




The background of the entire page is a dynamic industrial scene. In the upper half, there's a close-up of a mechanical assembly with two circular gauges and various metal components. The lower half is dominated by a shower of bright orange and yellow sparks falling from a point of contact, set against a dark blue background with bokeh light effects.

# heavy | mate<sup>®</sup> A

- Rated voltage 250 / 400 V
- Rated current 14 A ... 18 A
- Termination: screw
- Number of contacts: 3, 4, 10, 16, 32





Approvals, Testhouse	Characteristics	Approval-Number
SEV 	250 V, 10 A	
UL 	600 V, 14 A	E 63093
CSA 	600 V, 10 A; 16 A; 20 A	LR 700721

In general approvals refer to representative versions of the connector series. Extent and specification of tests upon request.

**General information**

- For series heavy|mate® A connectors may be engaged or disengaged when live but without electrical load. If these connectors are used as plug and socket device, the load shall be reduced to 10 % of the rated current.

- Low and high profile housing for heavy|mate® A series inserts for 10 and 16 contacts.

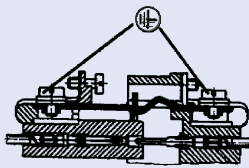


**No standard for this series, but:**

- Interchangeable with other makes
  - a) contact insert to contact insert
  - b) contact insert to housing 10 ,16 contacts

Housings are designed according to DIN EN 175 301 - 801

**First-to-mate last-to-break protective ground contact**



**Range of housings**

Size A3/4



Size A10

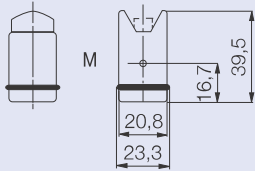

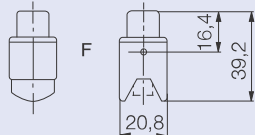



Size A16

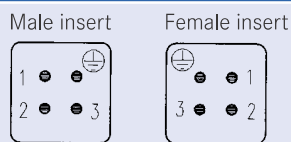


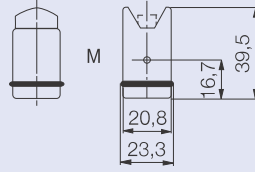

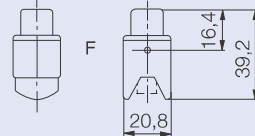

## heavy|mate® A Characteristics contact inserts

General Characteristics	Standard	Value			
Number of contacts		3/4 + ☺	10 + ☺	16 + ☺	32 + ☺
Termination technique		screw			
Wire gauge		0.25 - 2.5 mm <sup>2</sup>			
Flammability	UL 94	V-0			
Electrical Characteristics					
Rated voltage	IEC 60664-1	400 V	250 V		
Pollution degree	IEC 60664-1	3			
Installation (overvoltage) category	IEC 60664-1	III			
Material group	IEC 60664-1	III b			
Rated impulse withstand voltage	IEC 60664-1	4 KV			
Current carrying capacity	IEC 60512-5-2	see derating curves			
Rated current $T_{amp} = 40\text{ °C}$		18 A	16 A	14 A	14 A
Contact resistance	IEC 60512-2-1	≤ 5 mΩ			
Insulation resistance	IEC 60512-3-1	≥ 10 <sup>10</sup> Ω			
Climatical Characteristics					
Climatic category	IEC 60068-1	40 / 100 / 21			
Upper temperature	IEC 60512-11-9	+ 100 °C			
Lower temperature	IEC 60512-11-10	- 40 °C			
Mechanical Characteristics					
IP-degree of protection pin insert <sup>1)</sup>	IEC 60529	unmated IP00		mated IP20	
IP-degree of protection socket insert <sup>1)</sup>	IEC 60529	unmated IP20		mated IP20	
Weight pin insert		13 g	48 g	68 g	136 g
Weight socket insert		13 g	52 g	73 g	146 g
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles			
Materials					
Insert		PA	PBT	PBT	PBT
Contacts		Cu Zn (brass)			
Contact plating		Ag (silver)			

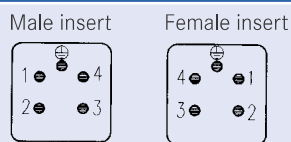
Description	Part Number	Drawing	Figure
<b>Contact insert 3 + ⊕</b>			
Male insert for screw termination	C146 10A003 002 4		
Female insert for screw termination	C146 10B003 002 4		

**Pin layout**

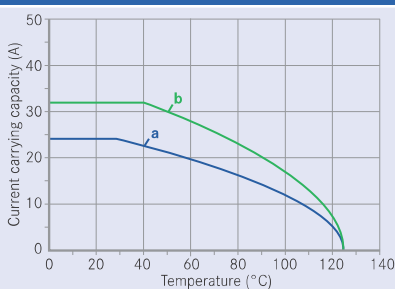


Description	Part Number	Drawing	Figure
<b>Contact insert 4 + ⊕</b>			
Male insert for screw termination	C146 10A004 002 4		
Female insert for screw termination	C146 10B004 002 4		

**Pin layout**



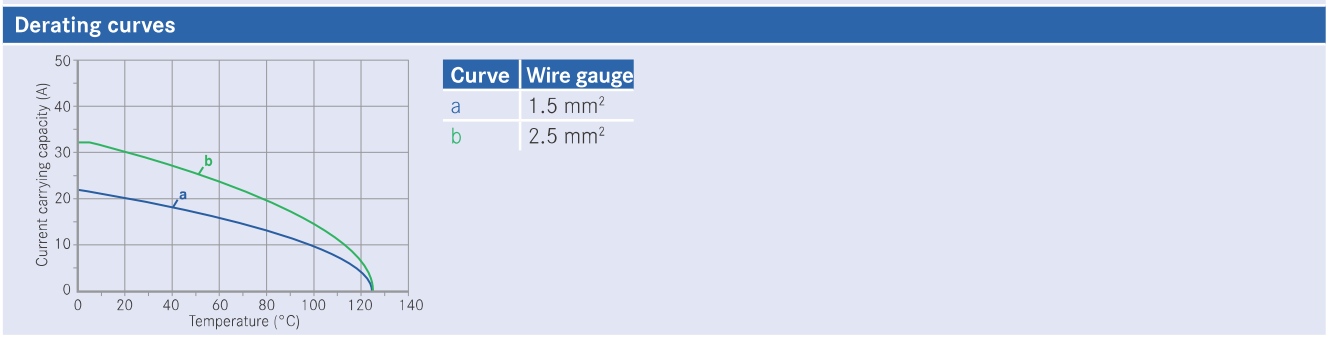
**Derating curves**



Curve	Wire gauge
a	1.5 mm <sup>2</sup>
b	2.5 mm <sup>2</sup>

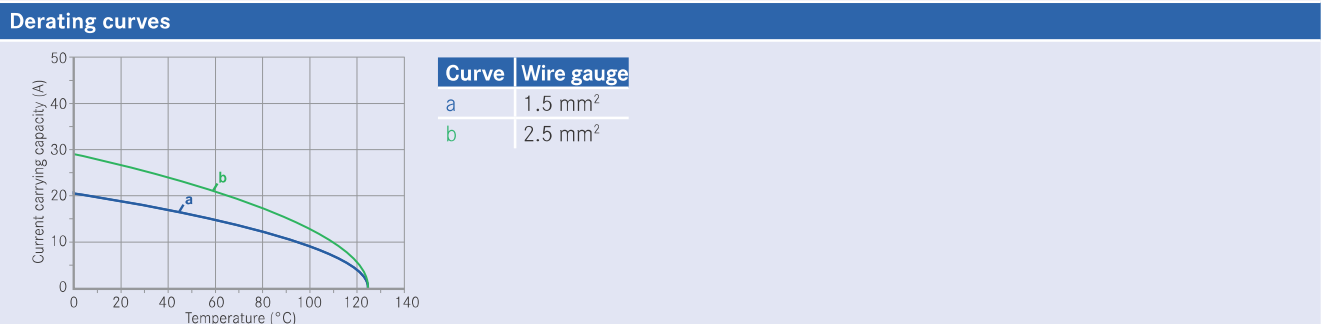
Description	Part Number	Drawing	Figure
<b>Contact insert 10 + ⊕</b>			
Male insert for screw termination	C146 10A010 002 4		
Male insert with wire protection for screw termination	C146 10A010 102 4		
Female insert for screw termination	C146 10B010 002 4		
Female insert with wire protection for screw termination	C146 10B010 102 4		

Pin layout		Assembly instruction
Male insert	Female insert	Panel cut out (insert)



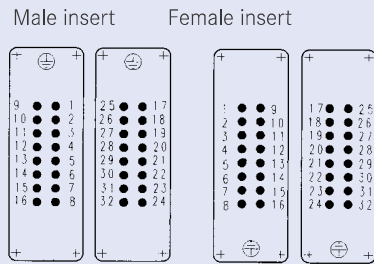
Description	Part Number	Drawing	Figure
<b>Contact insert 16 + ⊕</b>			
Male insert for screw termination	C146 10A016 002 4		
Male insert with wire protection for screw termination	C146 10A016 102 4		
Female insert for screw termination	C146 10B016 002 4		
Female insert with wire protection for screw termination	C146 10B016 102 4		

Pin layout		Assembly instruction
Male insert	Female insert	Panel cut out (insert)

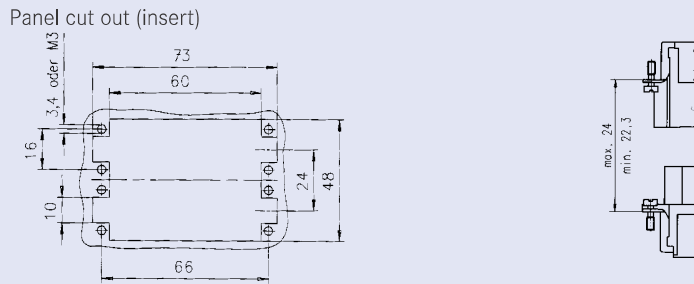


Description	Part Number	Drawing	Figure
<b>Contact insert 32 + ⊕</b>			
Male insert for screw termination	C146 10A016 002 4 (1 - 16) + C146 10A016 004 4 (17 - 32)		
Male insert with wire protection for screw termination	C146 10A016 102 4 (1 - 16) + C146 10A016 104 4 (17 - 32)		
Female insert for screw termination	C146 10B016 002 4 (1 - 16) + C146 10B016 004 4 (17 - 32)		
Female insert with wire protection for screw termination	C146 10B016 102 4 (1 - 16) + C146 10B016 104 4 (17 - 32)		

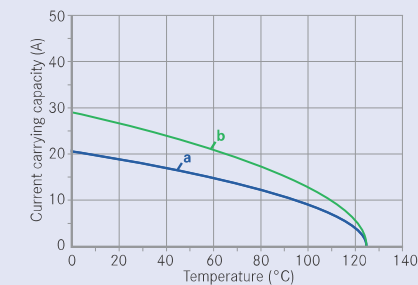
**Pin layout**



**Assembly instruction**



**Derating curves**



Curve	Wire gauge
a	1.5 mm <sup>2</sup>
b	2.5 mm <sup>2</sup>