

MixMate series – the high-capacity connectors

MixMate integrates axial screw contacts and TOP connection technology in one plug-in connector. The compact design allows simultaneous transmission of high currents, high voltages and signals.







Technical data

	S 4	S 4/0	S 6/12	S 6/6
Standards / approvals				
Standards	DIN EN 61984 DIN EN 60664-1	DIN EN 61984 DIN EN 60664-1	DIN EN 61984 DIN EN 60664-1	DIN EN 61984 DIN EN 60664-1
Approvals	UL/CSA	UL/CSA	UL/CSA	UL/CSA
Inserts				
No. of poles				
– Power contact	4 (+PE)	4	6	6 (+PE)
– Signal contact			12	6
Rated voltage				
– Power contact	1000 V	830 V	630 V	630 V
– Signal contact			400 V	400 V
Rated voltage to UL/CSA	600 V	600 V	600 V	600 V
Rated current				
– Power contact	65 A	80 A	48 A	100 A
– Signal contact			16 A	16 A
Rated impulse withstand voltage				
– Power contact	8 KV	8 KV	8 KV	8 KV
– Signal contact			6 KV	6 KV
Pollution severity	3	3	3	3
Insulation resistance	$\geq 10^{10} \Omega$	$\geq 10^{10} \Omega$	$\geq 10^{10} \Omega$	$\geq 10^{10} \Omega$
Material	Glass-fibre reinforced PC (in UL list and approved for railway applications)	Glass-fibre reinforced PC (in UL list and approved for railway applications)	Glass-fibre reinforced PC (in UL list and approved for railway applications)	Glass-fibre reinforced PC (in UL list and approved for railway applications)
Temperature range	-40 °C ... +125 °C	-40 °C ... +125 °C	-40 °C ... +125 °C	-40 °C ... +125 °C
Flammability to UL 94	V-0	V-0	V-0	V-0
Mechanical service life				
– Plugging cycles Ag - Surface	≥ 500	≥ 500	≥ 500	≥ 500
– Plugging cycles Au - Surface	≥ 500	≥ 500	≥ 500	≥ 500
Contact resistance with min. and max. conductors				
	$\leq 4 \text{ m}\Omega$	$\leq 4 \text{ m}\Omega$	$\leq 4 \text{ m}\Omega$	$\leq 4 \text{ m}\Omega$
Contacts / Material				
Sockets and plug-in contact	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Surface	Passivated silver or 0.8 μm gold on 2 μm Nickel	Passivated silver or 0.8 μm gold on 2 μm Nickel	Passivated silver or 0.8 μm gold on 2 μm Nickel	Passivated silver or 0.8 μm gold on 2 μm Nickel
Flexible conductor connection				
– Power contact	2.5 - 10 mm ² (AWG 14 ... 8)	1.5 - 16 mm ² (AWG 16 ... 6)	2.5 - 10 mm ² (AWG 14 ... 8)	16 - 35 mm ² (AWG 8 ... 2)
– Signal contact			0.5 - 2.5 mm ² (AWG 24 ... 14)	0.5 - 2.5 mm ² (AWG 24 ... 14)
Stripping length				
– Power contact	8 mm	8 mm	8 mm	13 mm
– Signal contact			12 mm	12 mm
Clamping torque/Axial connection				
– Screw connection		2 ... 3 Nm		
– Power contact	1.1 - 1.7 Nm		1.1 - 1.7 Nm	6 ... 8 Nm
– Signal contact			0.45 ... 0.9 Nm	0.45 ... 0.9 Nm
Fixings				
Hexagon socket, 2 mm	SW 2	SW 3	SW 2	SW 4
Screwdriver	0.6 x 3.5		0.6 x 3.5 mm	SD 0.6 x 3.5 or PZ 0
PE connection via plug/socket				
– Clamping range	1.5/2.5 ... 4/10 mm ²	1.5 ... 16 mm ² with cable lug	2.5 ... 10 mm ²	0.5 ... 4 mm ²
– AWG conductor	AWG 16/14 ... 12/8	AWG 16 ... 6	AWG 14 ... 8	AWG 20 ... 12
– Stripping length	8 mm	8 mm (for wire up to 6 mm ² only)	8 mm	8 mm
– Clamping torque	0.5 - 0.8 Nm	2 ... 2.5 Nm	2 ... 2.5 Nm	1.2 - 1.5 mm
– Blade dimensions	SD 0.8 x 4 mm	SD 0.8 x 4 mm or PZ 2	SD 0.8 x 4 mm or PZ 2	SD 0.8 x 4 mm or PZ 1

Note: Power contact = axial connection, Signal contact = screw connection, Switch off power supply before handling plug-in connectors. MixMate S6/6 with PE via axial connection with data identical to the power contact

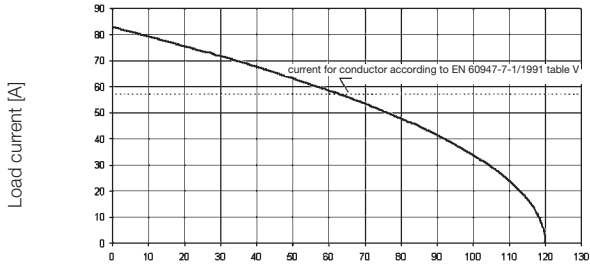
Overview

	Rated voltage	Rated current	No. of poles	Tension clamp connection	Screw conn. with wire guard spring	Crimp connection	Push In	Axial screw connection	Page
	1000 V	65 A	4 + ⊕					•	B.96
	830 V	80 A	4 + 0 + ⊕					•	B.98
	630 V	48 A	6 + 12 + ⊕		•			•	B.100
	630 V	100 A	6 + 6 + ⊕		•			•	B.102

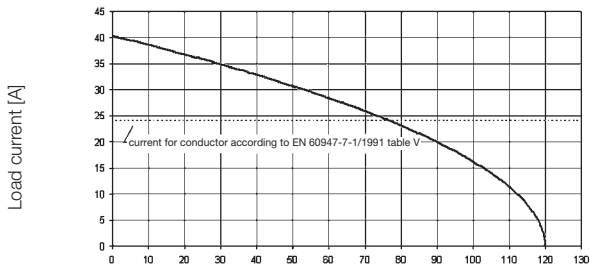
Technical data

Derating curves

Size 3
MixMate – 4 power contacts

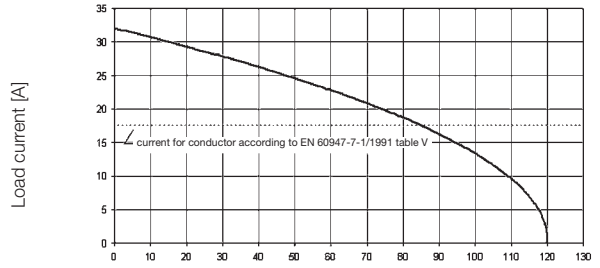


HDC-S4-SAS/BAS H07V-K10 Ambient temperature [°C]

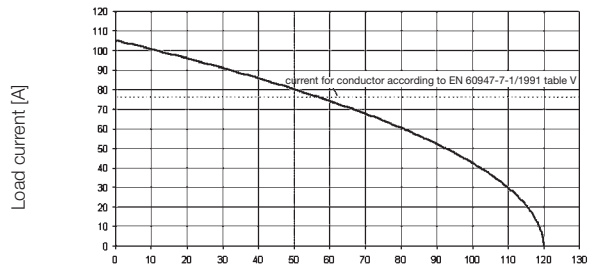


HDC-S4-SAS/BAS H07V-K2,5 Ambient temperature [°C]

Size 6
MixMate – 4 power contacts



HDC-S4/0-SAS/BAS H07V-K1,5 Ambient temperature [°C]



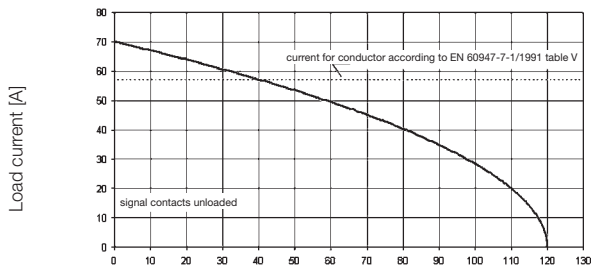
HDC-S4/0-SAS/BAS H07V-K16 Ambient temperature [°C]

Technical data

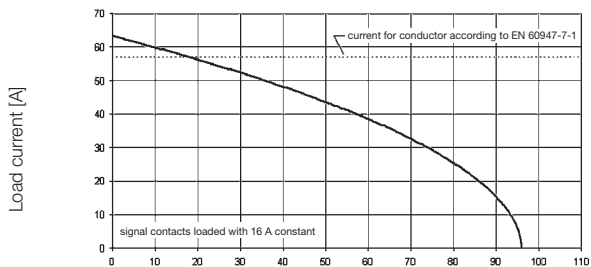
Derating curves

Size 6

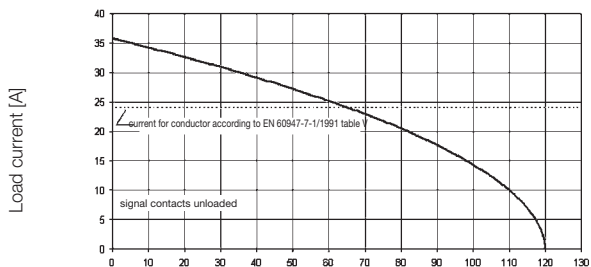
MixMate – 6 power contacts/12 signal contacts



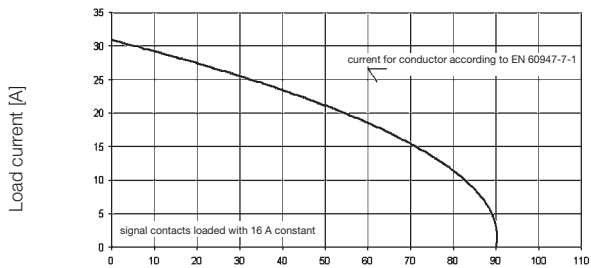
HDC-S6/12-SAS/BAS Ambient temperature [°C]
power contacts H07V-K10



HDC-S6/12-SAS/BAS Ambient temperature [°C]
power contacts H07V-K10



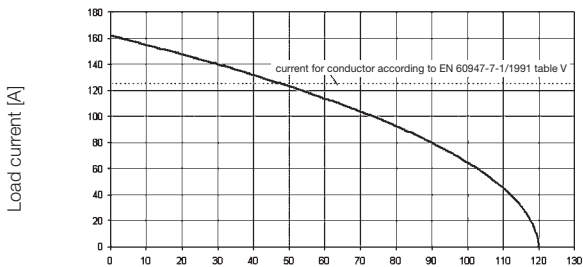
HDC-S6/12-SAS/BAS Ambient temperature [°C]
power contacts H07V-K2,5



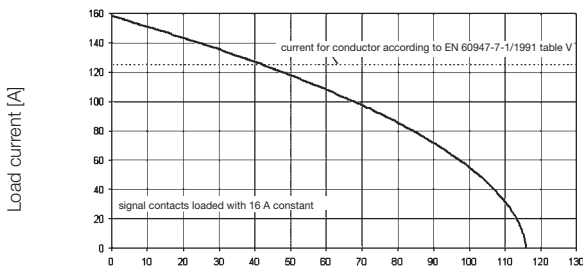
HDC-S6/12-SAS/BAS Ambient temperature [°C]
power contacts H07V-K2,5

Size 8

MixMate – 6 power contacts/6 signal contacts



HDC-S6/6-SAS/BAS Ambient temperature [°C]
power contacts H07V-K35



HDC-S6/6-SAS/BAS Ambient temperature [°C]
power contacts H07V-K35

MixMate series - the high-capacity connectors

1000 V, 65 A, Size 3

4 + ⊕

Inserts

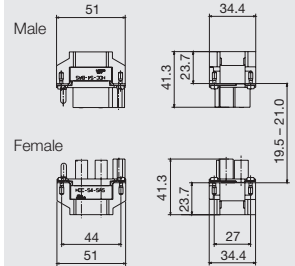


Axial screw connection

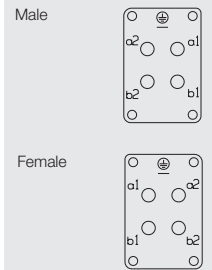


Insert	Designation	Order No.
Male	HDC S4 SAS	1789990000
Female	HDC S4 BAS	1789980000

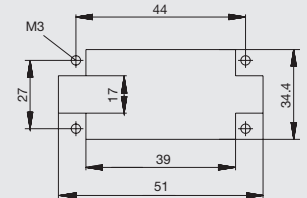
Dimensions



Arrangement of contacts



Mounting cut-out



Selection of Housings RockStar® IP65
Size 3

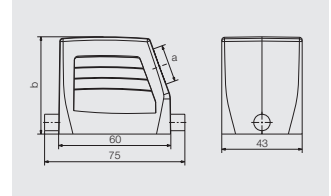


Hood

Hood, Cable Entry sideways



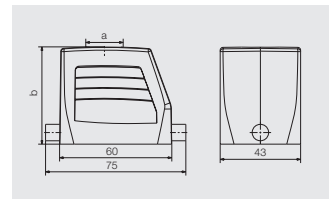
a	Version	Cover	b (mm)	Designation	Order No.
M 20	with thread		52	HDC 06B TSLU 1M20G	1788100000
M 20	with thread		52	HDC 06B TSLU 1M20G	1805930000
M 25	with thread		52	HDC 06B TSLU 1M25G	1788090000
M 25	with thread		72	HDC 16D TSLU 1M25G	1787480000



Hood, Cable Entry at top



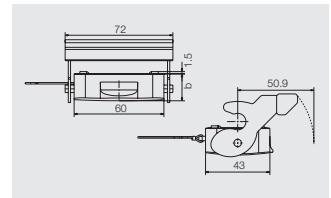
a	Version	Cover	b (mm)	Designation	Order No.
M 20	with thread		52	HDC 06B TOLU 1M20G	1788120000
M 25	with thread		52	HDC 06B TOLU 1M25G	1788110000
M 25	with thread		72	HDC 16D TOLU 1M25G	1787500000
M 32	with thread		72	HDC 16D TOLU 1M32G	1787490000



Cover



Version	Designation	Order No.
for hoods	HDC 06B DMDL 1LB	1665210000

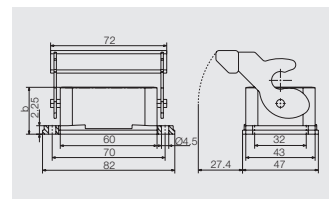


Base

Bulkhead housing



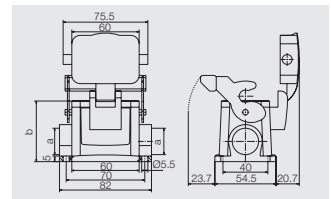
Version	Cover	b (mm)	Designation	Order No.
		29	HDC 06B ALU	1202100000
	with cover	47	HDC 06B ADLU	1202500000



Base housing



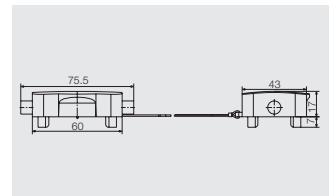
a	Version	Cover	b (mm)	Designation	Order No.
M 20	with thread		54	HDC 06B SLU 2M20G	1788140000
M 20	with thread	with cover	72	HDC 06B SDLU 2M20G	1788170000
M 25	with thread		54	HDC 06B SLU 2M25G	1788130000
M 25	with thread	with cover	72	HDC 06B SDLU 2M25G	1788160000



Cover



Version	Designation	Order No.
for bases	HDC 06B DODL 2BO	1665200000



MixMate series - the high-capacity connectors

630 V, 80 A, Size 6

4+0 + ⊕



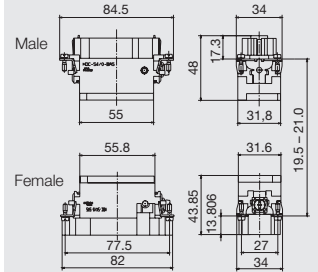
Inserts

Axial screw connection

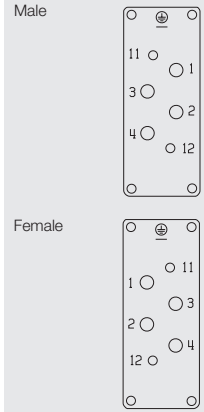


Insert	Designation	Order No.
Male	HDC S4 0 SAS	1789960000
Female	HDC S4 0 BAS	1789970000

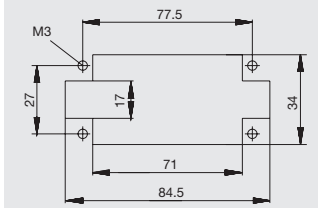
Dimensions



Arrangement of contacts



Mounting cut-out



Selection of Housings RockStar® IP65
Size 6

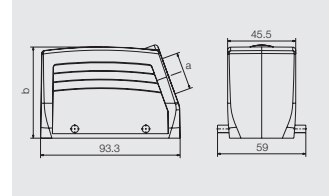


Hood

Hood, Cable Entry sideways



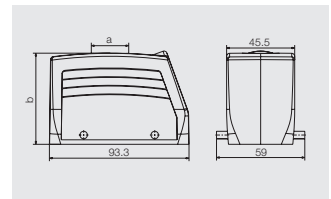
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		61	HDC 16B TSBU 1M25G	1788180000
M 25	with thread		76	HDC 40D TSBU 1M25G	1787010000
M 32	with thread		76	HDC 40D TSBU 1M32G	1787000000



Hood, Cable Entry at top



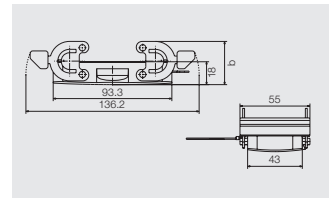
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		61	HDC 16B TOBU 1M25G	1788210000
M 25	with thread		76	HDC 40D TOBU 1M25G	1787070000
M 32	with thread		76	HDC 40D TOBU 1M32G	1787060000



Cover



Version	Designation	Order No.
for hoods	HDC 16B DMDQ 2QB	1665270000

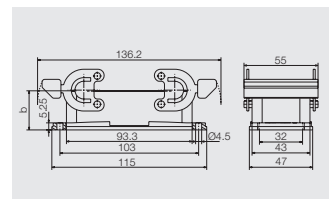


Base

Bulkhead housing



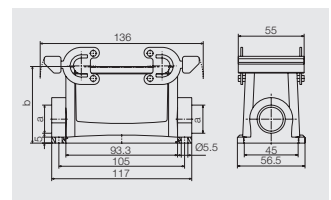
Version	Cover	b (mm)	Designation	Order No.
		29	HDC 16B ABU	1208600000



Base housing



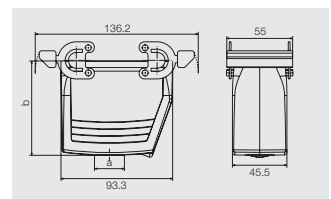
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		64	HDC 16B SBU 2M25G	1788240000
M 25	with thread		84	HDC 40D SBU 2M25G	1787120000
M 32	with thread		84	HDC 40D SBU 2M32G	1787110000



Coupling hood



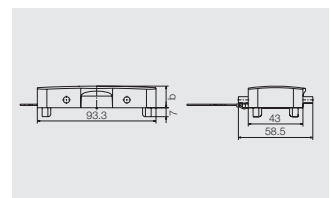
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		79	HDC 40D KBU 1M25G	1787200000
M 32	with thread		79	HDC 40D KBU 1M32G	1787190000



Cover



Version	Designation	Order No.
for bases	HDC 16B DODQ 4BO	1665260000



MixMate series - the high-capacity connectors

630 V, 48 A, Size 6

6+12 + ⚡

Inserts



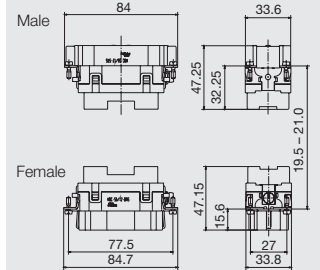
Axial screw connection



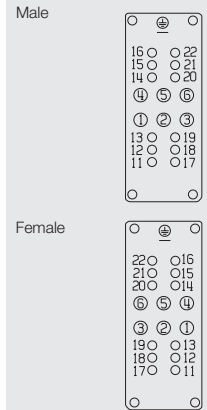
Insert	Designation	Order No.
Male	HDC S6 12 SAS	1790000000
Female	HDC S6 12 BAS	1790010000

Note Please note: the signal contacts are designed for a rated voltage of 400V and a rated current of 16A.

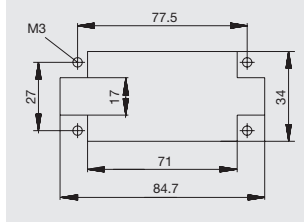
Dimensions



Arrangement of contacts



Mounting cut-out



Selection of Housings RockStar® IP65
Size 6

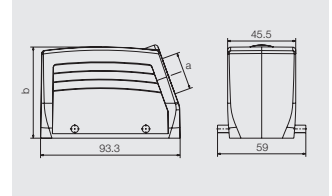


Hood

Hood, Cable Entry sideways



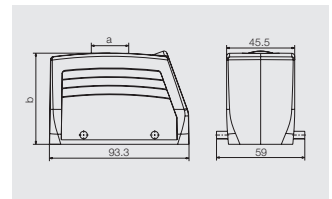
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		61	HDC 16B TSBU 1M25G	1788180000
M 25	with thread		76	HDC 40D TSBU 1M25G	1787010000
M 32	with thread		76	HDC 40D TSBU 1M32G	1787000000



Hood, Cable Entry at top



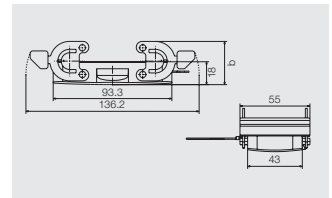
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		61	HDC 16B TOBU 1M25G	1788210000
M 25	with thread		76	HDC 40D TOBU 1M25G	1787070000
M 32	with thread		76	HDC 40D TOBU 1M32G	1787060000



Cover



Version	Designation	Order No.
for hoods	HDC 16B DMDQ 2QB	1665270000

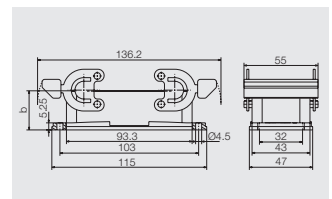


Base

Bulkhead housing



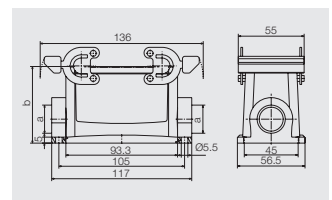
Version	Cover	b (mm)	Designation	Order No.
		29	HDC 16B ABU	1208600000



Base housing



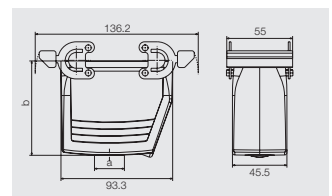
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		64	HDC 16B SBU 2M25G	1788240000
M 25	with thread		84	HDC 40D SBU 2M25G	1787120000
M 32	with thread		84	HDC 40D SBU 2M32G	1787110000



Coupling hood



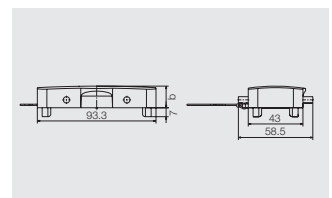
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		79	HDC 40D KBU 1M25G	1787200000
M 32	with thread		79	HDC 40D KBU 1M32G	1787190000



Cover



Version	Designation	Order No.
for bases	HDC 16B DODQ 4BO	1665260000



MixMate series - the high-capacity connectors

630 V, 100 A, Size 8

6+6 + ⊕

Inserts



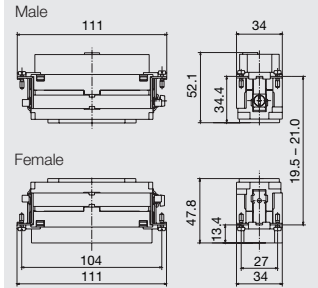
Axial screw connection



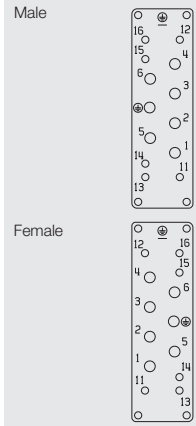
Insert	Designation	Order No.
Male	HDC S6 6 SAS	1790030000
Female	HDC S6 6 BAS	1790020000

Note Please note: the signal contacts are designed for a rated voltage of 400V and a rated current of 16A.

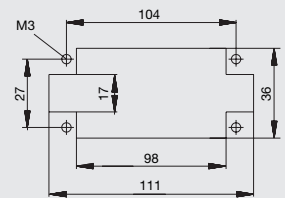
Dimensions



Arrangement of contacts



Mounting cut-out



Selection of Housings RockStar® IP65
Size 8

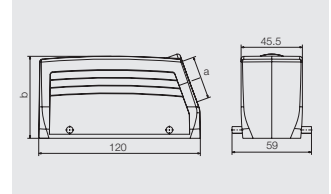


Hood

Hood, Cable Entry sideways



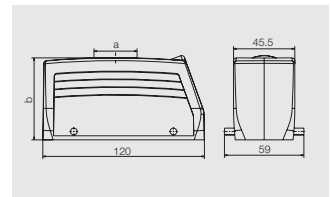
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		61	HDC 24B TSBU 1M25G	1787760000
M 32	with thread		61	HDC 24B TSBU 1M32G	1787750000
M 25	with thread		76	HDC 64D TSBU 1M25G	1786780000
M 32	with thread		76	HDC 64D TSBU 1M32G	1786770000



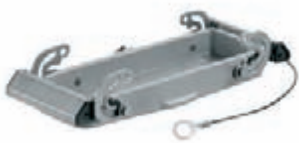
Hood, Cable Entry at top



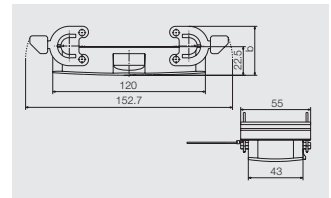
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		61	HDC 24B TOBU 1M25G	1787820000
M 32	with thread		61	HDC 24B TOBU 1M32G	1787810000
M 32	with thread		76	HDC 64D TOBU 1M32G	1786830000



Cover



Version	Designation	Order No.
for hoods	HDC 24B DMDQ 2QB	1665640000

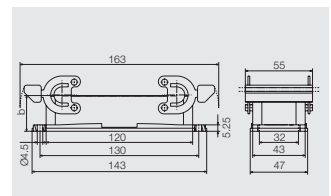


Base

Bulkhead housing



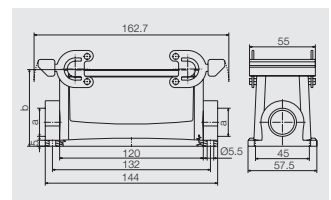
Version	Cover	b (mm)	Designation	Order No.
		29.3	HDC 24B ABU	1212400000



Base housing



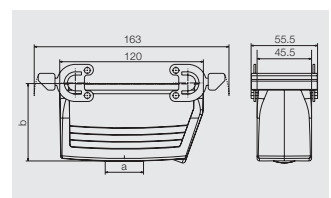
a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		64	HDC 24B SBU 2M25G	1787870000
M 25	with thread		84	HDC 64D SBU 2M25G	1786890000
M 32	with thread		84	HDC 64D SBU 2M32G	1786880000



Coupling hood



a	Version	Cover	b (mm)	Designation	Order No.
M 25	with thread		65	HDC 24B KBU 1M25G	1787920000
M 32	with thread		79	HDC 64D KBU 1M32G	1786960000



Cover



Version	Designation	Order No.
for bases	HDC 24B DODQ 4BO	1665630000

