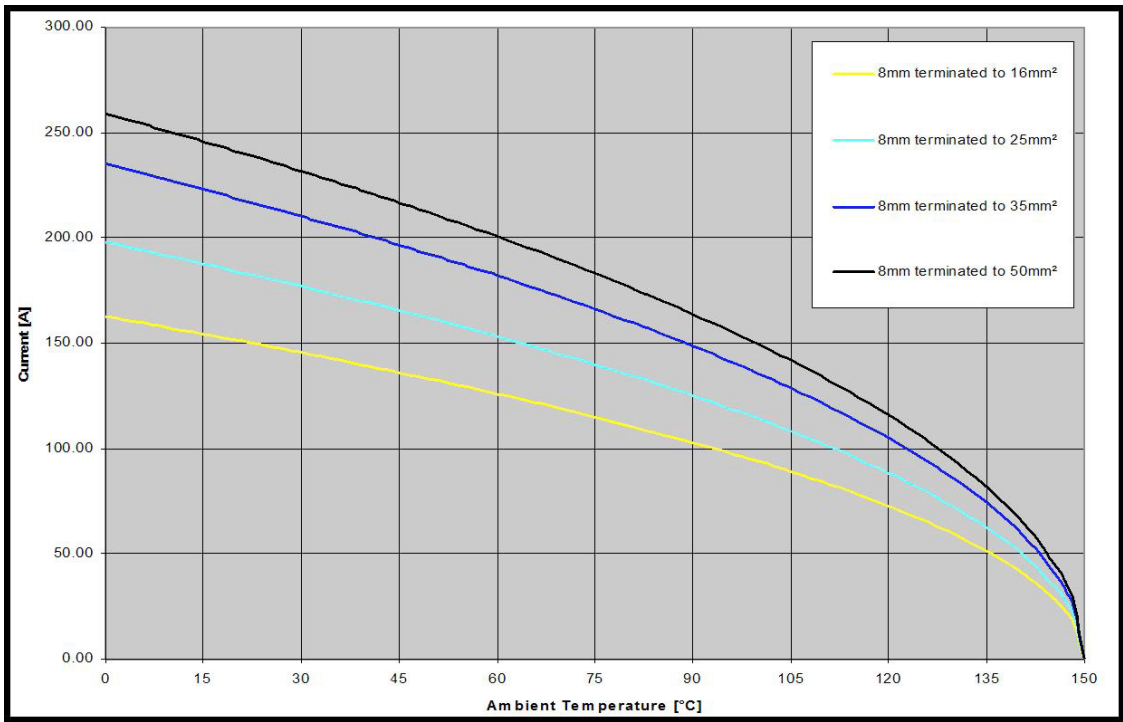
The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

Technical data	HV	HVBI
Rated voltage	400V DC	1000V DC
Operating temperature	-40°C to 125°C	
Dielectric withstanding voltage	2500V AC	
Insulation resistance	2000MOhms (25°C)	
Durability	200 cycles	
Shielding	Upon request	
Sealing	IP67 (mated)	

8MM RADSOK SOCKET: 25MM² TO 35MM²

Rated current

Insert size	Cable	Rated current
R8	8mm Radsok (35mm ² cable)	150A
R8	8mm Radsok (25mm ² cable)	120A



Remark:

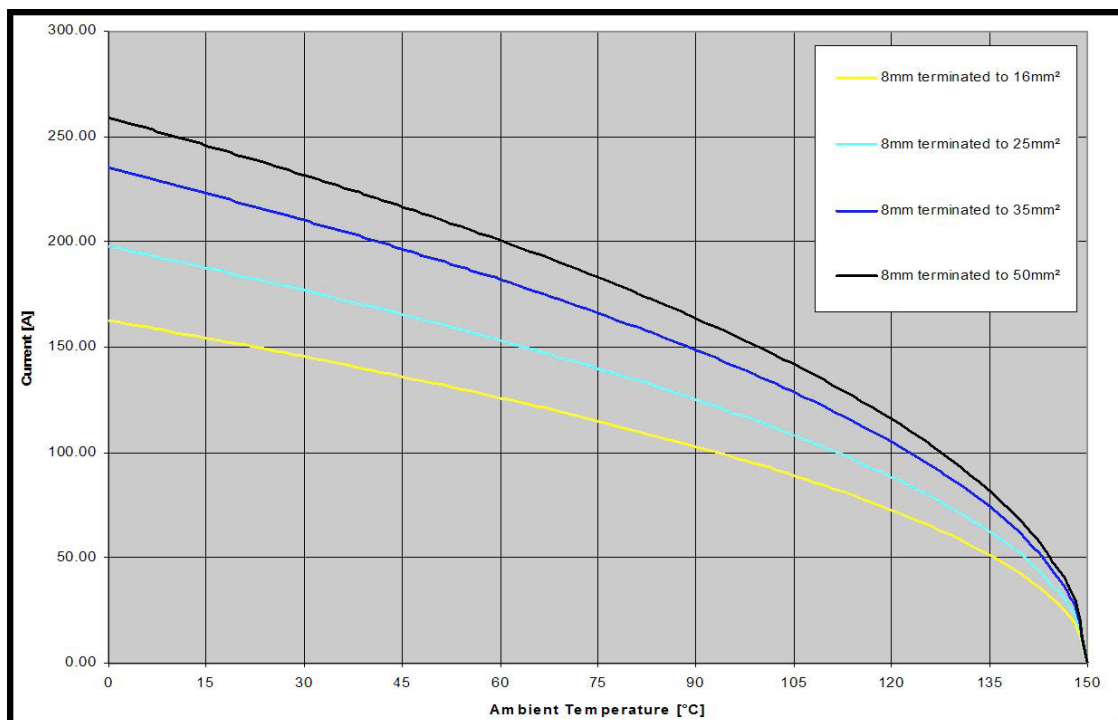
The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

Technical data	HV	HVBI
Rated voltage	400V DC	1000V DC
Operating temperature	-40°C to 125°C	
Dielectric withstanding voltage	2500V AC	
Insulation resistance	2000MOhms (25°C)	
Durability	200 cycles	
Shielding	Upon request	
Sealing	IP67 (mated)	

8MM RADSOK SOCKET: 35MM² TO 50MM²

Rated current

Insert size	Cable	Rated current
R7	8mm Radsok (50mm ² cable)	180A
R7	8mm Radsok (35mm ² cable)	150A



Remark:

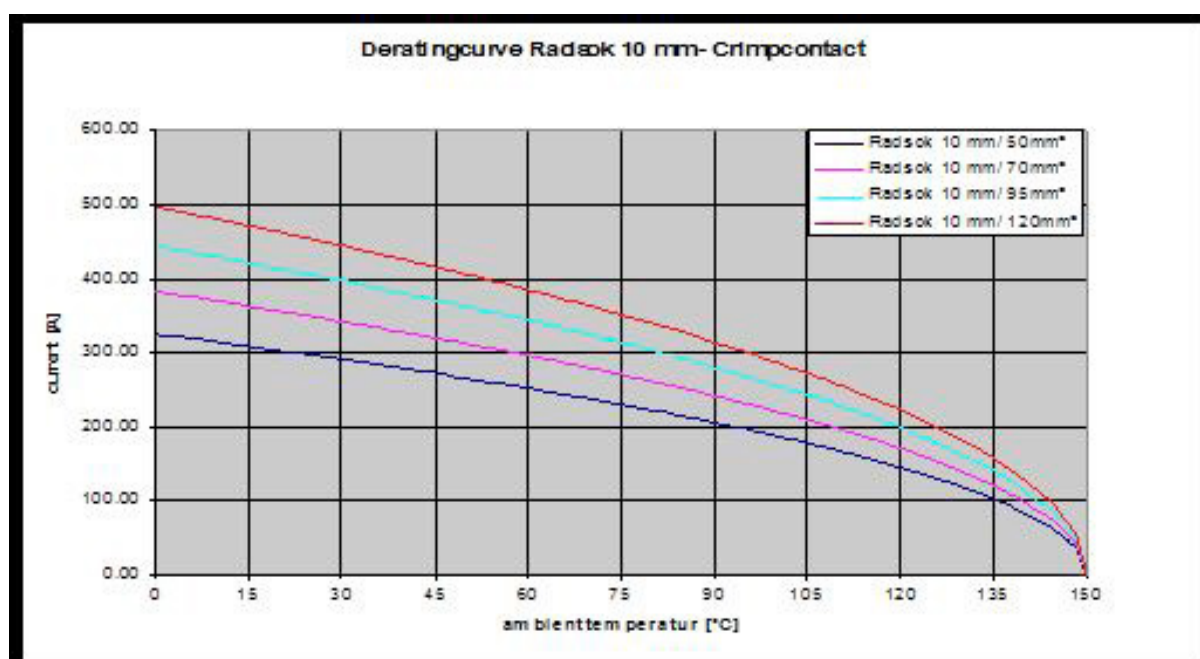
The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

Technical data	HV	HVBI
Rated voltage	400V DC	1000V DC
Operating temperature	-40°C to 125°C	
Dielectric withstanding voltage	2500V AC	
Insulation resistance	2000MΩ (25°C)	
Durability	200 cycles	
Shielding	Upon request	
Sealing	IP67 (mated)	

10MM RADSOK SOCKET: 70MM²

Rated current

Insert size	Cable	Rated current
RA	10mm Radsok (70mm ² cable)	250A
RA	10mm Radsok (50mm ² cable)	180A



Remark:

The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

Technical data	HV	HVBI
Rated voltage	400V DC	1000V DC
Operating temperature	-40°C to 125°C	
Dielectric withstanding voltage	2500V AC	
Insulation resistance	2000MΩ (25°C)	
Durability	200 cycles	
Shielding	Upon request	
Sealing	IP67 (mated)	

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	
PHEV air-conditioner	
DCDC	
PTC	
Power distribution boxes	
MECHANICAL	
Durability	> 500 mating cycles (up to 1000)
Connection type	Crimping
ELECTRICAL	
Rated voltage	400V AC / 690V 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
Product type: 1S: Flange receptacle						
Insert arrangement: 402: 2 X (23A to 40A) + 2 X 7.5A 403: 3 X (23A to 40A) + 2 X 7.5A 492: 2 X (40A to 50A) + 2 X 7.5A						
Contact type: M: Male contact F: Female contact						
C: Crimp version						
Alternate keying positions: /: Normal X: 270° Y: 315° Z: 90° W: 45°						

CONTACT

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

HOW TO ORDER

PLUG

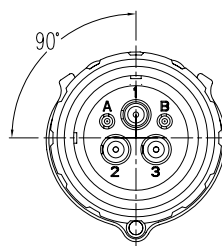
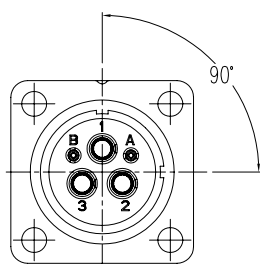
	HVG	1P	402	M	C	X	E	2A	2	LXXXX	H6
Product type:											
1P: Plug											
Insert arrangement:											
402: 2 X (23A to 40A) + 2 X 7.5A											
403: 3 X (23A to 40A) + 2 X 7.5A											
492: 2 X (40A to 50A) + 2 X 7.5A											
Contact type:											
M: Male contact											
F: Female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

ALTERNATE KEYING POSITIONS

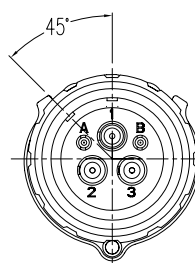
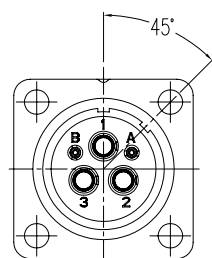
RECEPTACLE

STRAIGHT PLUG

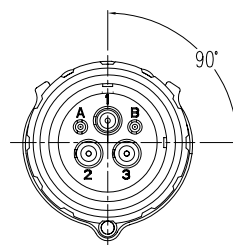
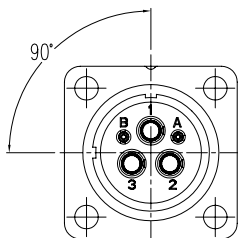
X: 270°



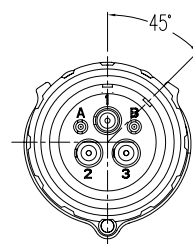
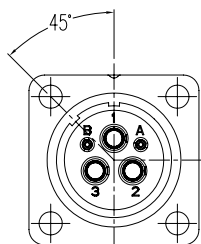
Y: 315°



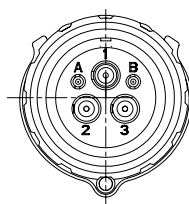
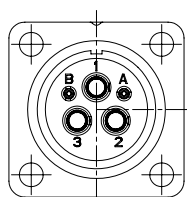
Z: 90°



W: 45°



N: NORMAL

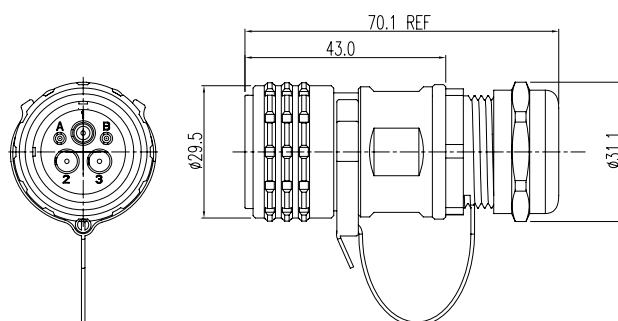
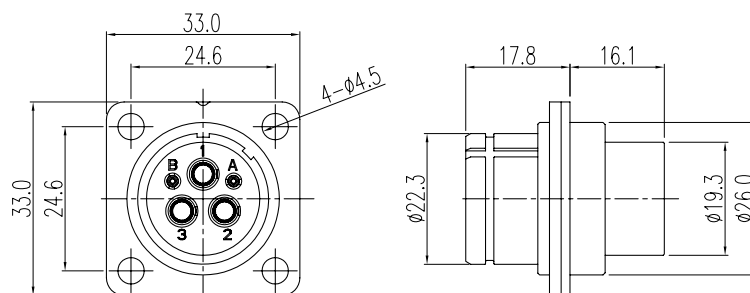


REMARK

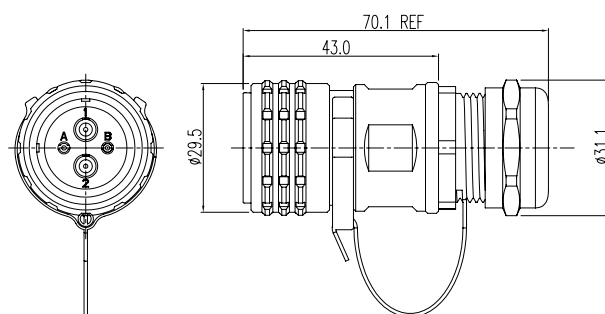
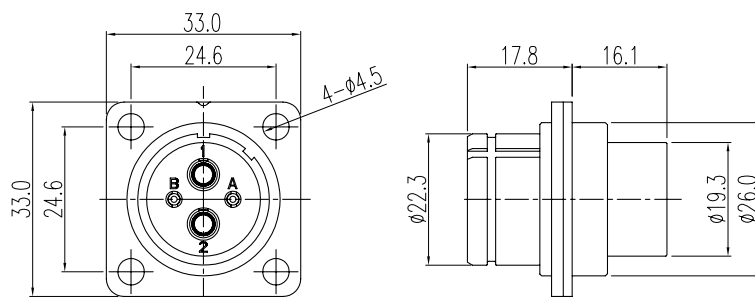
To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

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: 403



RECEPTACLE AND PLUG: 402



HVS SERIES



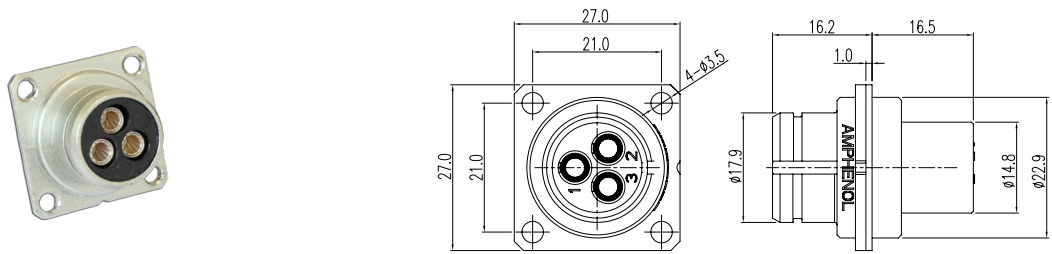
KEY FEATURES

- 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	
PHEV air-conditioner	
DCDC	
PTC	
Power distribution boxes	
MECHANICAL	
Durability	> 500 mating cycles
Connection type	Crimping
ELECTRICAL	
Rated voltage	230V AC / 400V DC
Rated current	32A 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

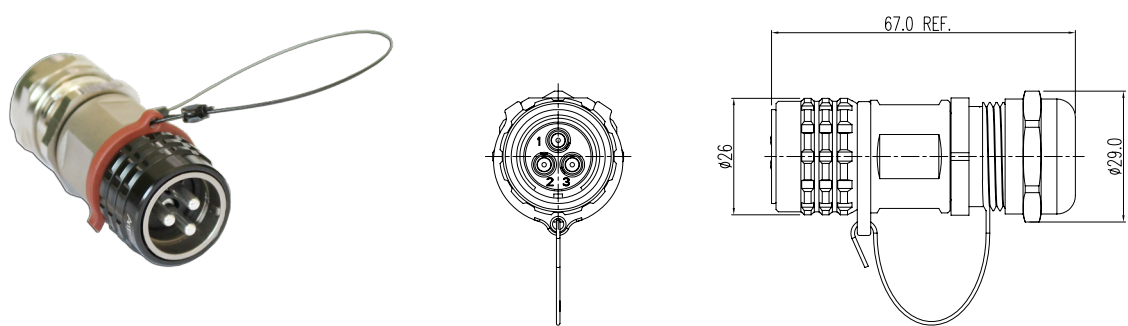
RECEPTACLE

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



PLUG

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



TOOLS

Contact size	Cable section (mm ²)	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

Amphenol PCD Shenzhen

Building 21
1st Liao Keng Industrial Zone
Shi Yan Street, Bao An District Shenzhen 518108
China

Tel.: +86 755-8173-8000
Fax: +86 755-8173-8180
Email: inquiry@amphenolpcd.com.cn

www.amphenolpcd.com.cn

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