

# HA SERIES

Compact standard connector

HA



## HA SERIES The slim inserts

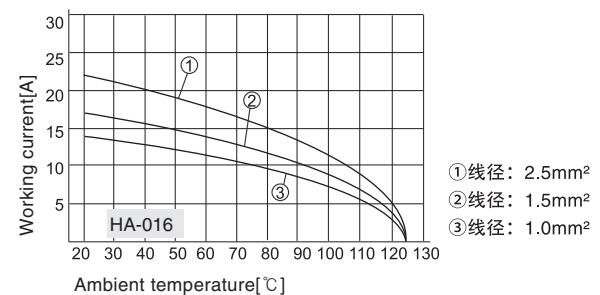
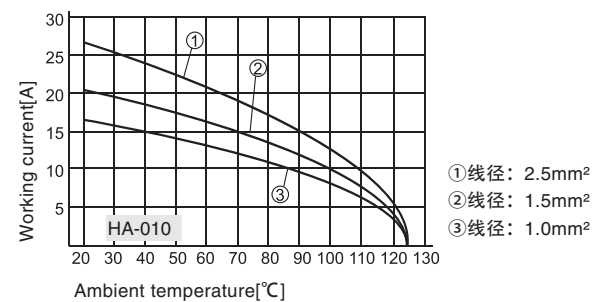
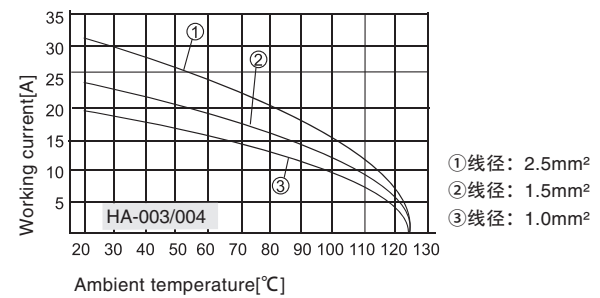
### Technical characteristics

Specifications	DIN EN 60 664 DIN EN 61 984
Approvals	
Inserts	
Number of contacts	3,4,10,16,32(2X16)+PE
Electrical data acc. to EN 61 984	
HA-003/HA-004	
-Rated current	10A
-Rated voltage conductor	230V
-Rated voltage conductor	400V
-Rated impulse voltage	4kV
-Pollution degree	3
-or	10A 250V 4kV 3
HA-010/HA-016	
-Rated current	16A
-Rated voltage	250V
-Rated impulse voltage	4kV
-Pollution degree	3
-Pollution degree 2 also	16A 230/400V 4kV 2
Rated voltage acc. to UL/CSA	600V
Insulation resistance	$\geq 10^{10}\Omega$
Material	polycarbonate
Limiting temperatures	-40°C...+125°C
Flammability acc. to UL 94	V0
Mechanical working life(mating cycles)	$\geq 500$
Contacts	
Material	copper alloy
Surface	hard-gold plated hard-silver plated
Contact resistance	$\leq 1m\Omega$
Screw terminal	
-Wrie gauge	1.0-2.5mm <sup>2</sup>
-AWG	18-14
-Tightening/Test torque	0.25Nm (HA-003/004) or 0.5Nm (HA-010/016)
Crimp terminal	
-Wrie gauge	0.14-4.0mm <sup>2</sup>
-AWG	26-12
Spring terminal	
-Wrie gauge	0.14-2.5mm <sup>2</sup>
-AWG	26-14

### Current carrying capacity

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

Control and test procedures according to DIN EN 60512-5



HA-003/004 The slim inserts

230/400V 10A 3/4+⊕



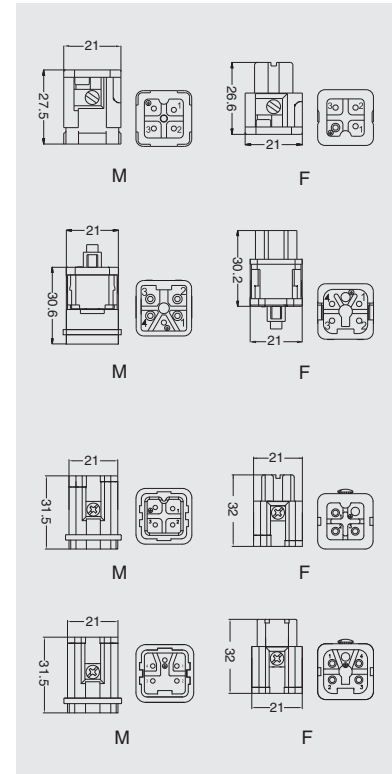
Inserts

Hoods/Housings: size 3A, detail please find the page 16-04~16-10.

Screw terminal



Insert	Designation	Order No.
Male	HA-003-M	02100310100
Female	HA-003-F	02100310200
Male	HA-004-M	02100410100
Female	HA-004-F	02100410200



Spring terminal



Insert	Designation	Order No.
Male	HA-003-MS	02100330100
Female	HA-003-FS	02100330200
Male	HA-004-MS	02100430100
Female	HA-004-FS	02100430200

HA

# HA-010 The slim inserts

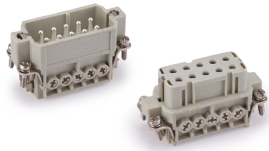
250V 16A 10+⊕



## Inserts

Hoods/Housings: size 10A, detail please find the page 16-11~16-12.

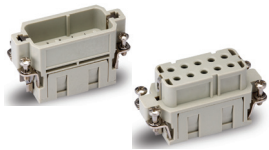
### Screw terminal



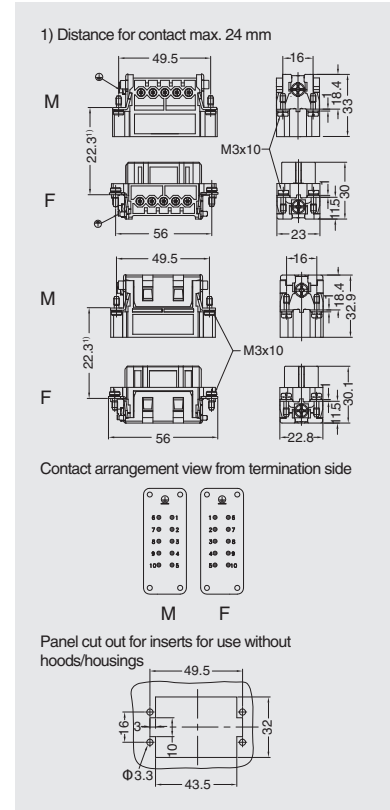
Insert	Designation	Order No.
Male	HA-010-M	02101010100
Female	HA-010-F	02101010200

### Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HA-010-MC	02101020100
Female	HA-010-FC	02101020200



## Accessories

### Crimp contacts 16A

Contact resistance  $\leq 1\text{m}\Omega$   
silver plated



gold plated



More crimp contacts 16A see P17-03.

### Tools

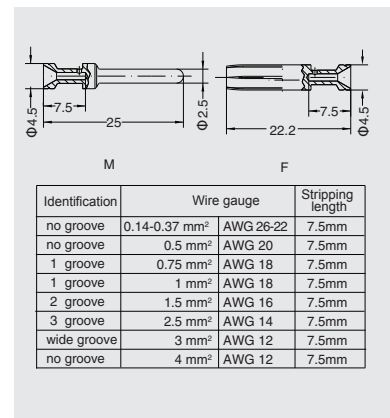
Crimping tool



Contact removal tool



Male	Order No.	Female	Order No.
CESM-0.37	08121131000	CESF-0.37	08121132000
CESM-0.5	08121133000	CESF-0.5	08121134000
CESM-0.75	08121135000	CESF-0.75	08121136000
CESM-1.0	08121137000	CESF-1.0	08121138000
CESM-1.5	08121139000	CESF-1.5	08121140000
CESM-2.5	08121141000	CESF-2.5	08121142000
CESM-3.0	08121143000	CESF-3.0	08121144000
CESM-4.0	08121145000	CESF-4.0	08121146000
CEGM-0.37	08121131010	CEGF-0.37	08121132010
CEGM-0.5	08121133010	CEGF-0.5	08121134010
CEGM-0.75	08121135010	CEGF-0.75	08121136010
CEGM-1.0	08121137010	CEGF-1.0	08121138010
CEGM-1.5	08121139010	CEGF-1.5	08121140010
CEGM-2.5	08121141010	CEGF-2.5	08121142010
CEGM-3.0	08121143010	CEGF-3.0	08121144010
CEGM-4.0	08121145010	CEGF-4.0	08121146010




Wire gauge	Designation	Order No.
0.5-4mm <sup>2</sup>	TL02G	09100021020

Wire gauge: 0.14-0.37mm<sup>2</sup> please select TL02 Crimping tool.

Application	Designation	Order No.
for crimp contacts 16A	TL01	09100012000

More tools detail please find the page 18-13~18-14.

## HA-016 The slim inserts

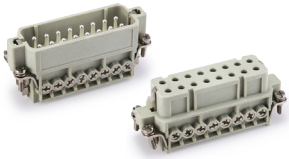
250V 16A 16+ 



### Inserts

Hoods/Housings: size 16A, detail please find the page 16-13~16-14.

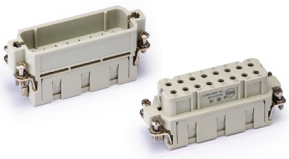
#### Screw terminal



Insert	Designation	Order No.
Male	HA-016-M	02101610100
Female	HA-016-F	02101610200

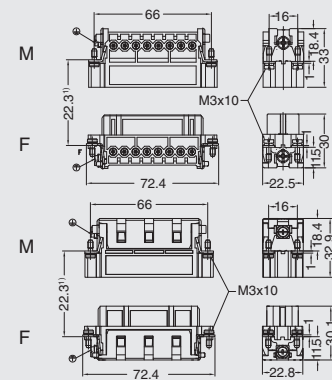
#### Crimp terminal

Order crimp contacts separately

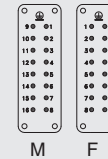


Insert	Designation	Order No.
Male	HA-016-MC	02101620100
Female	HA-016-FC	02101620200

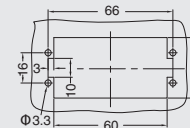
1) Distance for contact max. 24 mm



Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



## Accessories

### Crimp contacts 16A

Contact resistance  $\leq 1\text{m}\Omega$   
silver plated



gold plated



More crimp contacts 16A see P17-03.

#### Tools

Crimping tool



Contact removal tool



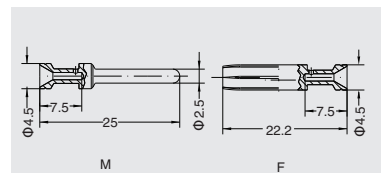
Male	Order No.	Female	Order No.
CESM-0.37	08121131000	CESF-0.37	08121132000
CESM-0.5	08121133000	CESF-0.5	08121134000
CESM-0.75	08121135000	CESF-0.75	08121136000
CESM-1.0	08121137000	CESF-1.0	08121138000
CESM-1.5	08121139000	CESF-1.5	08121140000
CESM-2.5	08121141000	CESF-2.5	08121142000
CESM-3.0	08121143000	CESF-3.0	08121144000
CESM-4.0	08121145000	CESF-4.0	08121146000
CEGM-0.37	08121131010	CEGF-0.37	08121132010
CEGM-0.5	08121133010	CEGF-0.5	08121134010
CEGM-0.75	08121135010	CEGF-0.75	08121136010
CEGM-1.0	08121137010	CEGF-1.0	08121138010
CEGM-1.5	08121139010	CEGF-1.5	08121140010
CEGM-2.5	08121141010	CEGF-2.5	08121142010
CEGM-3.0	08121143010	CEGF-3.0	08121144010
CEGM-4.0	08121145010	CEGF-4.0	08121146010

Wire gauge	Designation	Order No.
0.5-4mm <sup>2</sup>	TL02G	09100021020

Wire gauge: 0.14-0.37mm<sup>2</sup> please select TL02 Crimping tool.

Application	Designation	Order No.
for crimp contacts 16A	TL01	09100012000

More tools detail please find the page 18-13~18-14.



Identification	Wire gauge	Stripping length
no groove	0.14-0.37 mm <sup>2</sup>	AWG 26-22
no groove	0.5 mm <sup>2</sup>	AWG 20
1 groove	0.75 mm <sup>2</sup>	AWG 18
1 groove	1 mm <sup>2</sup>	AWG 18
2 groove	1.5 mm <sup>2</sup>	AWG 16
3 groove	2.5 mm <sup>2</sup>	AWG 14
wide groove	3 mm <sup>2</sup>	AWG 12
no groove	4 mm <sup>2</sup>	AWG 12

# HA-032 The slim inserts

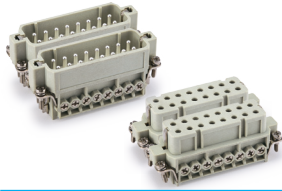
250V 16A 32+⚡



## Inserts

Hoods/Housings: size 32A, detail please find the page 16-15~16-16.

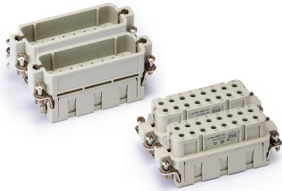
### Screw terminal



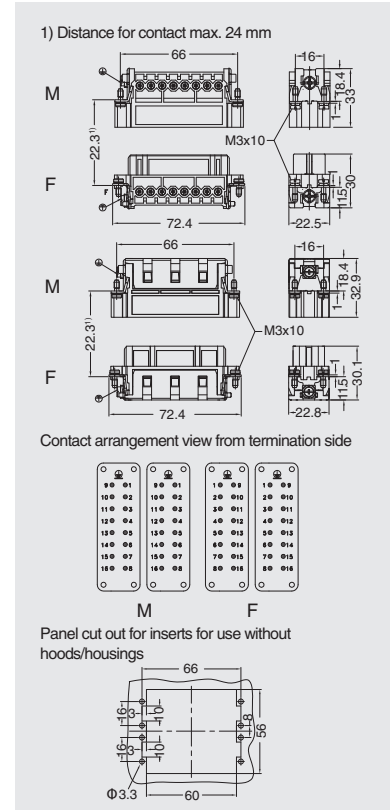
Insert	Designation	Order No.
Male	HA-016-M	02101610100
	HA-016-M (17-32)	02101612100
Female	HA-016-F	02101610200
	HA-016-F (17-32)	02101612200

### Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HA-016-MC	02101620100
	HA-016-MC (17-32)	02101622100
Female	HA-016-FC	02101620200
	HA-016-FC (17-32)	02101622200



## Accessories

### Crimp contacts 16A

Contact resistance ≤ 1mΩ  
silver plated



gold plated



More crimp contacts 16A see P17-03.

### Tools

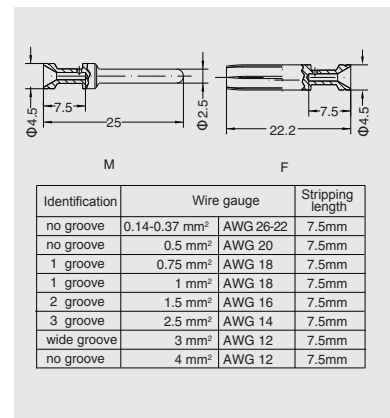
Crimping tool



Contact removal tool



Male	Order No.	Female	Order No.
CESM-0.37	08121131000	CESF-0.37	08121132000
CESM-0.5	08121133000	CESF-0.5	08121134000
CESM-0.75	08121135000	CESF-0.75	08121136000
CESM-1.0	08121137000	CESF-1.0	08121138000
CESM-1.5	08121139000	CESF-1.5	08121140000
CESM-2.5	08121141000	CESF-2.5	08121142000
CESM-3.0	08121143000	CESF-3.0	08121144000
CESM-4.0	08121145000	CESF-4.0	08121146000
CEGM-0.37	08121131010	CEGF-0.37	08121132010
CEGM-0.5	08121133010	CEGF-0.5	08121134010
CEGM-0.75	08121135010	CEGF-0.75	08121136010
CEGM-1.0	08121137010	CEGF-1.0	08121138010
CEGM-1.5	08121139010	CEGF-1.5	08121140010
CEGM-2.5	08121141010	CEGF-2.5	08121142010
CEGM-3.0	08121143010	CEGF-3.0	08121144010
CEGM-4.0	08121145010	CEGF-4.0	08121146010



Wire gauge	Designation	Order No.
0.5-4mm <sup>2</sup>	TL02G	09100021020

Wire gauge: 0.14-0.37mm<sup>2</sup> please select TL02 Crimping tool.

Application	Designation	Order No.
for crimp contacts 16A	TL01	09100012000

More tools detail please find the page 18-13~18-14.