



HA系列/HA Series

1. 产品制造规范/Specifications

VDE 0110 爬电距离及电气间隙/Concerning clearance and creepage distances

VDE 0627 插头插座/Connectors and plug devices

2. 标准/Standard

DIN EN 60 664-1

DIN EN 61984

3. 产品认证/Approvals



规范/Specifications DIN EN 60 664-1
DIN EN 61984

接插件针数
Number of contacts 3,4,10,16,32(2x16)+PE

接插体/Inserts

工作电流/Working current
HA-3,HA-4 10A
HA-10,HA-16,HA-32 16A

(见电流负载图/See current carrying capacity)

工作电压/Working voltage
HA-3,HA-4 250V/400V
HA-10,HA-16,HA-32 250V

测试电压/Test voltage urms 4KV

污染等级/Pollutiion degree 3(C)

当污染等级为2(C)时参数为16A;250V/400V

Pollutiion degree 2 also 16A;250V/400V

隔离电阻/Insulation resistance $\geq 10^{10}\Omega$

材料/Material Polycarbonate

工作温度范围 $-40^{\circ}\text{C}\dots+100^{\circ}\text{C}/125^{\circ}\text{C}$

Temperature range

阻燃等级 (据UL94) V0

Flammability acc.to U194

据UL/CSA工作电压 600V

Working voltage acc.to UL/CSA

可拔插次数 ≥ 500

Mechanical working life-mating cycles

接插针/Contacts

材料/Material 铜/Copper alloy

表面处理/Surface 镀银/Hard silver-plated

镀金/Hard gold-plated

接触电阻/Contact resistance $\leq 1\text{m}\Omega$

接线形式/Terminal 螺钉压接/Screw terminal

冷压压接/Crimp terminal

弹片压接/Spring terminal

-mm² 0.14-2.5mm²/0.14-4.0mm²

-AWG 26-14

拧紧力矩/测试力矩 0.5Nm:HA-010,HA-016,HA-032

-Tightening/test torque 0.25Nm:HA-003,HA-004

金属上壳, 底座/Hoods,Housings

材料/Material 锌合金/Die cast zinc

表面处理/Surface 高温粉末镀层/Powder-coated

(灰色RAL 7037)

锁定装置/Locking element 不锈钢或铁镀锌

Stainless steel,steel-zinc plated

工作温度范围 $-40^{\circ}\text{C}\dots+100^{\circ}\text{C}/125^{\circ}\text{C}$

Temperature range

防护等级 IP65

Degree of protection acc.to DIN40 050

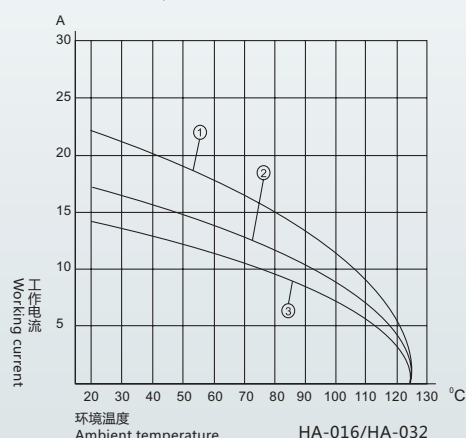
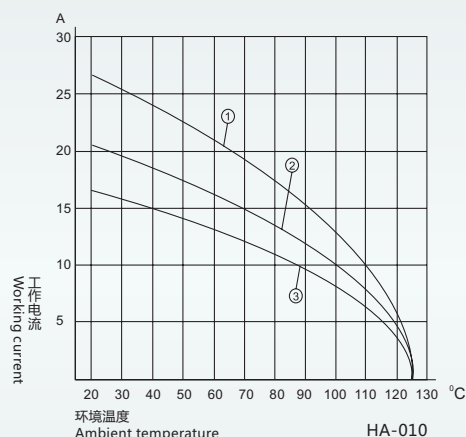
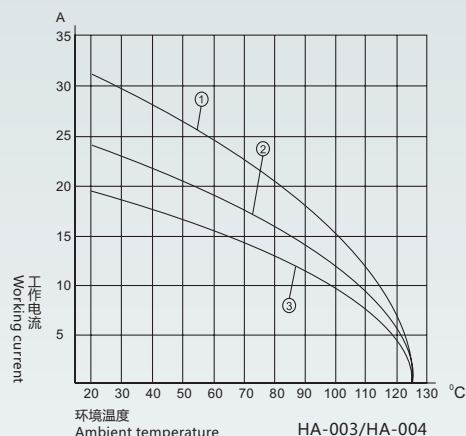
电流负载能力/Current carrying capacity

电流负载能力所受的限制主要来自于包含接插针的接插体可承受的最大温度。

The current carrying is limited by maximun temperature of materials for inserts and contacts including terminals.

测试和控制过程依据DIN IEC 60512-3

Control and test procedures according to DIN IEC 60512-3



①线径/Wire gauge:2.5mm²

②线径/Wire gauge:1.5mm²

③线径/Wire gauge:1.0mm²

芯件适配H3A外壳
Inserts suit for H3A Hood/housing

3+ 
4+ 

250V/400V 10A

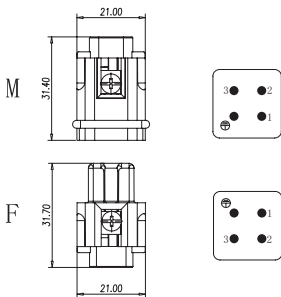
HA

外型尺寸(mm)/Dimensions(mm)

螺钉压接
Screw terminal

接插针排序/Contact arrangement
view from termination side

250V/10A



订货号/Order NO.
公接插件/Male insert 母接插件/Female insert

型号
Type

2 01 003 2101

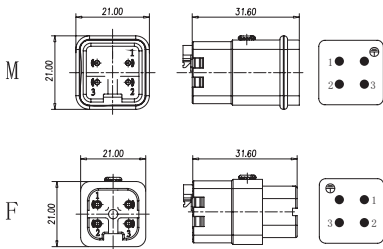
HA-003-M

2 01 003 2201

HA-003-F

弹片压接
Spring terminal

400V/10A



2 01 003 3101

HA-003-MS

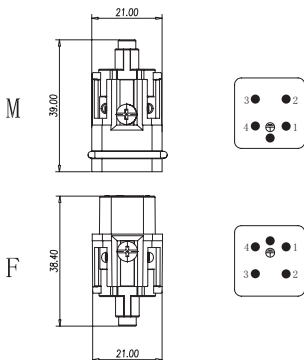
2 01 003 3201

HA-003-FS

螺钉压接
Screw terminal

接插针排序/Contact arrangement
view from termination side

250V/10A



2 01 004 2101

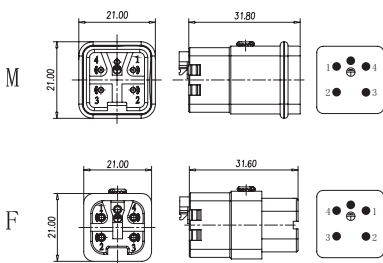
HA-004-M

2 01 004 2201

HA-004-F

弹片压接
Spring terminal

400V/10A



2 01 004 3101

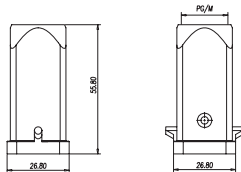
HA-004-MS

2 01 004 3201

HA-004-FS

表面粉末镀层, RAL 7037
Powder-coated, RAL 7037

外型尺寸(mm)/Dimensions(mm)



PG

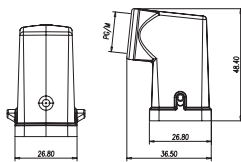
订货号/Order NO.

M20

PG11

H3A-MTG-PG11
H3A-MTG-M20

1 32 903 0111
1 32 903 0120

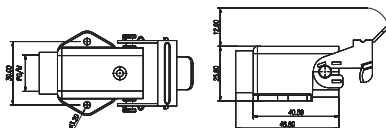
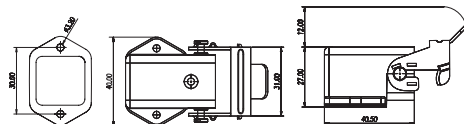
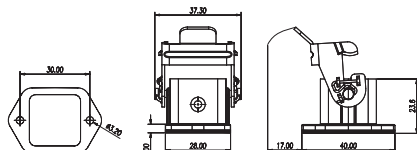


M20

PG11

H3A-MTS-PG11
H3A-MTS-M20

```
1 31 903 0111
1 31 903 0120
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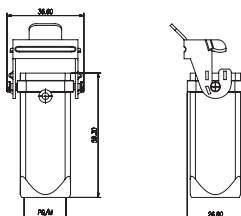
M16

M20

PG11

H3A-MAGSV-PG11
H3A-MAGSV-M16
H3A-MAGSV-M20

```
1 61 903 0111
1 61 903 0116
1 61 903 0120
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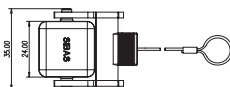


M20

PG11

H3A-MTGVB-PG11
H3A-MTGVB-M20

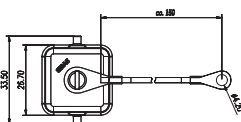
1 73 903 0111
1 73 903 0120



备注:适配公插+上壳
Note: For mounted male insert and hood



备注
No.



备注:适配母插+下壳
Note: For mounted female insert and housings

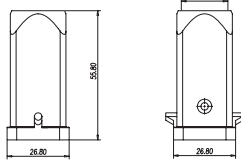
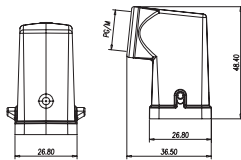
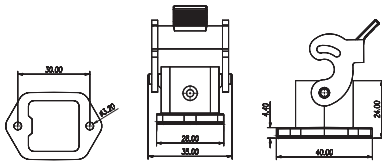
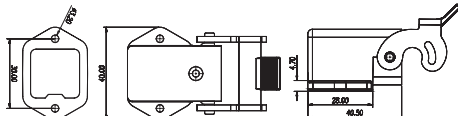
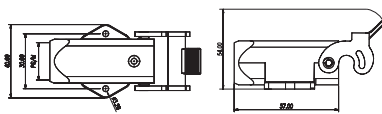
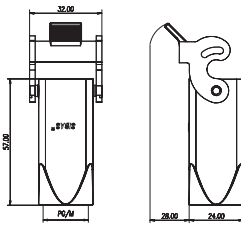
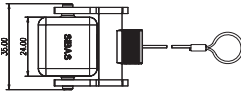
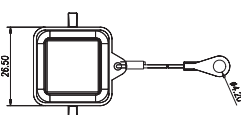
H3A-KDTP

1 01 003 1100

H3A-KDB

1 01 003 3100

塑料外壳
Thermoplastic hoods,housings

外型尺寸(mm)/Dimensions(mm)	Metr.	PG	型号/Type	订货号/Order NO.
顶部进线/Top entry				
				
	M20	PG11	H3A-TG-PG11 H3A-TG-M20	1 32 903 1111 1 32 903 1120
侧面进线/Side entry				
				
	M20	PG11	H3A-TS-PG11 H3A-TS-M20	1 31 903 1111 1 31 903 1120
开孔安装 Bulkhead mounting:Bottom entry				
				
			H3A-AG	1 50 903 1100
开孔安装 (侧出形式) Bulkhead mounting:Side entry				
				
			H3A-AGS	1 54 903 1111
表面安装(侧面形式) Surface mounting:Side entry				
				
	M16 M20	PG11	H3A-AGSV-PG11 H3A-AGSV-M16 H3A-AGSV-M20	1 61 903 1111 1 61 903 1116 1 61 903 1120
电缆对接下壳/Cable-to-cable hood:				
				
	M20	PG11	H3A-TGVB-PG11 H3A-TGVB-M20	1 73 903 1111 1 73 903 1120
上壳保护盖(塑料) Protection covers for hoods(thermoplastic)				
				
备注:适配公插+上壳 Note: For mounted male insert and hood				
			H3A-KDTP	1 01 003 1100
底座保护盖 Protection covers for hoods				
				
白/White				
				
灰/Grey				
			H3A-KDBP(白/White) H3A-KDBPG(灰/Grey)	1 01 003 2100 1 01 003 2300
备注:适配公插+下壳 Note: For mounted male insert and housings				

HA

芯件适配H10A外壳

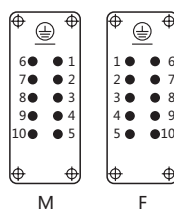
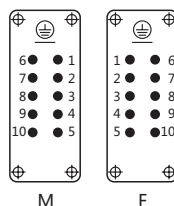
Inserts suit for H10A Hood/housing

10+ 

250V max. 16A

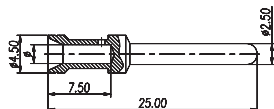
HA

外型尺寸(mm)/Dimensions(mm)

螺钉压接
Screw terminal接插针排序/Contact
arrangement view
from termination side冷压接 (冷压针需单独订购)
Crimp terminal (Order crimp contacts separately)接插针排序/Contact
arrangement view
from termination side

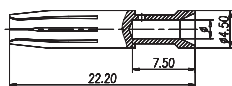
订货号/Order NO.		型号 Type
公接插件/Male insert	母接插件/Female insert	
2 01 010 2101	2 01 010 2201	HA-010-M HA-010-F
2 01 010 4101	2 01 010 4201	HA-010-MC HA-010-FC

插针/Male



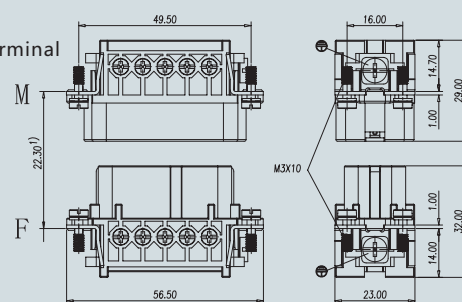
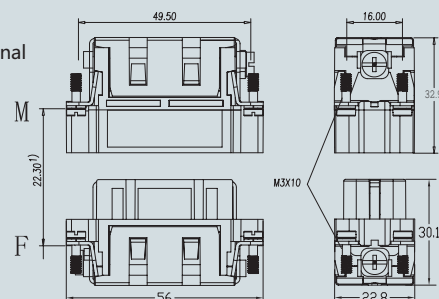
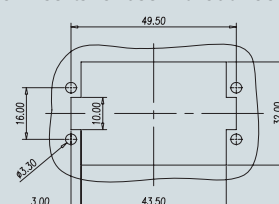
线规 Wire gauge	剥线长度 Stripping length		镀银冷压接插针 Crimp contacts, silver-plated		镀金冷压接插针 Crimp contacts, gold-plated	
			型号 Type	订货号 Order NO.	型号 Type	订货号 Order NO.
0.14-0.37mm ²	AWG26-22	7.5mm	CEM-0.3	2 03 000 1002	DEM-0.3	2 03 001 1002
0.5mm ²	AWG20	7.5mm	CEM-0.5	2 03 000 1005	DEM-0.5	2 03 001 1005
0.75mm ²	AWG18	7.5mm	CEM-0.75	2 03 000 1008	DEM-0.75	2 03 001 1008
1.0mm ²	AWG18	7.5mm	CEM-1.0	2 03 000 1010	DEM-1.0	2 03 001 1010
1.5mm ²	AWG16	7.5mm	CEM-1.5	2 03 000 1015	DEM-1.5	2 03 001 1015
2.5mm ²	AWG14	7.5mm	CEM-2.5	2 03 000 1025	DEM-2.5	2 03 001 1025
4.0mm ²	AWG12	7.5mm	CEM-4.0	2 03 000 1040	DEM-4.0	2 03 001 1040

插孔/Female



线规 Wire gauge	剥线长度 Stripping length		镀银冷压接插针 Crimp contacts, silver-plated		镀金冷压接插针 Crimp contacts, gold-plated	
			型号 Type	订货号 Order NO.	型号 Type	订货号 Order NO.
0.14-0.37mm ²	AWG26-22	7.5mm	CEF-0.3	2 03 000 2002	DEF-0.3	2 03 001 2002
0.5mm ²	AWG20	7.5mm	CEF-0.5	2 03 000 2005	DEF-0.5	2 03 001 2005
0.75mm ²	AWG18	7.5mm	CEF-0.75	2 03 000 2008	DEF-0.75	2 03 001 2008
1.0mm ²	AWG18	7.5mm	CEF-1.0	2 03 000 2010	DEF-1.0	2 03 001 2010
1.5mm ²	AWG16	7.5mm	CEF-1.5	2 03 000 2015	DEF-1.5	2 03 001 2015
2.5mm ²	AWG14	7.5mm	CEF-2.5	2 03 000 2025	DEF-2.5	2 03 001 2025
4.0mm ²	AWG12	7.5mm	CEF-4.0	2 03 000 2040	DEF-4.0	2 03 001 2040

1) 接插体之间最大距离24mm/Distance for contact max.24mm

螺钉压接
Screw terminal冷压接
Crimp terminal不使用防护外壳时芯体的安装开孔图
Panel cut out for inserts for use without hoods/housings

H10A 金属外壳 /H10A metal hoods,housings



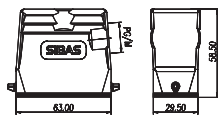
表面粉末镀层, RAL 7037
Powder-coated,RAL 7037

外型尺寸(mm)/Dimensions(mm)

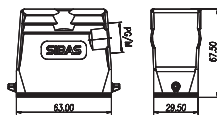
外壳上壳:侧面进线
Hood:Side entry



低结构/Low construction



高结构/High construction

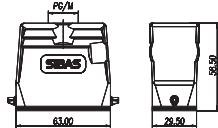


低结构 Low construction
高结构 High construction
低结构 Low construction
高结构 High construction

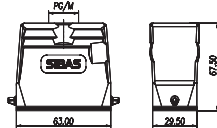
外壳上壳:顶部进线
Hood:Top entry



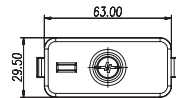
低结构/Low construction



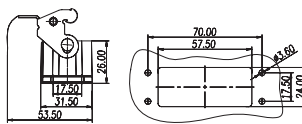
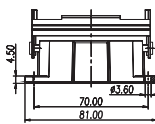
高结构/High construction



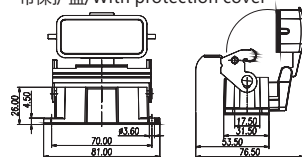
上壳保护盖
Protection covers for hoods



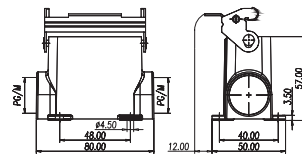
外壳底座:开孔安装
Bulkhead mounted



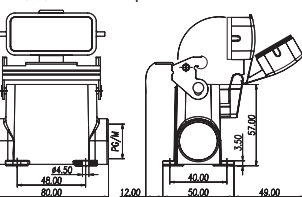
带保护盖/With protection cover



外壳底座:表面安装
Surface mounted:Side entry



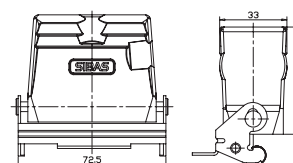
带保护盖/With protection cover



电缆对接下壳
Cable-to-cable hood



	H
低结构/Low construction	52.6
高结构/Low construction	66.6



 Metr.	 PG	型号/Type	订货号/Order NO.
M20 M25	PG16 PG21	H10A-TS-PG16	1 31 910 0116
		H10A-TS-PG21	1 31 910 0121
	PG21	H10A-TS-M20	1 31 910 0120
		H10A-TS-M25	1 31 910 0125
M25	PG21	H10A-TSH-PG21	1 33 910 0121
		H10A-TSH-M25	1 33 910 0125
M20 M25	PG16 PG21	H10A-TG-PG16	1 32 910 0116
		H10A-TG-PG21	1 32 910 0121
	PG21	H10A-TG-M20	1 32 910 0120
		H10A-TG-M25	1 32 910 0125
M25	PG21	H10A-TGH-PG21	1 34 910 0121
		H10A-TGH-M25	1 34 910 0125
		H10A-KDT	1 01 910 1001
		H10A-AG	1 50 910 0000
		H10A-AD	1 51 910 0000
M20 M25	PG16 PG21	H10A-SGR-PG16	1 61 910 0116
		H10A-SGR-PG21	1 61 910 0121
	PG21	H10A-SGR-M20	1 61 910 0120
		H10A-SGR-M25	1 61 910 0125
M20 M25	PG16 PG21	H10A-SGR-2PG16	1 61 910 0216
		H10A-SGR-2PG21	1 61 910 0221
	PG21	H10A-SGR-2M20	1 61 910 0220
		H10A-SGR-2M25	1 61 910 0225
M20 M25	PG16 PG21	H10A-SDR-PG16	1 62 910 0116
		H10A-SDR-PG21	1 62 910 0121
	PG21	H10A-SDR-M20	1 62 910 0120
		H10A-SDR-M25	1 62 910 0125
M20 M25	PG16 PG21	H10A-SDR-2PG16	1 62 910 0216
		H10A-SDR-2PG21	1 62 910 0221
	PG21	H10A-SDR-2M20	1 62 910 0220
		H10A-SDR-2M25	1 62 910 0225
M20 M25	PG16	H10A-TBF-PG16	1 73 910 0116
		H10A-TBF-M20	1 73 910 0120
	PG21	H10A-TBF-M25	1 73 910 0125
		H10A-TBFH-PG21	1 77 916 0121
M25	PG21	H10A-TBFH-M25	1 77 916 0125

HA

保留型号, 参数及尺寸更改权力

All specifications subject to change.Consult us for latest design specifications

芯件适配H16A外壳

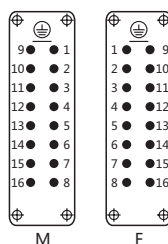
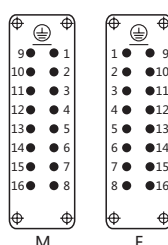
Inserts suit for H16A Hood/housing

16+ 

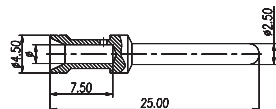
250V max. 16A

HA

外型尺寸(mm)/Dimensions(mm)

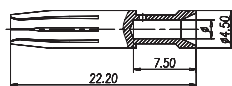
螺钉压接
Screw terminal接插针排序/Contact
arrangement view
from termination side冷压接 (冷压针需单独订购)
Crimp terminal(Order crimp contacts separately)接插针排序/Contact
arrangement view
from termination side

插针/Male



线规 Wire gauge		剥线长度 Stripping length	镀银冷压接插针 Crimp contacts,silver-plated		镀金冷压接插针 Crimp contacts,gold-plated	
			型号 Type	订货号 Order NO.	型号 Type	订货号 Order NO.
0.14-0.37mm ²	AWG26-22	7.5mm	CEM-0.3	2 03 000 1002	DEM-0.3	2 03 001 1002
0.5mm ²	AWG20	7.5mm	CEM-0.5	2 03 000 1005	DEM-0.5	2 03 001 1005
0.75mm ²	AWG18	7.5mm	CEM-0.75	2 03 000 1008	DEM-0.75	2 03 001 1008
1.0mm ²	AWG18	7.5mm	CEM-1.0	2 03 000 1010	DEM-1.0	2 03 001 1010
1.5mm ²	AWG16	7.5mm	CEM-1.5	2 03 000 1015	DEM-1.5	2 03 001 1015
2.5mm ²	AWG14	7.5mm	CEM-2.5	2 03 000 1025	DEM-2.5	2 03 001 1025
4.0mm ²	AWG12	7.5mm	CEM-4.0	2 03 000 1040	DEM-4.0	2 03 001 1040

插孔/Female



线规 Wire gauge		剥线长度 Stripping length	镀银冷压接插针		镀金冷压接插针	
			Crimp contacts,silver-plated		Crimp contacts,gold-plated	
			型号 Type	订货号 Order NO.	型号 Type	订货号 Order NO.
0.14-0.37mm ²	AWG26-22	7.5mm	CEF-0.3	2 03 000 2002	DEF-0.3	2 03 001 2002
0.5mm ²	AWG20	7.5mm	CEF-0.5	2 03 000 2005	DEF-0.5	2 03 001 2005
0.75mm ²	AWG18	7.5mm	CEF-0.75	2 03 000 2008	DEF-0.75	2 03 001 2008
1.0mm ²	AWG18	7.5mm	CEF-1.0	2 03 000 2010	DEF-1.0	2 03 001 2010
1.5mm ²	AWG16	7.5mm	CEF-1.5	2 03 000 2015	DEF-1.5	2 03 001 2015
2.5mm ²	AWG14	7.5mm	CEF-2.5	2 03 000 2025	DEF-2.5	2 03 001 2025
4.0mm ²	AWG12	7.5mm	CEF-4.0	2 03 000 2040	DEF-4.0	2 03 001 2040

订货号/Order NO.

公接插件/Male insert

母接插件/Female insert

型号

Type

2 01 016 2101

2 01 016 2201

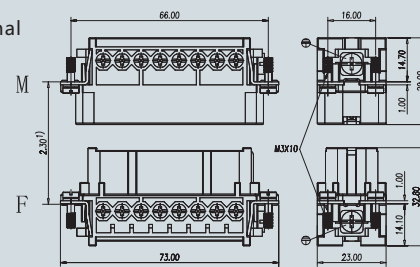
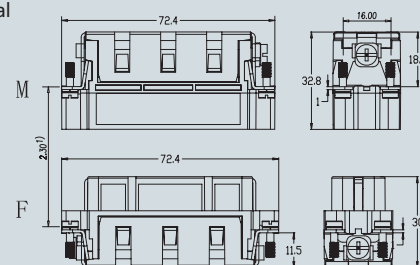
HA-016-M
HA-016-F

2 01 016 4101

2 01 016 4201

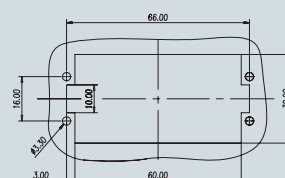
HA-016-MC
HA-016-FC

1)接插体之间最大距离24mm/Distance for contact max.24mm

螺钉压接
Screw terminal冷压接
Crimp terminal

不使用防护外壳时芯体的安装开孔图

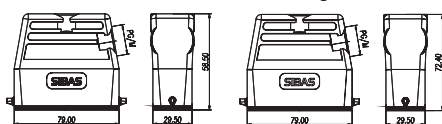
Panel cut out for inserts for use without hoods/housings



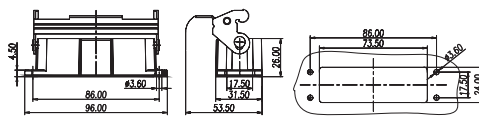
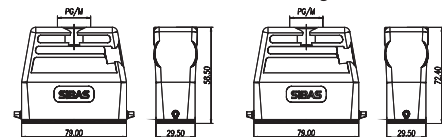
西霸士
SIBAS

外型尺寸(mm)/Dimensions(mm)

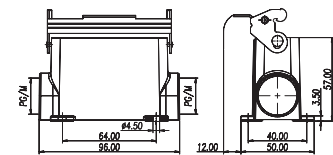
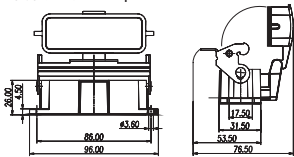
低结构/Low construction 高结构/High construction



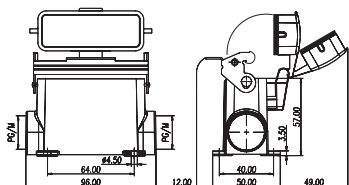
低结构/Low construction 高结构/High construction



帶保護蓋/With protection cover



带保护盖/With protection cover



	H
低结构/Low construction	66.6
高结构/Low construction	80.6

Technical drawing of the SIBAS 3200 battery. The front view on the left shows a rectangular battery with a width of 87.5 mm and a 'SIBAS' label. The side view on the right shows a height of 32 mm and a terminal with a cross-section of 10 mm.

 Metr.	 PG	型号/Type	订货号/Order NO.
M20 M25	PG16 PG21	H16A-TS-PG16	1 31 916 0116
		H16A-TS-PG21	1 31 916 0121
		H16A-TS-M20	1 31 916 0120
		H16A-TS-M25	1 31 916 0125
	PG21	H16A-TSH-PG21	1 33 916 0121
		H16A-TSH-M25	1 33 916 0125
M20 M25	PG16 PG21	H16A-TG-PG16	1 32 916 0116
		H16A-TG-PG21	1 32 916 0121
		H16A-TG-M20	1 32 916 0120
		H16A-TG-M25	1 32 916 0125
	PG21	H16A-TGH-PG21	1 34 916 0121
		H16A-TGH-M25	1 34 916 0125
		H16A-KDT	1 01 916 1001
		H16A-AG	1 50 916 0000
		H16A-AD	1 51 916 0000
M20 M25	PG16 PG21	H16A-SGR-PG16	1 61 916 0116
		H16A-SGR-PG21	1 61 916 0121
		H16A-SGR-M20	1 61 916 0120
		H16A-SGR-M25	1 61 916 0125
	PG16 PG21	H16A-SGR-2PG16	1 61 916 0216
		H16A-SGR-2PG21	1 61 916 0221
		H16A-SGR-2M20	1 61 916 0220
		H16A-SGR-2M25	1 61 916 0225
	PG16 PG21	H16A-SDR-PG16	1 62 916 0116
		H16A-SDR-PG21	1 62 916 0121
		H16A-SDR-M20	1 62 916 0120
		H16A-SDR-M25	1 62 916 0125
PG16 PG21	H16A-SDR-2PG16	1 62 916 0216	
	H16A-SDR-2PG21	1 62 916 0221	
	H16A-SDR-2M20	1 62 916 0220	
	H16A-SDR-2M25	1 62 916 0225	
M20 M25	PG16	H16A-TBF-PG16	1 73 916 0116
		H16A-TBF-M20	1 73 916 0120
		H16A-TBF-M25	1 73 916 0125
	PG21	H16A-TBFH-PG21	1 77 916 0121
		H16A-TBFH-M25	1 77 916 0125

HA

芯件适配H32A外壳

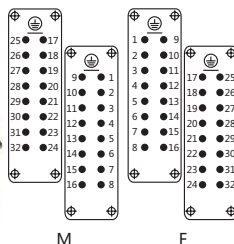
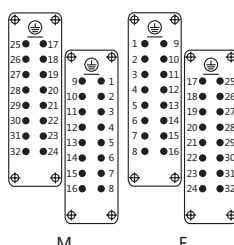
Inserts suit for H16A Hood/housing

32 + $\oplus$

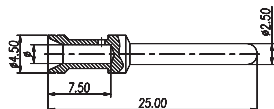
250V max. 16A

HA

外型尺寸(mm)/Dimensions(mm)

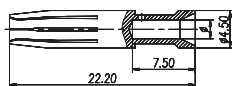
螺钉压接
Screw terminal接插针排序/Contact
arrangement view
from termination side冷压接 (冷压针需单独订购)
Crimp terminal (Order crimp contacts separately)接插针排序/Contact
arrangement view
from termination side

插针/Male



线规 Wire gauge	剥线长度 Stripping length	镀银冷压接插针 Crimp contacts, silver-plated		镀金冷压接插针 Crimp contacts, gold-plated	
		型号 Type	订货号 Order NO.	型号 Type	订货号 Order NO.
0.14-0.37mm ²	AWG26-22	CEM-0.3	2 03 000 1002	DEM-0.3	2 03 001 1002
0.5mm ²	AWG20	CEM-0.5	2 03 000 1005	DEM-0.5	2 03 001 1005
0.75mm ²	AWG18	CEM-0.75	2 03 000 1008	DEM-0.75	2 03 001 1008
1.0mm ²	AWG18	CEM-1.0	2 03 000 1010	DEM-1.0	2 03 001 1010
1.5mm ²	AWG16	CEM-1.5	2 03 000 1015	DEM-1.5	2 03 001 1015
2.5mm ²	AWG14	CEM-2.5	2 03 000 1025	DEM-2.5	2 03 001 1025
4.0mm ²	AWG12	CEM-4.0	2 03 000 1040	DEM-4.0	2 03 001 1040

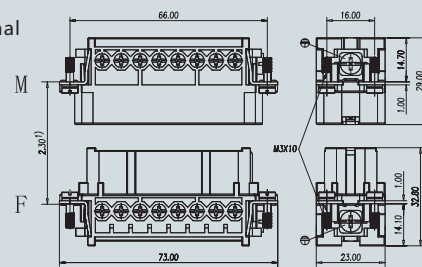
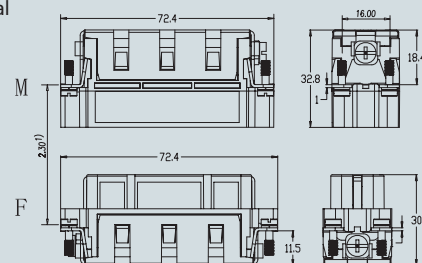
插孔/Female



线规 Wire gauge	剥线长度 Stripping length	镀银冷压接插针 Crimp contacts, silver-plated		镀金冷压接插针 Crimp contacts, gold-plated	
		型号 Type	订货号 Order NO.	型号 Type	订货号 Order NO.
0.14-0.37mm ²	AWG26-22	CEF-0.3	2 03 000 2002	DEF-0.3	2 03 001 2002
0.5mm ²	AWG20	CEF-0.5	2 03 000 2005	DEF-0.5	2 03 001 2005
0.75mm ²	AWG18	CEF-0.75	2 03 000 2008	DEF-0.75	2 03 001 2008
1.0mm ²	AWG18	CEF-1.0	2 03 000 2010	DEF-1.0	2 03 001 2010
1.5mm ²	AWG16	CEF-1.5	2 03 000 2015	DEF-1.5	2 03 001 2015
2.5mm ²	AWG14	CEF-2.5	2 03 000 2025	DEF-2.5	2 03 001 2025
4.0mm ²	AWG12	CEF-4.0	2 03 000 2040	DEF-4.0	2 03 001 2040

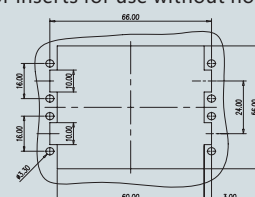
订货号/Order NO.		型号 Type
公接插件/Male insert	母接插件/Female insert	
2 01 016 2101 2 01 032 2101	2 01 016 2201 2 01 032 2201	HA-016-M(1-16) HA-016-M(17-32) HA-016-F(1-16) HA-016-F(17-32)
2 01 016 4101 2 01 032 4101	2 01 016 4201 2 01 032 4201	HA-016-MC(1-16) HA-016-MC(17-32) HA-016-FC(1-16) HA-016-FC(17-32)

1) 接插体之间最大距离24mm/Distance for contact max.24mm

螺钉压接
Screw terminal冷压接
Crimp terminal

不使用防护外壳时芯体的安装开孔图

Panel cut out for inserts for use without hoods/housings



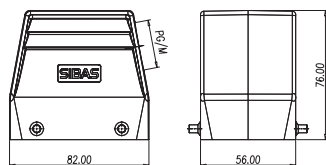
H32A 金属外壳 /H32A metal hoods,housings



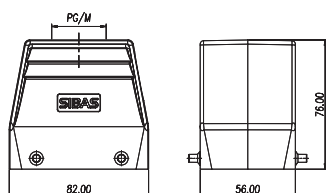
表面粉末镀层, RAL 7037
Powder-coated,RAL 7037

外型尺寸(mm)/Dimensions(mm)

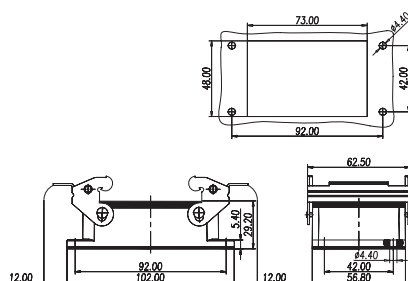
外壳上壳:侧面进线
Hood:Side entry



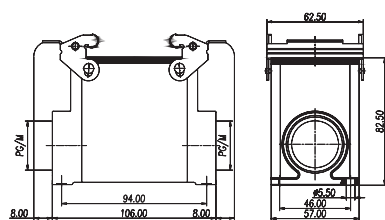
外壳上壳:顶部进线
Hood:Top entry



外壳底座:开孔安装
Bulkhead mounted



外壳底座:表面安装
Surface mounted:Side entry



1 并接尺寸
1 Side entry
2 并接尺寸
2 Side entry

Metr.	PG	型号/Type	订货号/Order NO.
M25 M32 M40	PG21 PG29 PG36	H32A-TS-PG21	1 31 932 0121
		H32A-TS-PG29	1 31 932 0129
		H32A-TS-PG36	1 31 932 0136
		H32A-TS-M25	1 31 932 0125
		H32A-TS-M32	1 31 932 0132
		H32A-TS-M40	1 31 932 0140
M25 M32 M40	PG21 PG29 PG36	H32A-TG-PG21	1 32 932 0121
		H32A-TG-PG29	1 32 932 0129
		H32A-TG-PG36	1 32 932 0136
		H32A-TG-M25	1 32 932 0125
		H32A-TG-M32	1 32 932 0132
		H32A-TG-M40	1 32 932 0140
		H32A-AG	1 41 932 0000
M25 M32	PG21 PG29	H32A-SGR-PG21	1 44 932 0121
		H32A-SGR-PG29	1 44 932 0129
		H32A-SGR-M25	1 44 932 0125
		H32A-SGR-M32	1 44 932 0132
		H32A-SGR-2PG21	1 44 932 0221
		H32A-SGR-2PG29	1 44 932 0229
M25 M32	PG21 PG29	H32A-SGR-2M25	1 44 932 0225
		H32A-SGR-2M32	1 44 932 0232

HA