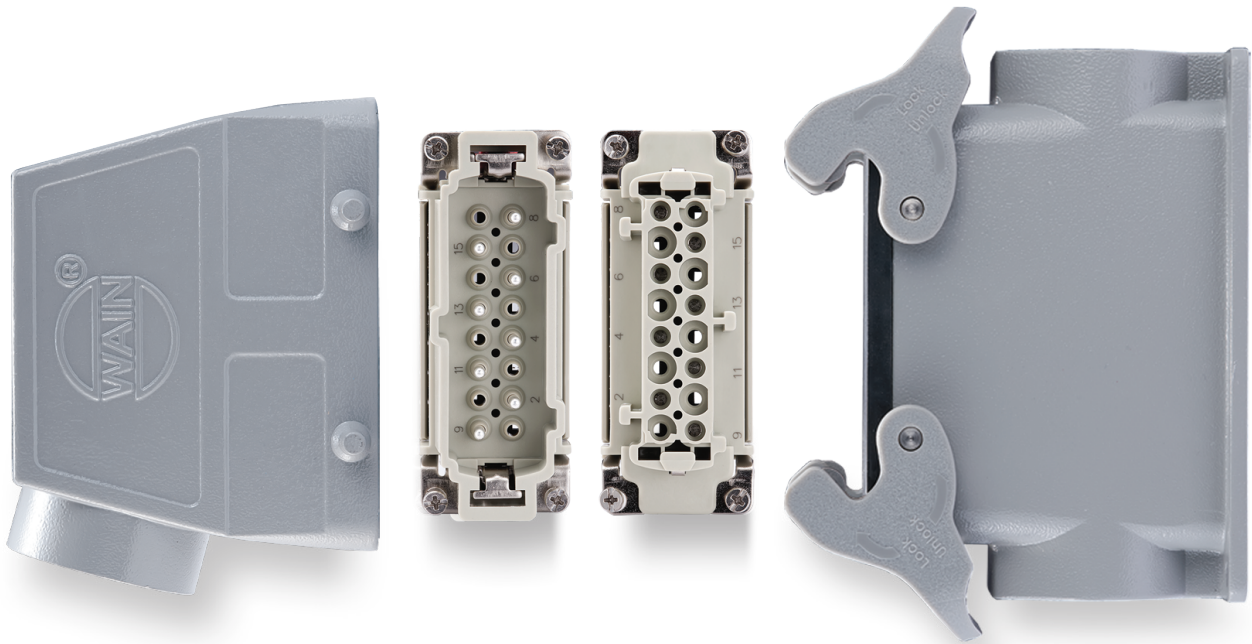


## HVE SERIES

High voltage connector

HVE



# HVE SERIES High voltage inserts

## Technical characteristics

Specifications	DIN EN 60 664 DIN EN 61 984
Approvals	
<b>Inserts</b>	
Number of contacts	3,6,10,12,20+PE
Electrical data acc. to DIN EN 61 984	
-Rated current	16A
-Rated voltage	830V
-Rated impulse voltage	8kV
-Pollution degree	3
-Pollution degree 2 also	16A 1000V 8kV 2
-or	16A 720/1250V 8kV 2
-Relay contacts	16A 500V 6kV 3
Rated voltage acc. to UL/CSA	600V
Relay contacts	250V
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)	$\geq 500$
<b>Contacts</b>	
Material	copper alloy
Surface	hard-silver plated
Contact resistance	$\leq 1m\Omega$
<b>Screw terminal</b>	
-Wire gauge	1.0-2.5mm <sup>2</sup>
-AWG	18-14
-Tightening/test torque	0.5Nm
-Stripping length	7.0mm
<b>Crimp terminal</b>	
-Wire gauge	0.14-4.0mm <sup>2</sup>
-AWG	26-12
-Stripping length	7.5mm

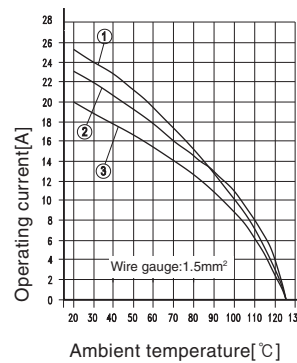
For a fully equipped crimp connector the following contacts are required:

Type	Contacts total	Operating contacts	Relay contacts
HVE-003	5	3	2
HVE-006	8	6	2
HVE-010	12	10	2
HVE-012	16	12	4
HVE-020	24	20	4

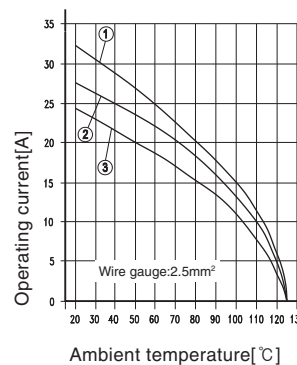
## Current carrying capacity

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



- ① HVE-003-MF(MC/FC)
- ② HVE-006-MF(MC/FC)
- ③ HVE-010-MF(MC/FC)  
HVE-016-MF(MC/FC)



- ① HVE-003-MF(MC/FC)
- ② HVE-006-MF(MC/FC)
- ③ HVE-010-MF(MC/FC)  
HVE-016-MF(MC/FC)

## HVE-003 High voltage inserts

830V 16A 3+2+⊕

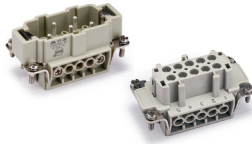


Hoods/Housings: Screw terminal size **HV10B** or **10B high protection**,

Crimp terminal size **10B**, detail please find the page 16-25~16-41.

### Inserts

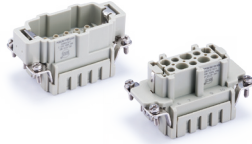
#### Screw terminal



Insert	Designation	Order No.
Male	HVE-003-M	05100310100
Female	HVE-003-F	05100310200

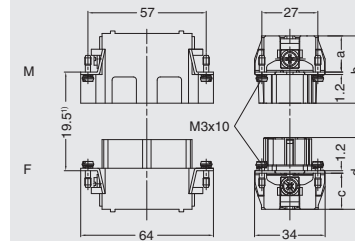
#### Crimp terminal

Order crimp contacts separately



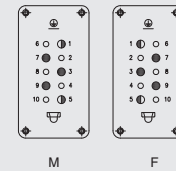
Insert	Designation	Order No.
Male	HVE-003-MC	05100320100
Female	HVE-003-FC	05100320200

1) Distance for contact max. 21 mm

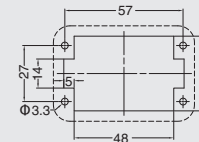


	a	b	c	b
M/F	18	33	18	35
MC/FC	19	34	19	36

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



## Accessories

### Crimp contacts

16A Operating contacts  
Contact resistance  $\leq 1\text{m}\Omega$   
silver plated



Relay contacts  
silver plated



More crimp contacts 16A see P17-03.

### Tools

Crimping tool



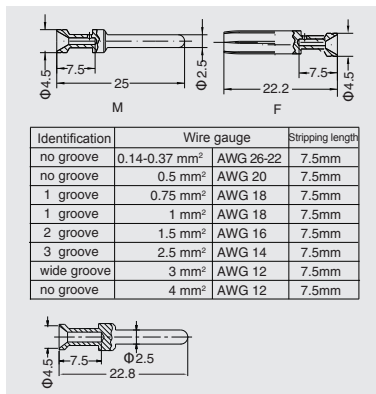
Contact removal tool



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

Wire gauge	Designation	Order No.
1mm <sup>2</sup>	CESM-1.0R	08121137300
1.5 mm <sup>2</sup>	CESM-1.5R	08121139300
2.5 mm <sup>2</sup>	CESM-2.5R	08121141300



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.

# HVE-006 High voltage inserts

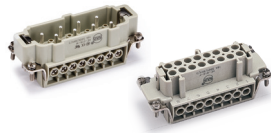
830V 16A 6+2+ 



Hoods/Housings: Screw terminal size **HV16B** or **16B high protection**,  
Crimp terminal size **16B**, detail please find the page16-42~16-60.

## Inserts

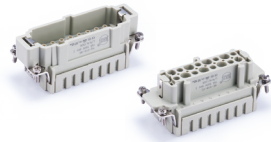
### Screw terminal



Insert	Designation	Order No.
Male	HVE-006-M	05100610100
Female	HVE-006-F	05100610200

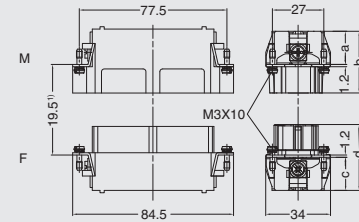
### Crimp terminal

Order crimp contacts separately



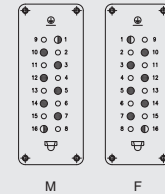
Insert	Designation	Order No.
Male	HVE-006-MC	05100620100
Female	HVE-006-FC	05100620200

1) Distance for contact max. 21 mm

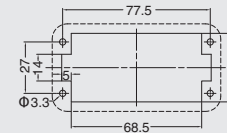


	a	b	c	b
M/F	18	33	18	35
MC/FC	19	34	19	36

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



## Accessories

### Crimp contacts

16A Operating contacts  
Contact resistance  $\leq 1m\Omega$   
silver plated



Relay contacts  
silver plated



More crimp contacts 16A see P17-03.

### Tools

Crimping tool



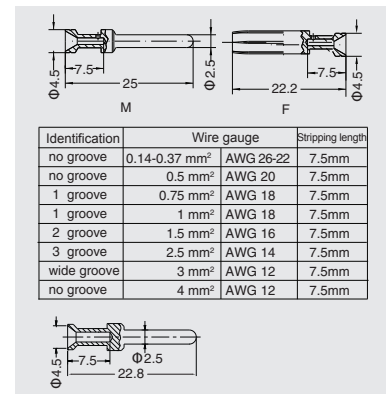
Contact removal tool



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

Wire gauge	Designation	Order No.
1mm <sup>2</sup>	CESM-1.0R	08121137300
1.5 mm <sup>2</sup>	CESM-1.5R	08121139300
2.5 mm <sup>2</sup>	CESM-2.5R	08121141300



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 page18-13~18-14.

## HVE-010 High voltage inserts

830V 16A 10+2+⊕

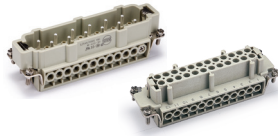


Hoods/Housings: Screw terminal size HV24B or 24B high protection,

Crimp terminal size 24B, detail please find the page 16-61~16-80.

### Inserts

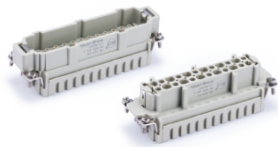
#### Screw terminal



Insert	Designation	Order No.
Male	HVE-010-M	05101010100
Female	HVE-010-F	05101010200

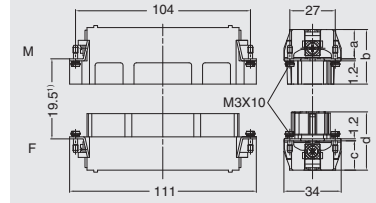
#### Crimp terminal

Order crimp contacts separately



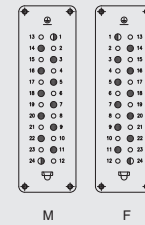
Insert	Designation	Order No.
Male	HVE-010-MC	05101020100
Female	HVE-010-FC	05101020200

1) Distance for contact max. 21 mm

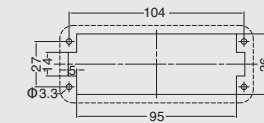


	a	b	c	b
M/F	18	33	18	35
MC/FC	19	34	19	36

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



## Accessories

### Crimp contacts

16A Operating contacts  
Contact resistance ≤ 1mΩ  
silver plated



Relay contacts  
silver plated



More crimp contacts 16A see P17-03.

### Tools

Crimping tool



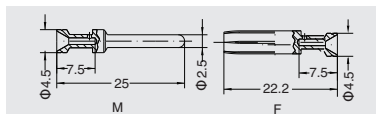
Contact removal tool



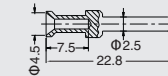
Male	Order No.	Female	Order No.
CESM-0.37	08121131000	CESF-0.37	08121132000
CESM-0.5	08121133000	CESF-0.5	08121134000
CESM-0.75	08121135000	CESF-0.75	08121136000
CESM-1.0	08121137000	CESF-1.0	08121138000
CESM-1.5	08121139000	CESF-1.5	08121140000
CESM-2.5	08121141000	CESF-2.5	08121142000
CESM-3.0	08121143000	CESF-3.0	08121144000
CESM-4.0	08121145000	CESF-4.0	08121146000

Wire gauge	Designation	Order No.
1mm <sup>2</sup>	CESM-1.0R	08121137300
1.5 mm <sup>2</sup>	CESM-1.5R	08121139300
2.5 mm <sup>2</sup>	CESM-2.5R	08121141300



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



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.

## HVE-012 High voltage inserts

830V 16A 12+4+

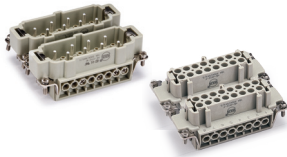


Hoods/Housings: Screw terminal size **HV32B**,

Crimp terminal size **32B**, detail please find the page 16-81~16-84.

### Inserts

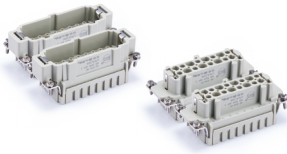
#### Screw terminal



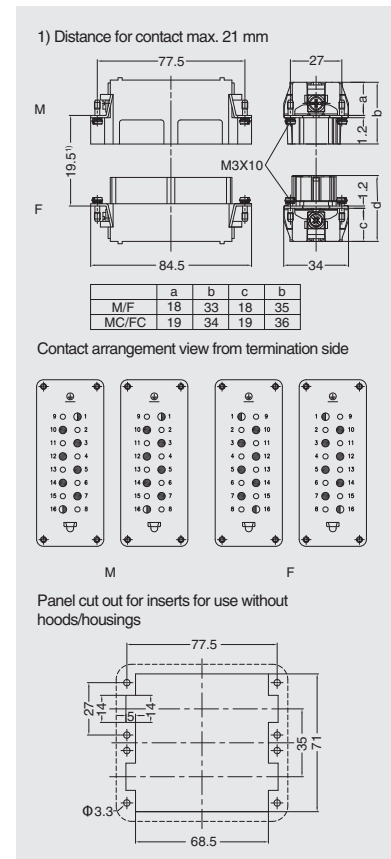
Insert	Designation	Order No.
Male	HVE-006-M	05100610100
	HVE-006-M(7-12)	05100612100
Female	HVE-006-F	05100610200
	HVE-006-F(7-12)	05100612200

#### Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HVE-006-MC	05100620100
	HVE-006-MC(7-12)	05100622100
Female	HVE-006-FC	05100620200
	HVE-006-FC(7-12)	05100622200



### Accessories

#### Crimp contacts

16A Operating contacts  
Contact resistance  $\leq 1\text{m}\Omega$   
silver plated



Relay contacts  
silver plated



More crimp contacts 16A see P17-03.

#### Tools

Crimping tool

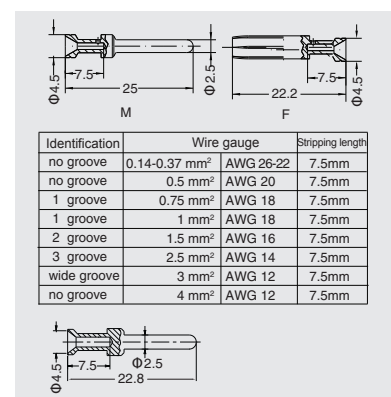


Contact removal tool



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

Wire gauge	Designation	Order No.
1mm <sup>2</sup>	CESM-1.0R	08121137300
1.5 mm <sup>2</sup>	CESM-1.5R	08121139300
2.5 mm <sup>2</sup>	CESM-2.5R	08121141300



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.



# HVE-016 High voltage inserts

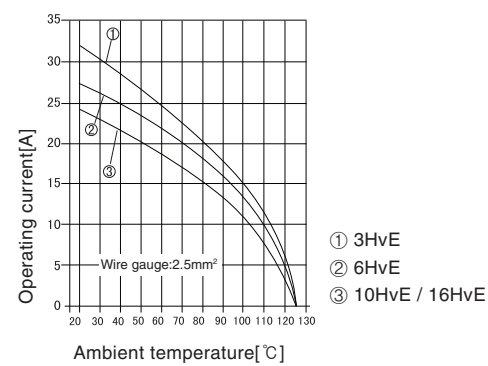
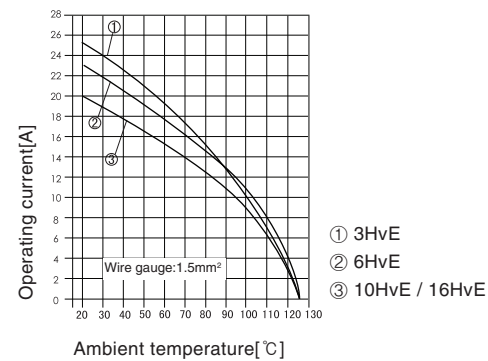
## Technical characteristics

Specifications	DIN EN 60 664 DIN EN 61 984
Approvals	
<b>Inserts</b>	
Number of contacts	16,32+PE + 2 additional contacts for safe high voltage connections
<b>Electrical data acc. to DIN EN 61 984</b>	
-Rated current	16A
-Rated voltage conductor - ground	400V
-Rated voltage conductor - conductor	690V
-Rated impulse voltage	6kV
-Pollution degree	3
-or	16A 500V 6kV 3
Rated voltage acc. to UL/CSA	600V
Relay contacts	250V
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)	$\geq 500$
<b>Contacts</b>	
Material	copper alloy
Surface	hard-silver plated
Contact resistance	$\leq 1m\Omega$
<b>Screw terminal</b>	
-Wire gauge	2.5mm <sup>2</sup>
-AWG	14
-Tightening/test torque	0.5Nm

## 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





# HVE-016 High voltage inserts

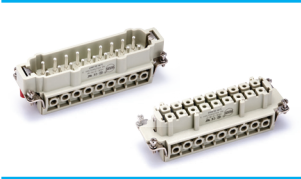
400/690V 16A 16+2+ 



## Inserts

Hoods/Housings: size HV24B or 24B high protection, detail please find the page 16-74~16-80

Screw terminal



Insert	Designation	Order No.
Male	HVE-016-M	03101650100
Female	HVE-016-F	03101650200

1) Distance for contact max. 21 mm

Contact arrangement view from termination side

- Working contact
- Relay contact
- Without contact

Panel cut out for inserts for use without hoods/housings

# HVE-032 High voltage inserts

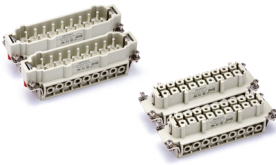
400/690V 16A 32+4+⏚



## Inserts

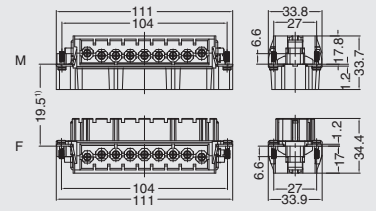
Hoods/Housings: size HV48B, detail please find the page 16-86.

### Screw terminal

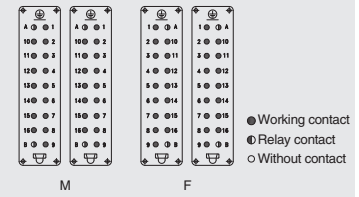


Insert	Designation	Order No.
Male	HVE-016-M	03101650100
	HVE-016-M(17-32)	03101652100
Female	HVE-016-F	03101650200
	HVE-016-F(17-32)	03101652200

1) Distance for contact max. 21 mm



Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings

