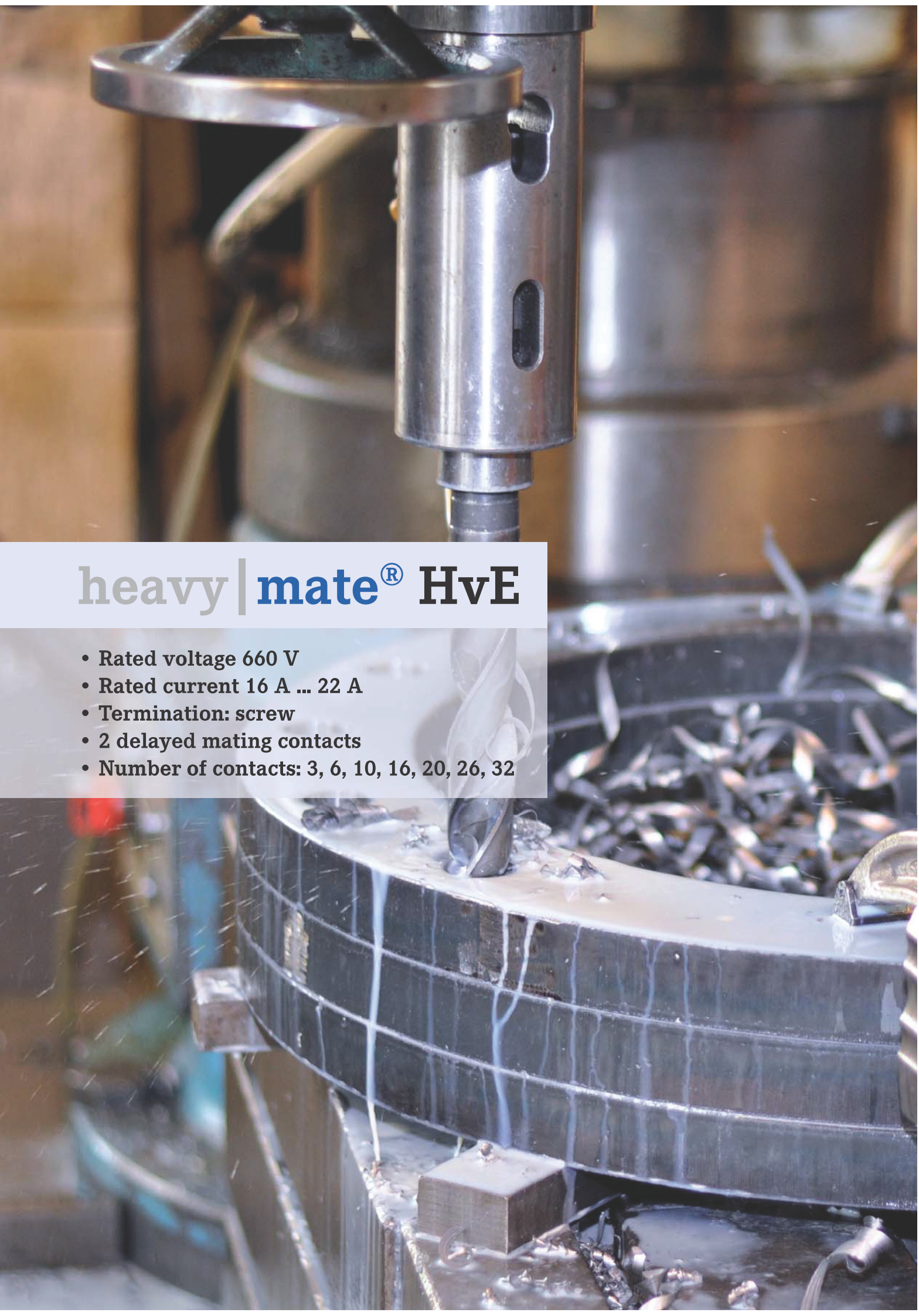
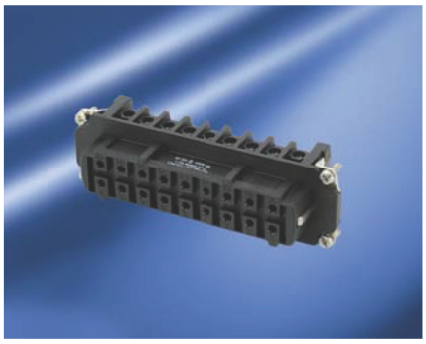


heavy | mate® HvE

- Rated voltage 660 V
- Rated current 16 A ... 22 A
- Termination: screw
- 2 delayed mating contacts
- Number of contacts: 3, 6, 10, 16, 20, 26, 32








Approvals, Testhouse	Characteristics	Approval-Number
UL	600 V, 16 A	E 63093
CSA	600 V, 16 A	48932

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

Construction of connectors Type HvE

The connectors of series heavy|mate® HvE are based on series heavy|mate® E with the following deviations:

Inserts

The HVE-inserts with 3, 6 and 10 contacts are basically the same as the 10, 16 and 24-contacts inserts of series heavy|mate® E. However they are only partly loaded with contacts and have two delayed mating pilot duty contacts.
Only type 16 HVE has special inserts with a different contact arrangement. The mounting dimensions are however identical with the 24 contacts version of heavy|mate® E.
The delayed mating contacts are intended for switching a relay coil for electrically locking in order to have unloaded socket contacts in an unmated condition.

If connectors without breaking capacity are used as connectors with breaking capacity the electrical power data must be reduced in accordance with the manufacturer's specification. These specifications are available from the manufacturer.

heavy|mate® E inserts with pin contacts are not intermatable with heavy|mate® HvE inserts with socket contacts due to
a) two empty contact holes are closed at 3, 6 and 10 contact inserts.
b) the 16 contacts HVE insert has a different contact arrangement.

Housings: (made of aluminium)

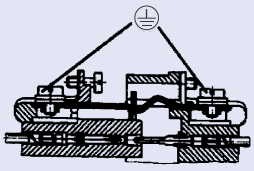
heavy|mate® E housings with an inside insulation (plastic foil) are used for the 16-contacts insert.
The inside barriers at the narrow sides preventing mounting of 660 V-inserts in 400 V housings are removed and the 16-contacts insert is now mountable.

No standard for this series,but:

Intermateable and exchangeable
with other makes
a) Contact insert to contact insert
b) Contact insert to housing 6, 10 ,16, 24 pin

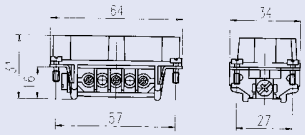
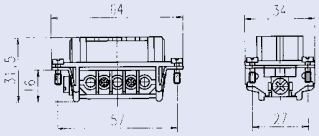
Housings are designed according to
DIN EN 175 301-801

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



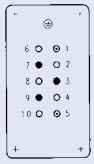
General Characteristics	Standard	Value						
Number of contacts		3	6	10	16	20	26 [3]	32
Termination technique		screw						
Wire gauge		0.25 - 2.5 mm²						
Flammability	UL 94	V-0						
Electrical Characteristics								
Rated voltage	IEC 60664-1	660 V [1] (600 V UL / CSA[2])						
Pollution degree	IEC 60664-1	3						
Installation (overvoltage) category	IEC 60664-1	III						
Material group	IEC 60664-1	III a			II	IIIa	[3]	II
Rated impulse withstand voltage	IEC 60664-1	8 kV						
Current carrying capacity	IEC 60512-5-2	see derating curves						
Contact resistance	IEC 60512-2-1	≤ 5 m Ω						
Insulation resistance	IEC 60512-3-1	≥ 10^{10} Ω						
Climatical Characteristics								
Climatic category	IEC 60068-1	40/125/21						
Upper temperature	IEC 60512-11-9	+ 125°C						
Lower temperature	IEC 60512-11-10	- 40°C						
Mechanical Characteristics								
IP-degree of protection pin insert [4]	IEC 60529	unmated IP00				mated IP20		
IP-degree of protection socket insert [4]	IEC 60529	unmated IP20				mated IP20		
Weight pin insert		49 g	63 g	81 g	107 g	162 g	189 g	214 g
Weight socket insert		49 g	63 g	81 g	107 g	162 g	189 g	214 g
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles						
Materials								
Insert		PC, GV			PA,GV	PC,GV	[3]	PA,GV
Colour insert		grey			black	grey	[3]	black
Contacts		Cu Zn (brass)						
Contact plating		Ag (silver)						

[1] for working contacts, 400 V for mating contacts [2] Label for CSA application see page 258
[3] Combination 10 and 16 ways, i.e. material PC and PA [4] IP-degree of protection on termination side IP10

Description	Part Number	Drawing	Figure
Contact insert 3 + ⏚ + 2 (delayed mating contacts)			
Male insert with wire protection for screw termination	C146 10A003 102 3		
Female insert with wire protection for screw termination	C146 10B003 102 3		

Pin layout

Male insert

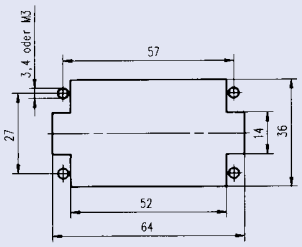


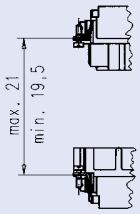
Female insert

- ● Working contact
- ⊙ Mating contact
- ○ Without contact

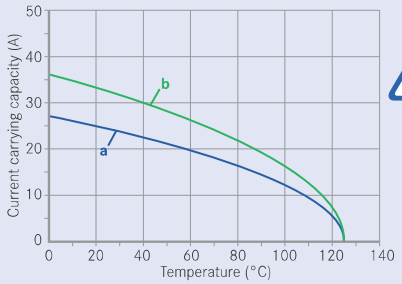
Assembly instruction

Panel cut out (insert)





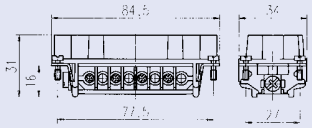
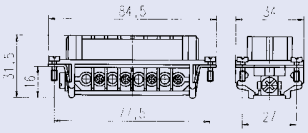
Derating curves



Notice restriction of wire

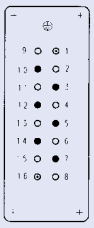
Curve a: 1.5 mm² screw contacts

Curve b: 2.5 mm² screw contacts

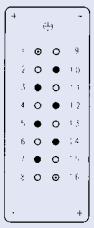
Description	Part Number	Drawing	Figure
Contact insert 6 + ⏚ + 2 (delayed mating contacts)			
Male insert with wire protection for screw termination	C146 10A006 102 3		
Female insert with wire protection for screw termination	C146 10B006 102 3		

Pin layout

Male insert



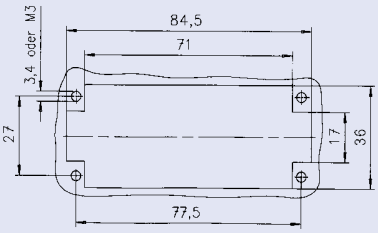
Female insert

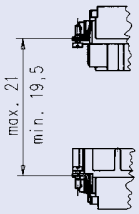


- ● Working contact
- ⊙ Mating contact
- ○ Without contact

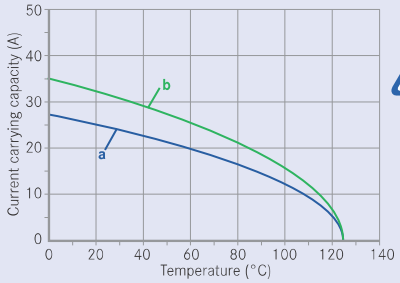
Assembly instruction

Panel cut out (insert)





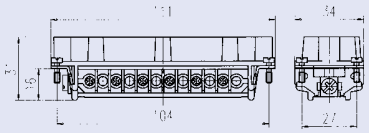
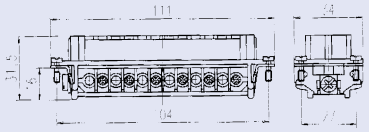
Derating-Kurven



Notice restriction of wire

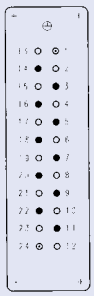
Curve a: 1.5 mm² screw contacts

Curve b: 2.5 mm² screw contacts

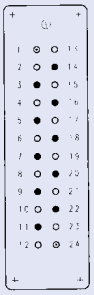
Description	Part Number	Drawing	Figure
Contact insert 10 + ⏚ + 2 (delayed mating contacts)			
Male insert with wire protection for screw termination	C146 10A010 102 3		
Female insert with wire protection for screw termination	C146 10B010 102 3		

Pin layout

Male insert



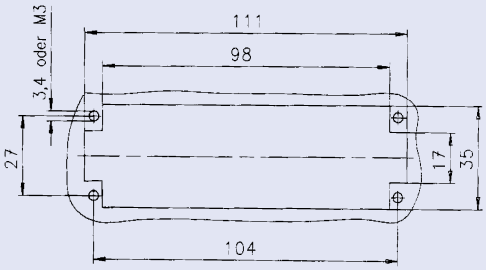
Female insert

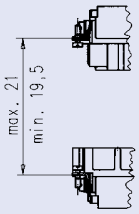


- Working contact
- Mating contact
- Without contact

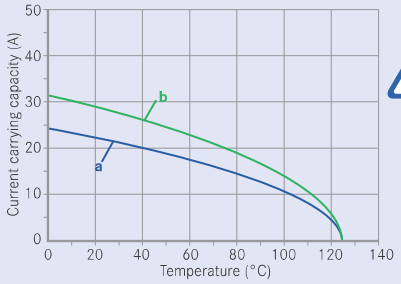
Assembly instruction

Panel cut out (insert)





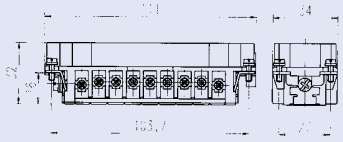
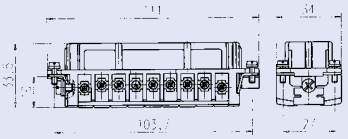
Derating curves



Notice restriction of wire

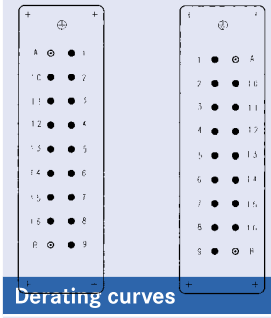
Curve a: 1.5 mm² screw contacts

Curve b: 2.5 mm² screw contacts

Description	Part Number	Drawing	Figure
Contact insert 16 + ⏚+ 2 (delayed mating contacts)			
Male insert with wire protection for screw termination	C146 10A016 102 3		
Male insert without wire protection for screw termination	C146 10A016 002 3		
Female insert with wire protection for screw termination	C146 10B016 102 3		
Female insert without wire protection for screw termination	C146 10B016 002 3		

Pin layout

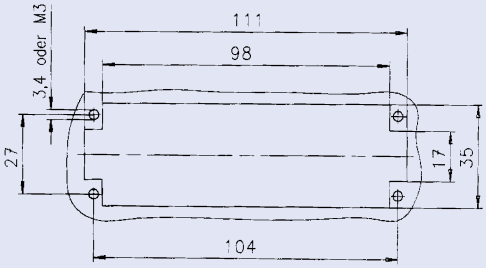
Male insert Female insert

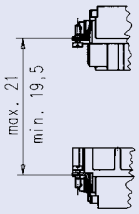


● Working contact
⊙ Mating contact

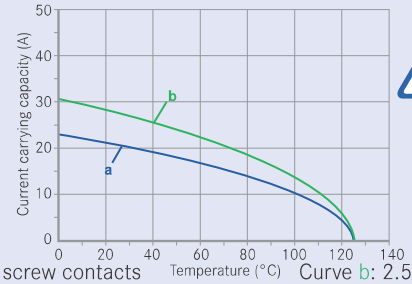
Assembly instruction

Panel cut out (insert)



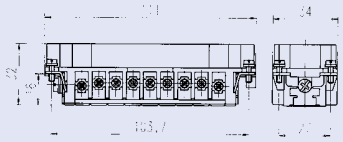
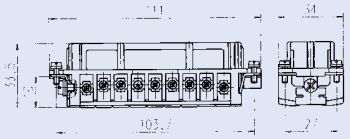


Derating curves



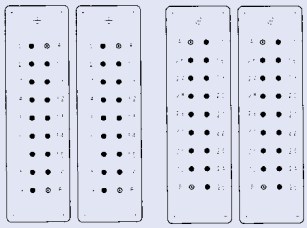
Notice restriction of wire

Curve a: 1.5 mm² screw contacts Curve b: 2.5 mm² screw contacts

Description	Part Number	Drawing	Figure
Contact insert 32 + ⏚ + 4 (delayed mating contacts)			
Male insert with wire protection for screw termination	C146 10A016 102 3		
Female insert with wire protection for screw termination	C146 10B016 102 3		

Pin layout

Male insert Female insert



● Working contact
⊙ Mating contact