

HVE SERIES

High voltage connector

HVE SERIES High voltage inserts

Technical characteristics

Specifications	DIN EN 60 664 DIN EN 61 984
Approvals	
Inserts	
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	600V
Relay contacts	250V
Insulation resistance	≥10 ¹⁰ Ω
Material	polycarbonate
Limiting temperatures	-40°C...+125°C
Flammability acc. to UL 94	V0
Mechanical working life(mating cycles)	≥500
Contacts	
Material	copper alloy
Surface	hard-silver plated
Contact resistance	≤1mΩ
Screw terminal	
-Wire gauge	1.0-2.5mm ²
-AWG	18-14
-Tightening/test torque	0.5Nm
-Stripping length	7.0mm
Crimp terminal	
-Wire gauge	0.14-4.0mm ²
-AWG	26-12
-Stripping length	7.5mm

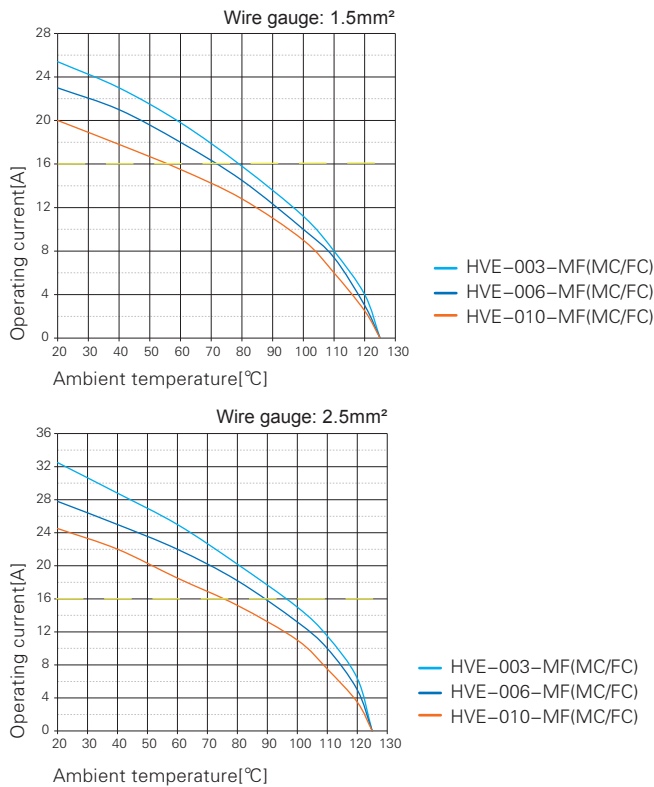
For a fully equipped crimp connector the following contacts are required:

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



HVE-003 High voltage inserts



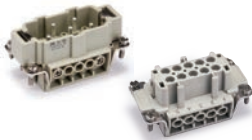
830V 16A 3+2+⊕



Inserts

Hoods/Housings: Screw terminal size **10B Plastic** or **VV10B/HV10B**, please find the details on page 15-39, 15-60~15-65.
Crimp terminal size **10B**, please find the details on page 15-39~15-69.

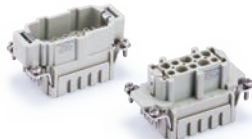
Screw terminal



Insert	Designation	Order No.
Male	HVE-003-M	124 003 011 0001
Female	HVE-003-F	124 003 021 0001

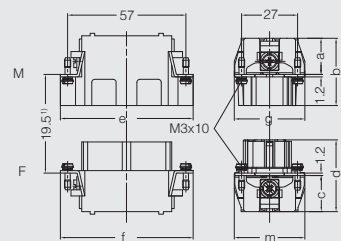
Crimp terminal

Order crimp contacts separately



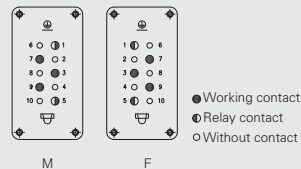
Insert	Designation	Order No.
Male	HVE-003-MC	124 003 010 0001
Female	HVE-003-FC	124 003 020 0001

1) Distance for contact max. 21 mm

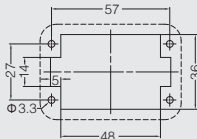


	a	b	e	g	c	d	f	m
M/F	16.5	32	64.5	34	16.8	34.2	64	34
MC/FC	18	33	64	34	17.5	35.2	64	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Crimp contacts

Crimp contacts 16A

16A Operating contacts
Contact resistance ≤ 1 m Ω
silver plated



Relay contacts²⁾
silver plated



More crimp contacts 16A see P13-04.

Tools

Crimping tool



Contact removal tool



Male	Order No.	Female	Order No.
CESM-0.37	101 019 110 0301	CESF-0.37	101 019 120 0301
CESM-0.50	101 019 110 0401	CESF-0.50	101 019 120 0401
CESM-0.75	101 019 110 0601	CESF-0.75	101 019 120 0601
CESM-1.0	101 019 110 0801	CESF-1.0	101 019 120 0801
CESM-1.5	101 019 110 0901	CESF-1.5	101 019 120 0901
CESM-2.5	101 019 110 1001	CESF-2.5	101 019 120 1001
CESM-3.0	101 019 110 1101	CESF-3.0	101 019 120 1101
CESM-4.0	101 019 110 1201	CESF-4.0	101 019 120 1201
Wire gauge	Designation		Order No.
1mm ²	CESM-1.0R		101 019 110 0808
1.5 mm ²	CESM-1.5R		101 019 110 0908
2.5 mm ²	CESM-2.5R		101 019 110 1008

Wire gauge	Designation	Order No.
0.5-4mm ²	TL02G	198 001 001 0011

Wire gauge: 0.14-0.37mm² please select TL02 Crimping tool.

Application	Designation	Order No.
for crimp contacts 16A	TL01	198 001 000 0002

More tools detail please find the page32-03~32-06.

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.
2) Delay pin is relatively short, delay contact, protect circuit to avoid electric arc.

HVE-006 High voltage inserts



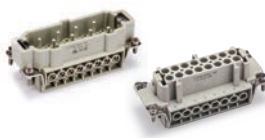
830V 16A 6+2+⊕



Inserts

Hoods/Housings: Screw terminal size **16B Plastic** or **VV16B/HV16B**, please find the details on page 15-70, 15-68~96-103.
Crimp terminal size **16B**, please find the details on page 15-70~15-107.

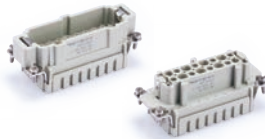
Screw terminal



Insert	Designation	Order No.
Male	HVE-006-M	124 006 011 0001
Female	HVE-006-F	124 006 021 0001

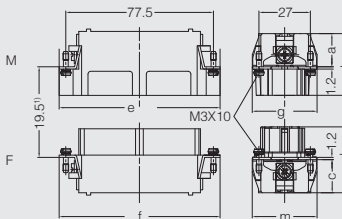
Crimp terminal

Order crimp contacts separately



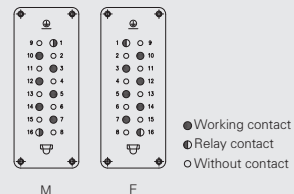
Insert	Designation	Order No.
Male	HVE-006-MC	124 006 010 0001
Female	HVE-006-FC	124 006 020 0001

1) Distance for contact max. 21 mm

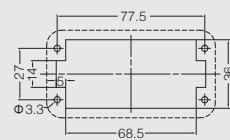


	a	b	e	g	c	d	f	m
M/F	18	32.5	84.5	34	18	34.5	84.5	34
MC/FC	18	33.5	84.5	34	18	35	84.5	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Crimp contacts

Crimp contacts 16A

16A Operating contacts
Contact resistance ≤ 1 m Ω
silver plated



Relay contacts²⁾
silver plated



More crimp contacts 16A see P13-04.

Tools

Crimping tool



Contact removal tool



Male	Order No.	Female	Order No.
CESM-0.37	101 019 110 0301	CESF-0.37	101 019 120 0301
CESM-0.50	101 019 110 0401	CESF-0.50	101 019 120 0401
CESM-0.75	101 019 110 0601	CESF-0.75	101 019 120 0601
CESM-1.0	101 019 110 0801	CESF-1.0	101 019 120 0801
CESM-1.5	101 019 110 0901	CESF-1.5	101 019 120 0901
CESM-2.5	101 019 110 1001	CESF-2.5	101 019 120 1001
CESM-3.0	101 019 110 1101	CESF-3.0	101 019 120 1101
CESM-4.0	101 019 110 1201	CESF-4.0	101 019 120 1201
Wire gauge	Designation		Order No.
1mm ²	CESM-1.0R		101 019 110 0808
1.5 mm ²	CESM-1.5R		101 019 110 0908
2.5 mm ²	CESM-2.5R		101 019 110 1008

Wire gauge	Designation	Order No.
0.5-4mm ²	TL02G	198 001 001 0011

Wire gauge: 0.14-0.37mm² please select TL02 Crimping tool.

Application	Designation	Order No.
for crimp contacts 16A	TL01	198 001 000 0002

More tools detail please find the page32-03~32-06.

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.
2) Delay pin is relatively short, delay contact, protect circuit to avoid electric arc.

HVE-020 High voltage inserts

830V 16A 20+4+



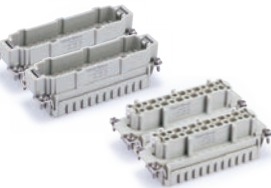
Inserts

Screw terminal



Crimp terminal

Order crimp contacts separately

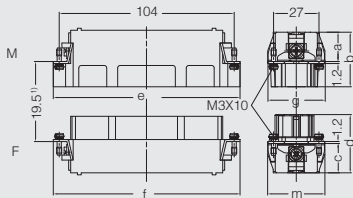


Hoods/Housings: Screw terminal size **WV48B/HV48B**, please find the details on page 15-162.
Crimp terminal size **48B**, please find the details on page 15-160~15-162.

Insert	Designation	Order No.
Male	HVE-010-M	124 010 010 0001
	HVE-010-M(11-20)	124 010 011 0002
Female	HVE-010-F	124 010 021 0001
	HVE-010-F(11-20)	124 010 021 0002

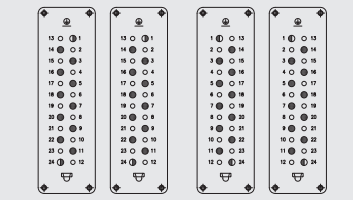
Insert	Designation	Order No.
Male	HVE-010-MC	124 010 010 0001
	HVE-010-MC(11-20)	124 010 010 0002
Female	HVE-010-FC	124 010 020 0001
	HVE-010-FC(11-20)	124 010 020 0002

1) Distance for contact max. 21 mm

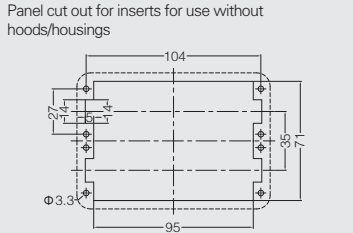


M/F	a	b	e	g	c	d	f	m
M/F	17	32.5	111	33.5	17	34.5	111	33.5
MC/FC	18.3	33.5	111	34	18.3	35.5	111	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Crimp contacts

Crimp contacts 16A

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



Relay contacts²⁾
silver plated



More crimp contacts 16A see P13-04.

Tools

Crimping tool



Contact removal tool



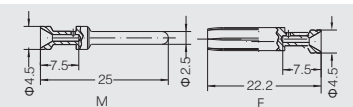
Male	Order No.	Female	Order No.
CESM-0.37	101 019 110 0301	CESF-0.37	101 019 120 0301
CESM-0.50	101 019 110 0401	CESF-0.50	101 019 120 0401
CESM-0.75	101 019 110 0601	CESF-0.75	101 019 120 0601
CESM-1.0	101 019 110 0801	CESF-1.0	101 019 120 0801
CESM-1.5	101 019 110 0901	CESF-1.5	101 019 120 0901
CESM-2.5	101 019 110 1001	CESF-2.5	101 019 120 1001
CESM-3.0	101 019 110 1101	CESF-3.0	101 019 120 1101
CESM-4.0	101 019 110 1201	CESF-4.0	101 019 120 1201
Wire gauge	Designation		Order No.
1mm ²	CESM-1.0R		101 019 110 0808
1.5 mm ²	CESM-1.5R		101 019 110 0908
2.5 mm ²	CESM-2.5R		101 019 110 1008

Wire gauge	Designation	Order No.
0.5-4mm ²	TL02G	198 001 001 0011

Wire gauge: 0.14-0.37mm² please select TL02 Crimping tool.

Application	Designation	Order No.
for crimp contacts 16A	TL01	198 001 000 0002

More tools detail please find the page32-03~32-06.



Identification	Wire gauge	Stripping length
no groove	0.14-0.37 mm ² AWG 28-22	7.5mm
no groove	0.5 mm ² AWG 20	7.5mm
1 groove	0.75 mm ² AWG 18	7.5mm
1 groove	1 mm ² AWG 18	7.5mm
2 grooves	1.5 mm ² AWG 16	7.5mm
3 grooves	2.5 mm ² AWG 14	7.5mm
wide groove	3 mm ² AWG 12	7.5mm
no groove	4 mm ² AWG 12	7.5mm

When the wire gauge is less than 0.75mm², it's better to use the auxiliary pin assembly tool TL15.



HVE-016 High voltage inserts

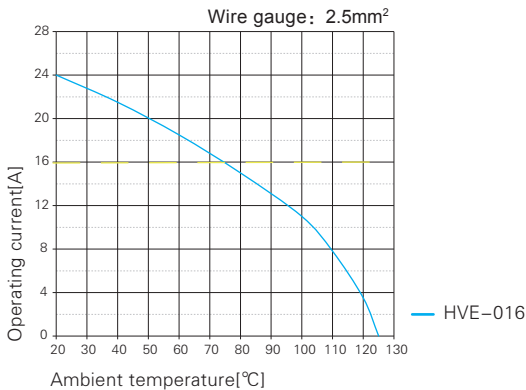
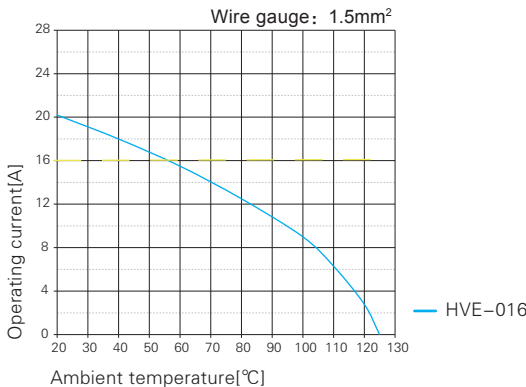
Technical characteristics

Specifications	DIN EN 60 664 DIN EN 61 984
Approvals	
Inserts	
Number of contacts	16,32+PE + 2 additional contacts for safe high voltage connections
Electrical data acc. to DIN EN 61 984	
-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	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)	≥ 500
Contacts	
Material	copper alloy
Surface	hard-silver plated
Contact resistance	$\leq 1\text{m}\Omega$
Screw terminal	
-Wire gauge	2.5mm ²
-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



Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.
2) Delay pin is relatively short, delay contact, protect circuit to avoid electric arc.

HVE-016 High voltage inserts

400/690V 16A 16+2+⏚



Inserts

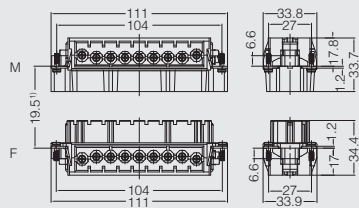
Hoods/Housings: size 24B Plastic or WV24B/HV24B, please find the details on page 15-108, 15-136~15-144.

Screw terminal

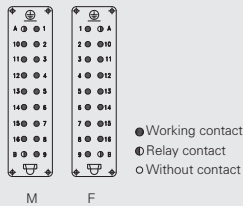


Insert	Designation	Order No.
Male	HVE-016-M	124 016 011 0001
Female	HVE-016-F	124 016 021 0001

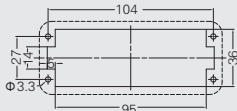
1) Distance for contact max. 21 mm



Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



HVE-032 High voltage inserts

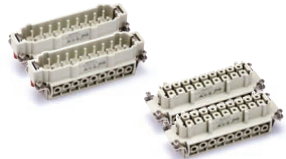
400/690V 16A 32+4+⏚



Inserts

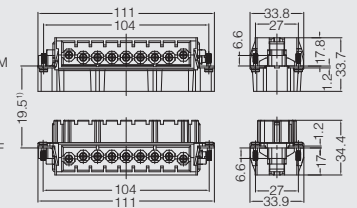
Hoods/Housings: size WV48B/HV48B, please find the details on page 15-162.

Screw terminal

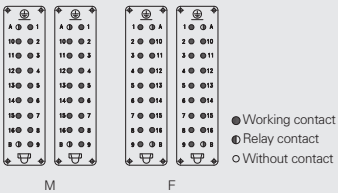


Insert	Designation	Order No.
Male	HVE-016-M	124 016 011 0001
	HVE-016-M(17-32)	124 016 011 0002
Female	HVE-016-F	124 016 021 0001
	HVE-016-F(17-32)	124 016 021 0002

1) Distance for contact max. 21 mm



Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings

