

# HE SERIES

Standard products



## HE SERIES Standard inserts

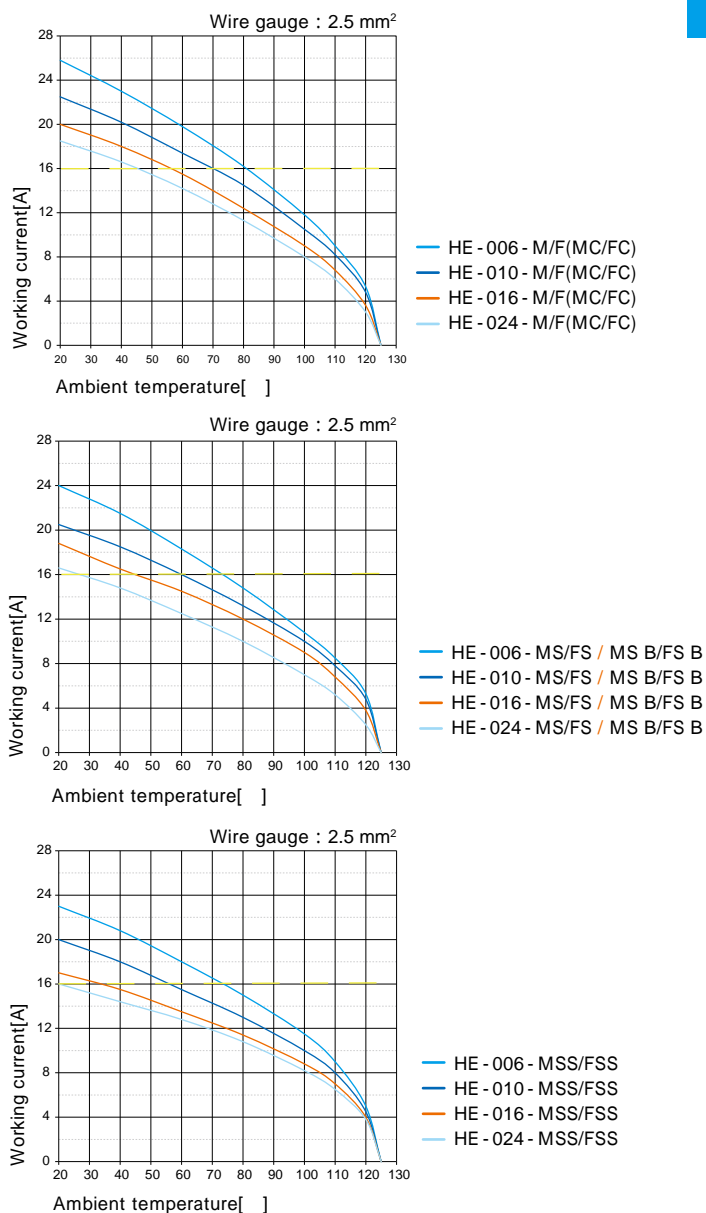
## Technical characteristics

Specifications	DIN EN 60 664 DIN EN 61 984
Approvals	
<b>Inserts</b>	
Number of contacts	6,10,16,24,32(2X16),48(2X24)+PE
Electrical data acc. to DIN EN 61 984	
- Rated current	16A
- Rated voltage	500V
- Rated impulse voltage	6KV
- Pollution degree	3
- Pollution degree 2 also	16A 400/690V 6kV 2
Rated voltage acc. to UL	600V
Insulation resistance	10 <sup>10</sup>
Material	polycarbonate
Limiting temperatures	-40 ...+125
Flammability acc. to UL 94	V0
Mechanical working life(mating cycles)	500
<b>Contacts</b>	
Material	copper alloy
Surface	hard - gold plated hard - silver plated
Contact resistance	1m
<b>Screw terminal</b>	
- Wrie gauge	0.75 - 2.5mm <sup>2</sup>
- AWG	18 - 14
- Tightening/Test torque	0.5Nm
- Stripping length	7.0mm
<b>Crimp terminal</b>	
- Wrie gauge	0.14 - 4.0mm <sup>2</sup>
- AWG	26 - 12
- Stripping length	7.5mm
<b>Spring terminal</b>	
- Wrie gauge	0.14 - 2.5mm <sup>2</sup>
- AWG	26 - 14
- Stripping length	7 - 9mm

## 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



HE-006 Standard inserts

500V 16A 6+⊕



Inserts

Hoods/Housings: size 6B, please find the details on page 15-25~15-38.

Screw terminal



Insert	Designation	Order No.
Male	HE -006 - M	122 006 011 0001
Female	HE -006 - F	122 006 021 0001

Crimp terminal

Order crimp contacts separately



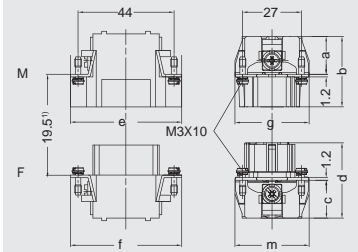
Insert	Designation	Order No.
Male	HE -006 - MC <sup>1)</sup>	122 006 010 0001
Female	HE -006 - FC <sup>1)</sup>	122 006 020 0001
1), can match PCB adapter, see page 14 - 04~14 - 05.		
Male	HE -006 - MC/N <sup>2)</sup>	122 006 010 0101
Female	HE -006 - FC/N <sup>2)</sup>	122 006 020 0101
2), for crimp contacts 16A - Enhanced , see page 13 - 04.		

Spring terminal, See P00 - 35 for the structural characteristics of spring.



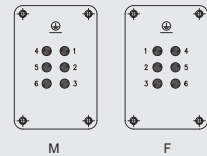
Insert	Designation	Order No.
Male	HE -006 - MS	122 006 012 0001
Female	HE -006 - FS	122 006 022 0001
Male	HE -006 - MS B	122 006 012 0101
Female	HE -006 - FS B	122 006 022 0101
Double spring connection(Two terminal per contact ) Only suitable for high structure shells		
Male	HE -006 - MSS	122 006 012 0201
Female	HE -006 - FSS	122 006 022 0201

1) Distance for contact max. 21 mm

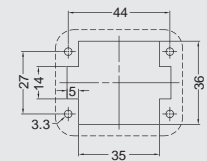


	a	b	e	g	c	d	f	m
M/F	16	32.4	51	34	16.8	34.5	50.5	34
MC/FC	18	33	51	34	18	35	50.5	34
MCN / FCN	18.3	34	51	34	19	36	51	34
MS/FS	18	33.3	51	34	18.2	35.4	50.5	34
MSS/FSS	34.5	49.5	50	34	33.4	50	50	34
MS B / FS B	19.5	34.7	51	34	19	36.5	51	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Crimp contacts

Crimp contacts 16A

Contact resistance 1m silver plated

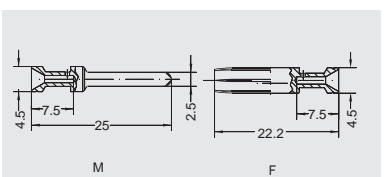


gold plated



More crimp contacts 16A see P13 - 04.

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
CEGM - 0.37	101 019 210 0301	CEGF - 0.37	101 019 220 0301
CEGM - 0.50	101 019 210 0401	CEGF - 0.50	101 019 220 0401
CEGM - 0.75	101 019 210 0601	CEGF - 0.75	101 019 220 0601
CEGM - 1.0	101 019 210 0801	CEGF - 1.0	101 019 220 0801
CEGM - 1.5	101 019 210 0901	CEGF - 1.5	101 019 220 0901
CEGM - 2.5	101 019 210 1001	CEGF - 2.5	101 019 220 1001
CEGM - 3.0	101 019 210 1101	CEGF - 3.0	101 019 220 1101
CEGM - 4.0	101 019 210 1201	CEGF - 4.0	101 019 220 1201



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 grooves	1.5 mm <sup>2</sup>	AWG 16
3 grooves	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

When the wire gauge is less than 0.75mm<sup>2</sup>, it's better to use the auxiliary pin assembly tool TL15.

Tools

Crimping tool



Contact removal tool



Wire gauge	Designation	Order No.
0.5 - 4mm <sup>2</sup>	TL02G	198 001 001 0011

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

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

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

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

HE-010 Standard inserts

500V 16A 10+

Inserts

Hoods/Housings: size 10B, please find the details on page 15-39~15-69.

Screw terminal



Insert	Designation	Order No.
Male	HE -010 - M	122 010 011 0001
Female	HE -010 - F	122 010 021 0001

Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HE -010 - MC <sup>1)</sup>	122 010 010 0001
Female	HE -010 - FC <sup>1)</sup>	122 010 020 0001

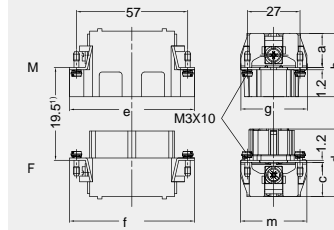
1).can match PCB adapter,see page 14 - 04~14 - 05.

Spring terminal, See P00 - 35 for the structural characteristics of spring.



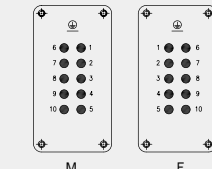
Insert	Designation	Order No.
Male	HE -010 - MS	122 010 012 0001
Female	HE -010 - FS	122 010 022 0001
Male	HE -010 - MS B	122 010 012 0101
Female	HE -010 - FS B	122 010 022 0101
Double spring connection(Two terminal per contact ) Only suitable for high structure shells		
Male	HE -010 - MSS	122 010 012 0201
Female	HE -010 - FSS	122 010 022 0201

1) Distance for contact max. 21 mm

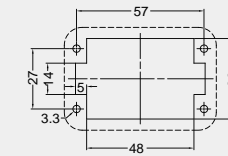


	a	b	e	g	c	d	f	m
M/F	16.5	32	64.5	34	16.8	34.2	64	34
MC/FC	18	33	64	34	17.5	35.2	64	34
MS/FS	18.5	33.5	64	34	18.5	35.6	64	34
MSS/FSS	34	49	64	34	33.5	49.5	63	34
MS B / FS B	19	34.5	64	34	18.6	36	64	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Crimp contacts

Crimp contacts 16A

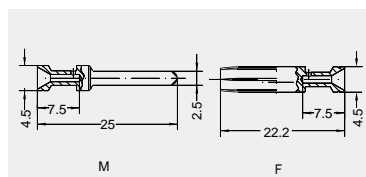
Contact resistance 1m silver plated



gold plated



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
CEGM - 0.37	101 019 210 0301	CEGF - 0.37	101 019 220 0301
CEGM - 0.50	101 019 210 0401	CEGF - 0.50	101 019 220 0401
CEGM - 0.75	101 019 210 0601	CEGF - 0.75	101 019 220 0601
CEGM - 1.0	101 019 210 0801	CEGF - 1.0	101 019 220 0801
CEGM - 1.5	101 019 210 0901	CEGF - 1.5	101 019 220 0901
CEGM - 2.5	101 019 210 1001	CEGF - 2.5	101 019 220 1001
CEGM - 3.0	101 019 210 1101	CEGF - 3.0	101 019 220 1101
CEGM - 4.0	101 019 210 1201	CEGF - 4.0	101 019 220 1201



Identification	Wire gauge	Stripping length
no groove	0.14 - 0.37 mm <sup>2</sup> AWG 26-22	7.5mm
no groove	0.5 mm <sup>2</sup> AWG 20	7.5mm
1 groove	0.75 mm <sup>2</sup> AWG 18	7.5mm
1 groove	1 mm <sup>2</sup> AWG 18	7.5mm
2 grooves	1.5 mm <sup>2</sup> AWG 16	7.5mm
3 grooves	2.5 mm <sup>2</sup> AWG 14	7.5mm
wide groove	3 mm <sup>2</sup> AWG 12	7.5mm
no groove	4 mm <sup>2</sup> AWG 12	7.5mm

When the wire gauge is less than 0.75mm<sup>2</sup>, it's better to use the auxiliary pin assembly tool TL15.

More crimp contacts 16A see P13 - 04.

Tools

Crimping tool



Contact removal tool



Wire gauge	Designation	Order No.
0.5 - 4mm <sup>2</sup>	TL02G	198 001 001 0011

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

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

More tools detail please find the page 32 - 03 - 32 - 06.

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

# HE-016 Standard inserts

500V 16A 16+



## Inserts

Hoods/Housings: size 16B, please find the details on page 15-70~15-107.

### Screw terminal



Insert	Designation	Order No.
Male	HE -016 - M	122 016 011 0001
Female	HE -016 - F	122 016 021 0001

### Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HE -016 - MC <sup>1)</sup>	122 016 010 0001
Female	HE -016 - FC <sup>1)</sup>	122 016 020 0001

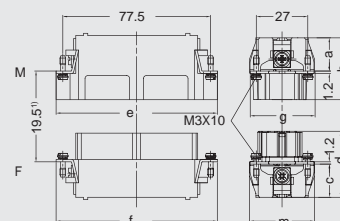
1).can match PCB adapter,see page 14 -04~14 -05.

Spring terminal, See P00 - 35 for the structural characteristics of spring.



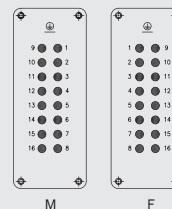
Insert	Designation	Order No.
Male	HE -016 - MS	122 016 012 0001
Female	HE -016 - FS	122 016 022 0001
Male	HE -016 - MS B	122 016 012 0101
Female	HE -016 - FS B	122 016 022 0101
Double spring connection(Two terminal per contact ) Only suitable for high structure shells		
Male	HE -016 - MSS	122 016 012 0201
Female	HE -016 - FSS	122 016 022 0201

1) Distance for contact max. 21 mm

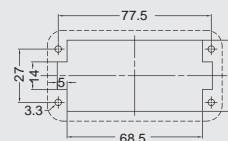


	a	b	e	g	c	d	f	m
M/F	17	32.5	84.2	34	17	34.5	84.2	33.5
MC/FC	18	33.5	84.5	34	18	35	84.5	34
MS/FS	18	33.7	84.5	34	18.2	35.5	84.5	34
MSS/FSS	34.3	49	84.5	34	32.2	49	84.5	34
MS B / FS B	19.6	34.7	84.3	34	18.6	36	84.5	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



## Crimp contacts

### Crimp contacts 16A

Contact resistance 1m silver plated



gold plated



More crimp contacts 16A see P13 -04.

### Tools

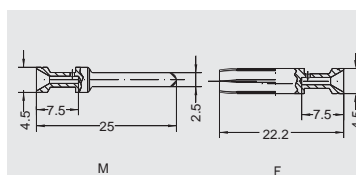
Crimping tool



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
CEGM -0.37	101 019 210 0301	CEGF -0.37	101 019 220 0301
CEGM -0.50	101 019 210 0401	CEGF -0.50	101 019 220 0401
CEGM -0.75	101 019 210 0601	CEGF -0.75	101 019 220 0601
CEGM -1.0	101 019 210 0801	CEGF -1.0	101 019 220 0801
CEGM -1.5	101 019 210 0901	CEGF -1.5	101 019 220 0901
CEGM -2.5	101 019 210 1001	CEGF -2.5	101 019 220 1001
CEGM -3.0	101 019 210 1101	CEGF -3.0	101 019 220 1101
CEGM -4.0	101 019 210 1201	CEGF -4.0	101 019 220 1201



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 grooves	1.5 mm <sup>2</sup>	AWG 16
3 grooves	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

When the wire gauge is less than 0.75mm<sup>2</sup>, it's better to use the auxiliary pin assembly tool TL15.

Wire gauge	Designation	Order No.
0.5 - 4mm <sup>2</sup>	TL02G	198 001 001 0011

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

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

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

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

# HE-024 Standard inserts

500V 16A 24+



## Inserts

Hoods/Housings: size 24B, please find the details on page 15-108-15-150.

### Screw terminal



Insert	Designation	Order No.
Male	HE-024-M	122 024 011 0001
Female	HE-024-F	122 024 021 0001

### Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HE-024-MC <sup>1)</sup>	122 024 010 0001
Female	HE-024-FC <sup>1)</sup>	122 024 020 0001

1).can match PCB adapter,see page 14-04-14-05.

Spring terminal, See P00-35 for the structural characteristics of spring.



Insert	Designation	Order No.
Male	HE-024-MS	122 024 012 0001
Female	HE-024-FS	122 024 022 0001
Male	HE-024-MS B	122 024 012 0101
Female	HE-024-FS B	122 024 022 0101
Double spring connection(Two terminal per contact ) Only suitable for high structure shells		
Male	HE-024-MSS	122 024 012 0201
Female	HE-024-FSS	122 024 022 0201

## Crimp contacts

### Crimp contacts 16A

Contact resistance 1m  
silver plated



gold 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
CEGM-0.37	101 019 210 0301	CEGF-0.37	101 019 220 0301
CEGM-0.50	101 019 210 0401	CEGF-0.50	101 019 220 0401
CEGM-0.75	101 019 210 0601	CEGF-0.75	101 019 220 0601
CEGM-1.0	101 019 210 0801	CEGF-1.0	101 019 220 0801
CEGM-1.5	101 019 210 0901	CEGF-1.5	101 019 220 0901
CEGM-2.5	101 019 210 1001	CEGF-2.5	101 019 220 1001
CEGM-3.0	101 019 210 1101	CEGF-3.0	101 019 220 1101
CEGM-4.0	101 019 210 1201	CEGF-4.0	101 019 220 1201

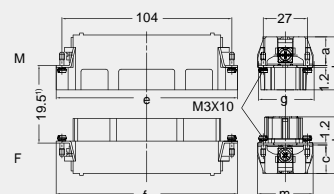
Wire gauge	Designation	Order No.
0.5-4mm <sup>2</sup>	TL02G	198 001 001 0011

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

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

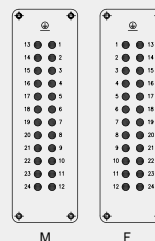
More tools detail please find the page 32-03-32-06.

1) Distance for contact max. 21 mm

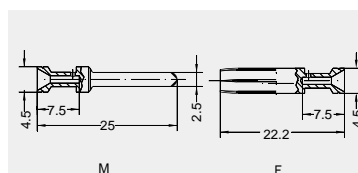
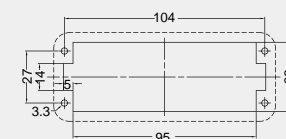


	a	b	e	g	c	d	f	m
M/F	17	32.5	111	33.5	17	34.5	111	33.5
MC/FC	18.3	33.5	111	34	18.3	35.5	111	34
MS/FS	18.5	33.6	111	34	18.5	35.6	111	34
MSS/FSS	34	49	110	34	32	49	110	34
MS B / FS B	19.6	34.7	111	34	19	36.2	111	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Identification	Wire gauge	Stripping length
no groove	0.14-0.37 mm <sup>2</sup> AWG 26-22	7.5mm
no groove	0.5 mm <sup>2</sup> AWG 20	7.5mm
1 groove	0.75 mm <sup>2</sup> AWG 18	7.5mm
1 groove	1 mm <sup>2</sup> AWG 18	7.5mm
2 grooves	1.5 mm <sup>2</sup> AWG 16	7.5mm
3 grooves	2.5 mm <sup>2</sup> AWG 14	7.5mm
wide groove	3 mm <sup>2</sup> AWG 12	7.5mm
no groove	4 mm <sup>2</sup> AWG 12	7.5mm

When the wire gauge is less than 0.75mm<sup>2</sup>, it's better to use the auxiliary pin assembly tool TL15.

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

HE-032 Standard inserts

500V 16A 32+



Inserts

Hoods/Housings: size 32B, please find the details on page 15-151~15-159.

Screw terminal



Insert	Designation	Order No.
Male	HE -016 - M	122 016 011 0001
	HE -016 - M(17 - 32)	122 016 011 0002
Female	HE -016 - F	122 016 021 0001
	HE -016 - F(17 - 32)	122 016 021 0002

Crimp terminal

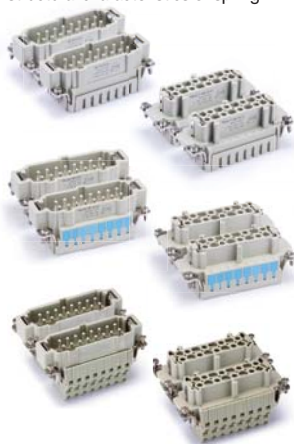
Order crimp contacts separately



Insert	Designation	Order No.
Male	HE -016 - MC	122 016 010 0001
	HE -016 - MC(17 - 32) <sup>1)</sup>	122 016 010 0002
Female	HE -016 - FC	122 016 020 0001
	HE -016 - FC(17 - 32) <sup>1)</sup>	122 016 020 0002

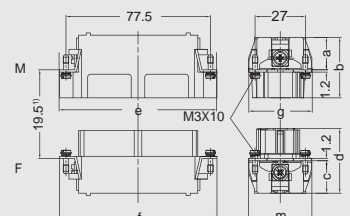
1).can match PCB adapter,see page 14 - 04 - 14 - 05.

Spring terminal, See P00 - 33 for the structural characteristics of spring.



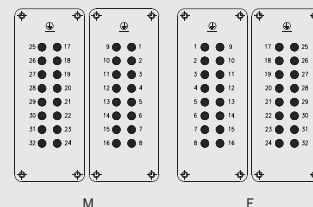
Insert	Designation	Order No.
Male	HE -016 - MS	122 016 012 0001
	HE -016 - MS(17 - 32)	122 016 012 0002
Female	HE -016 - FS	122 016 022 0001
	HE -016 - FS(17 - 32)	122 016 022 0002
Male	HE -016 - MS B	122 016 012 0101
	HE -016 - MS B(17 - 32)	122 016 012 0102
Female	HE -016 - FS B	122 016 022 0101
	HE -016 - FS B(17 - 32)	122 016 022 0102
Double spring connection(Two terminal per contact ) Only suitable for high structure shells		
Male	HE -016 - MSS	122 016 012 0201
	HE -016 - MSS(17 - 32)	122 016 012 0202
Female	HE -016 - FSS	122 016 022 0201
	HE -016 - FSS(17 - 32)	122 016 022 0202

1) Distance for contact max. 21 mm

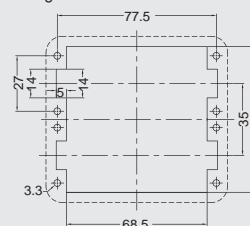


	a	b	e	g	c	d	f	m
M/F	17	32.5	84.2	34	17	34.5	84.2	33.5
MC/FC	18	33.5	84.5	34	18	35	84.5	34
MS/FS	18	33.7	84.5	34	18.2	35.5	84.5	34
MSS/FSS	34.3	49	84.5	34	32.2	49	84.5	34
MS B / FS B	19.6	34.7	84.3	34	18.6	36	84.5	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



Crimp contacts

Crimp contacts 16A

Contact resistance 1m silver plated



gold plated



More crimp contacts 16A see P13 - 04.

Tools

Crimping tool



Contact removal tool



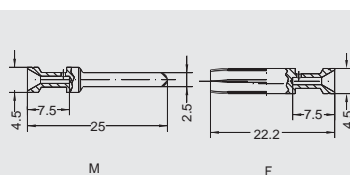
Male	Order No.	Female	Order No.
CESM - 0.37	101 019 110 0301	CESF - 0.37	101 019 120 0301
CESM - 0.50	101 019 110 0401	CESF - 0.50	101 019 120 0401
CESM - 0.75	101 019 110 0601	CESF - 0.75	101 019 120 0601
CESM - 1.0	101 019 110 0801	CESF - 1.0	101 019 120 0801
CESM - 1.5	101 019 110 0901	CESF - 1.5	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
CEGM - 0.37	101 019 210 0301	CEGF - 0.37	101 019 220 0301
CEGM - 0.50	101 019 210 0401	CEGF - 0.50	101 019 220 0401
CEGM - 0.75	101 019 210 0601	CEGF - 0.75	101 019 220 0601
CEGM - 1.0	101 019 210 0801	CEGF - 1.0	101 019 220 0801
CEGM - 1.5	101 019 210 0901	CEGF - 1.5	101 019 220 0901
CEGM - 2.5	101 019 210 1001	CEGF - 2.5	101 019 220 1001
CEGM - 3.0	101 019 210 1101	CEGF - 3.0	101 019 220 1101
CEGM - 4.0	101 019 210 1201	CEGF - 4.0	101 019 220 1201

Wire gauge	Designation	Order No.
0.5 - 4mm <sup>2</sup>	TL02G	198 001 001 0011

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

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

More tools detail please find the page 32 - 03 - 32 - 06.



Identification	Wire gauge	Stripping length
no groove	0.14 - 0.37 mm <sup>2</sup>	AWG 26-22 7.5mm
no groove	0.5 mm <sup>2</sup>	AWG 20 7.5mm
1 groove	0.75 mm <sup>2</sup>	AWG 18 7.5mm
1 groove	1 mm <sup>2</sup>	AWG 18 7.5mm
2 grooves	1.5 mm <sup>2</sup>	AWG 16 7.5mm
3 grooves	2.5 mm <sup>2</sup>	AWG 14 7.5mm
wide groove	3 mm <sup>2</sup>	AWG 12 7.5mm
no groove	4 mm <sup>2</sup>	AWG 12 7.5mm

When the wire gauge is less than 0.75mm<sup>2</sup>, it's better to use the auxiliary pin assembly tool TL15.

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.

# HE-048 Standard inserts

500V 16A 48+



## Inserts

Hoods/Housings: size 48B, please find the details on page 15-160-15-162.

### Screw terminal



Insert	Designation	Order No.
Male	HE -024 - M	122 024 011 0001
Female	HE -024 - M(25 - 48)	122 024 011 0002
	HE -024 - F	122 024 021 0001
	HE -024 - F(25 - 48)	122 024 021 0002

### Crimp terminal

Order crimp contacts separately



Insert	Designation	Order No.
Male	HE -024 - MC	122 024 010 0001
	HE -024 - MC(25 - 48) <sup>1)</sup>	122 024 010 0002
Female	HE -024 - FC	122 024 020 0001
	HE -024 - FC(25 - 48) <sup>1)</sup>	122 024 020 0002

1).can match PCB adapter,see page 14 - 04~14 - 05.

Spring terminal, See P00 - 33 for the structural characteristics of spring.



Insert	Designation	Order No.
Male	HE -024 - MS	122 024 012 0001
	HE -024 - MS(25 - 48)	122 024 012 0002
Female	HE -024 - FS	122 024 022 0001
	HE -024 - FS(25 - 48)	122 024 022 0002
Male	HE -024 - MS B	122 024 012 0101
	HE -024 - MS B(25 - 48)	122 024 012 0102
Female	HE -024 - FS B	122 024 022 0101
	HE -024 - FS B(25 - 48)	122 024 022 0102
Double spring connection(Two terminal per contact ) Only suitable for high structure shells		
Male	HE -024 - MSS	122 024 012 0201
	HE -024 - MSS(25 - 48)	122 024 012 0202
Female	HE -024 - FSS	122 024 022 0201
	HE -024 - FSS(25 - 48)	122 024 022 0202

### Crimp contacts

#### Crimp contacts 16A

Contact resistance 1m  
silver plated



gold plated



More crimp contacts 16A see P13 - 04.

#### Tools

Crimping tool



Contact removal tool

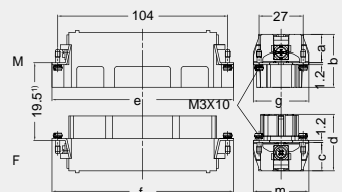


Male	Order No.	Female	Order No.
CESM -0.37	101 019 110 0301	CESF -0.37	101 019 120 0301
CESM -0.50	101 019 110 0401	CESF -0.50	101 019 120 0401
CESM -0.75	101 019 110 0601	CESF -0.75	101 019 120 0601
CESM -1.0	101 019 110 0801	CESF -1.0	101 019 120 0801
CESM -1.5	101 019 110 0901	CESF -1.5	101 019 120 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
CEGM -0.37	101 019 210 0301	CEGF -0.37	101 019 220 0301
CEGM -0.50	101 019 210 0401	CEGF -0.50	101 019 220 0401
CEGM -0.75	101 019 210 0601	CEGF -0.75	101 019 220 0601
CEGM -1.0	101 019 210 0801	CEGF -1.0	101 019 220 0801
CEGM -1.5	101 019 210 0901	CEGF -1.5	101 019 220 0901
CEGM -2.5	101 019 210 1001	CEGF -2.5	101 019 220 1001
CEGM -3.0	101 019 210 1101	CEGF -3.0	101 019 220 1101
CEGM -4.0	101 019 210 1201	CEGF -4.0	101 019 220 1201

Wire gauge	Designation	Order No.
0.5 - 4mm <sup>2</sup>	TL02G	198 001 001 0011
Wire gauge: 0.14 - 0.37mm <sup>2</sup> please select TL02 Crimping tool.		
Application	Designation	Order No.
for crimp contacts 16A	TL01	198 001 000 0002

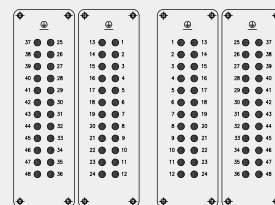
More tools detail please find the page 32 - 03 - 32 - 06.

1) Distance for contact max. 21 mm

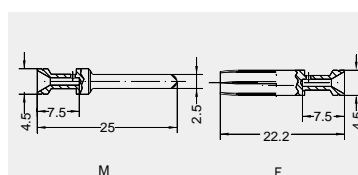
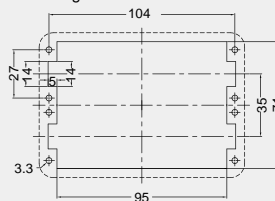


M/F	a	b	e	g	c	d	f	m
MC/FC	18.3	33.5	111	33.5	17	34.5	111	33.5
MS/FS	18.3	33.6	111	34	18.5	35.6	111	34
MSS/FSS	34	49	110	34	32	49	110	34
MS B / FS B	19.6	34.7	111	34	19	36.2	111	34

Contact arrangement view from termination side



Panel cut out for inserts for use without hoods/housings



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 grooves	1.5 mm <sup>2</sup>	AWG 16
3 grooves	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

When the wire gauge is less than 0.75mm<sup>2</sup>, it's better to use the auxiliary pin assembly tool TL15.

Notes: The tools for crimp terminal may influence the product quality and stability. Please select the tools recognized by our company.



## HE push spring insert

## Tools

HE B Spring open machine<sup>1)</sup>

Description	Designation	Order NO.
for all HE B spring inserts	SOM01	198 001 003 0008

1) It can open all the shrapnel windows of insert at one time; suitable for using in mass assembly, greatly improving the efficiency of the connection.

