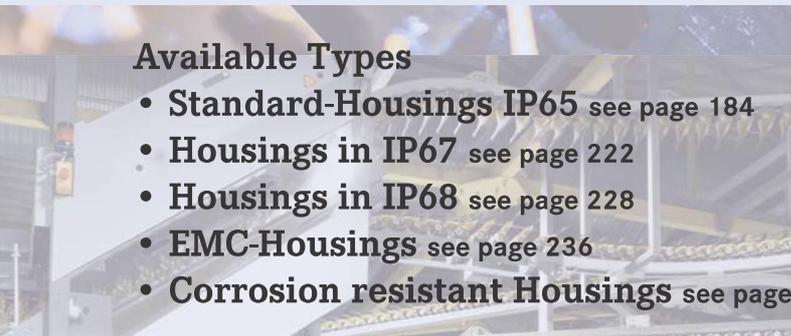




heavy | mate[®] Housings

Available Types

- **Standard-Housings IP65** see page 184
- **Housings in IP67** see page 222
- **Housings in IP68** see page 228
- **EMC-Housings** see page 236
- **Corrosion resistant Housings** see page 244





General information

- The connectors of our heavy|mate® series are designed for use in machine tools, general electric installations and applications as well as for industrial control and other electrical equipment. Other applications than the above mentioned are in the responsibility of the user.
- For cable to cable connections a suitable cable clamp has to be used.
- The indicated dimensions with the panel cut-outs represent reference values and are in the concrete application with products to be co-ordinated.
- The sealing area of the housing has to be level and free of burrs.
- Housings in accordance with DIN EN 175 301 - 801 (DIN 43 652) .

Range of housings

Size A3/4



Size A10



Size A16



Size A32



Size E6



Size E10



Size E16



Size E24

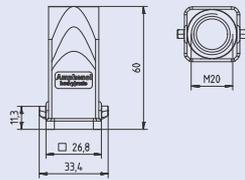
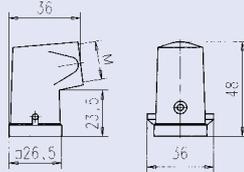
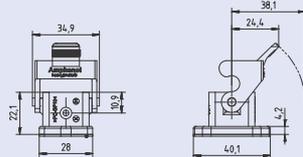
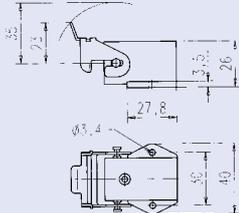
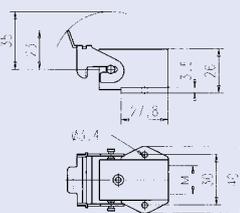
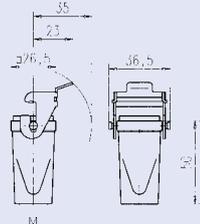
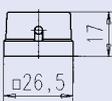


Size E48



heavy|mate® Housings standard Characteristics

General Characteristics	Standard	Value
Protection class housing		IP65
Protection class spring cover locked		IP65
unlocked spring loaded		IP54
Locking system	DIN EN 175 301-801 (DIN 43 652)	1 locking lever 2 locking levers
Climatical Characteristics		
Climatic category	IEC 60068-1	40 / 125 / 21
Temperature range	IEC 60068-1	- 40 °C / + 125 °C
Upper temperature	IEC 60512-11-9	+ 125 °C
Lower temperature	IEC 60512-11-10	- 40 °C
Mechanical Characteristics		
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles
Materials		
Housings	DIN EN 175 301-801 (DIN 43 652)	Aluminium die cast alloy
Thermoplastic housing		PA
Metal housing D 7		Zinc die cast alloy
Protective cover		PA
Rubber gasket		NBR
Locking lever		steel / zinc coated
Surface EMV housings		special surface

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	20 20	C146 10R003 600 4 C146 10R003 601 4 (black design)		
Hood side entry	20	C146 10R003 500 4		
Housings				
Housing bulkhead mounting with gasket	- -	C146 10F003 000 4		
Housing bulkhead end mounting with gasket	-	C146 10F003 004 4		
Housing single side entry with gland bushing	20	C146 10N003 500 4		
Hood cable to cable coupling	20	C146 10R003 804 4		
Protective cover (only in connection with male insert)				
Cover for housings	-	C146 10Z003 100 4		

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	20	C146 30R003 600 4		
Hood side entry	20	C146 30R003 500 4		
Housings				
Housing bulkhead mounting with gasket	-	C146 30F003 000 4		
Housing bulkhead end mounting with gasket	-	C146 30F003 004 4		
Housing single side entry with gland bushing	20	C146 30N003 500 4		
Hood cable to cable coupling	20	C146 30R003 804 4		
Protective cover (only in connection with male insert)				
Cover for housings	-	C146 30Z003 100 4		

heavy|mate® Housings standard Size A10

Description	M	Part Number	Drawing	Figure	
Hoods					
Hood top entry low profile	20	C146 21R010 650 4			
	25	C146 21R010 600 4			
Hood top entry high profile	20	C146 21R015 650 2			
	25	C146 21R015 600 2			
Hood side entry low profile	20	C146 21R010 550 4			
	25	C146 21R010 500 4			
Hood side entry high profile	20	C146 21R015 550 2			
	25	C146 21R015 500 2			
Housings			h		
Hood coupling application low profile	20	C146 21R010 854 4	47.5		
	25	C146 21R010 804 4	47.5		
Hood coupling application high profile	20	C146 21R015 854 2	59		
	25	C146 21R015 804 2	59		
Housing bulkhead mounting with gasket	-	C146 10F015 000 2			
Housing bulkhead mounting with spring cover with gasket	-	C146 10F015 003 2			

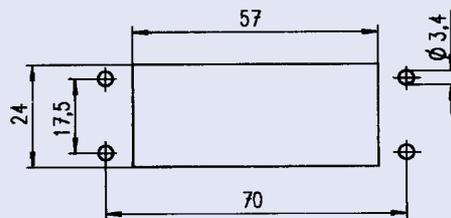
heavy|mate® Housings standard Size A10

Description	M	Part Number	Drawing	Figure
Housings				
Housing single side entry	25	C146 10N015 500 2	<p>1 closed if single entry</p>	
Housing double side entry	25	C146 10N015 600 2		
Housing with spring cover single side entry	25	C146 10N015 806 2	<p>1 closed if single entry</p>	
Housing with spring cover double side entry	20 25	C146 10N015 607 2 C146 10N015 606 2		

Protective cover

Cover for housings	-	C146 10Z015 100 2		
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Panel cut out for bulkhead mounting

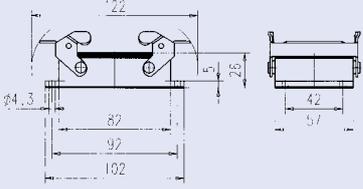
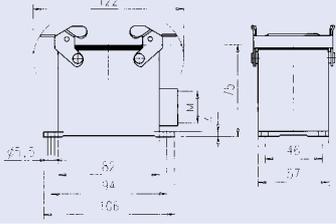
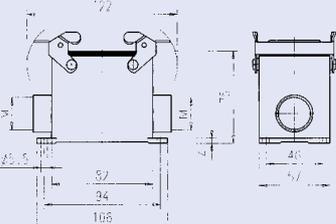


heavy|mate® Housings standard Size A16

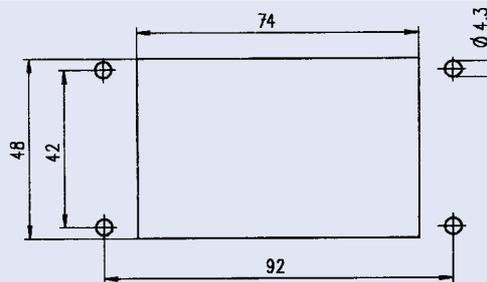
Description	M	Part Number	Drawing	Figure	
Hoods					
Hood top entry low profile	20	C146 21R016 650 4			
	25	C146 21R016 600 4			
Hood top entry high profile	20	C146 21R025 650 2			
	25	C146 21R025 600 2			
Hood side entry low profile	20	C146 21R016 550 4			
	25	C146 21R016 500 4			
Hood side entry high profile	20	C146 21R025 550 2			
	25	C146 21R025 500 2			
Housings			h		
Hood coupling application low profile	20	C146 21R016 854 4	52.5		
	25	C146 21R016 804 4	52.5		
Hood coupling application high profile	20	C146 21R025 854 2	65		
	25	C146 21R025 804 2	65		
Housing bulkhead mounting with gasket	-	C146 10F025 000 2			
Housing bulkhead mounting with spring cover with gasket	-	C146 10F025 003 2			

heavy|mate® Housings standard Size A32

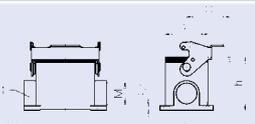
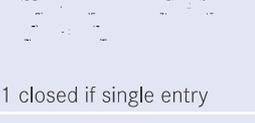
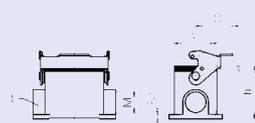
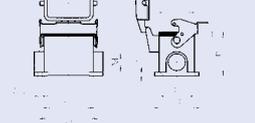
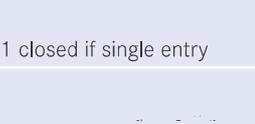
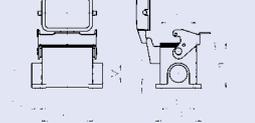
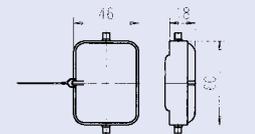
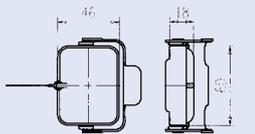
Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	25	C146 21R032 650 4		
	32	C146 21R032 600 4		
	40	C146 21R032 601 4		
Hood side entry	25	C146 21R032 550 4		
	32	C146 21R032 500 4		
	40	C146 21R032 501 4		
Hood coupling application	25	C146 21R032 852 4		
	32	C146 21R032 802 4		
	40	C146 21R032 803 4		
Hood side entry	25	C146 21R032 552 4		
	32	C146 21R032 502 4		

Description	M	Part Number	Drawing	Figure
Housings				
Housing bulkhead mounting with gasket	-	C146 10F032 000 4		
Housing single side entry	25 32	C146 10N032 550 4 C146 10N032 500 4		
Housing double side entry	25 32	C146 10N032 650 4 C146 10N032 600 4		

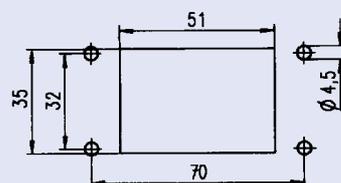
Panel cut out for bulkhead mounting

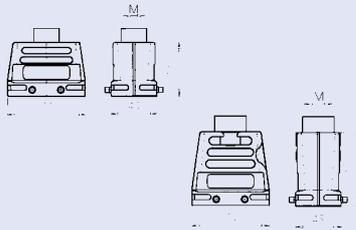
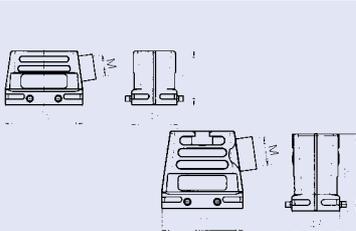
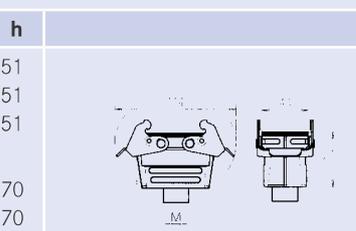
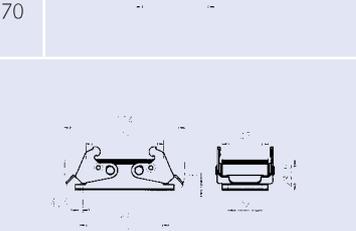
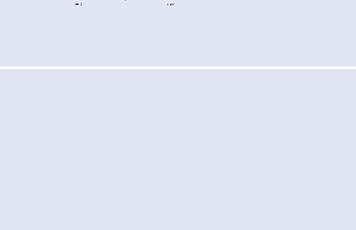
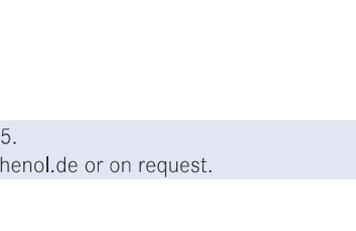


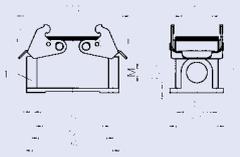
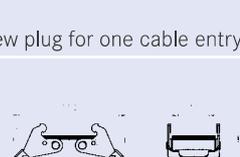
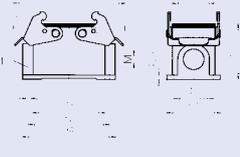
Description	M	Part Number	Drawing	Figure	
Hoods					
Hood top entry low profile	16	C146 21R006 656 1			
	20	C146 21R006 606 1			
Hood top entry high profile	25	C146 21R006 656 8			
	32	C146 21R006 606 8			
Hood side entry low profile	20	C146 21R006 506 1			
	25	C146 21R006 507 1			
Hood side entry high profile	25	C146 21R006 556 8			
	32	C146 21R006 506 8			
Housings			h		
Hood coupling application low profile	20	C146 21R006 804 1	52		
	25	C146 21R006 854 8	70		
Housing bulkhead mounting with gasket	-	C146 10F006 000 1			
Housing bulkhead mounting with thermoplastic spring cover with gasket	-	C146 10F006 003 1			
Housing bulkhead mounting with metal spring cover with gasket	-	C146 30F006 003 1			

Description	M	Part Number	Drawing	Figure	
Housings					
Housing single side entry low profile	20	C146 10N006 803 1	57		
Housing single side entry high profile	32	C146 10N006 802 2	74	 1 closed if single entry	
Housing double side entry low profile	20	C146 10N006 603 1	57		
Housing double side entry high profile	25 32	C146 10N006 603 2 C146 10N006 602 2	74 74		
Housing with spring cover single side entry low profile	20 25	C146 10N006 807 1 C146 10N006 806 1	57 57		
Housing with spring cover single side entry high profile	25 32	C146 10N006 807 2 C146 10N006 806 2	74 74	 1 closed if single entry	
Housing with spring cover double side entry low profile	20	C146 10N006 607 1	57		
Housing with spring cover double side entry high profile	25 32	C146 10N006 607 2 C146 10N006 606 2	74 74		
Protective cover					
Cover for housings	-	C146 10Z006 100 1			
Cover for hoods	-	C146 10Z006 200 1			

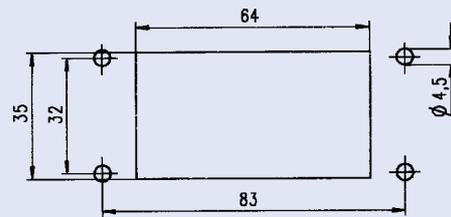
Panel cut out for bulkhead mounting



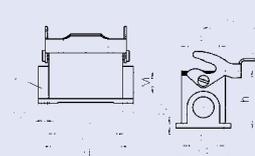
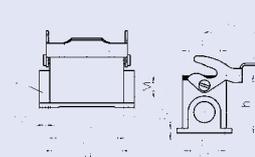
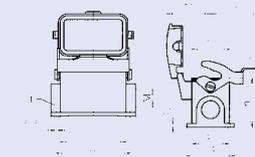
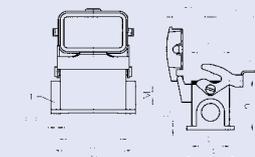
Description	M	Part Number	Drawing	Figure	
Hoods					
Hood top entry low profile	20	C146 21R010 650 1			
	25	C146 21R010 600 1			
Hood top entry high profile	25	C146 21R010 650 8			
	32	C146 21R010 600 8			
Hood side entry low profile	20	C146 21R010 550 1			
	25	C146 21R010 500 1			
Hood side entry high profile	25	C146 21R010 550 8			
	32	C146 21R010 500 8			
Housings			h		
Hood coupling application low profile	20	C146 21R010 852 1	51		
	25	C146 21R010 802 1	51		
			51		
Hood coupling application high profile	25	C146 21R010 852 8	70		
	32	C146 21R010 802 8	70		
Housing bulkhead mounting with gasket	-	C146 10F010 000 1			
Right-angled housing with gasket	-	C146 10F010 090 1			

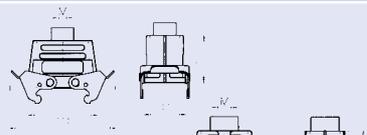
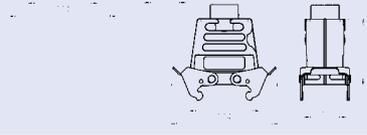
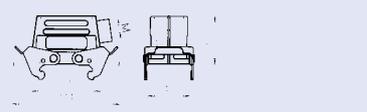
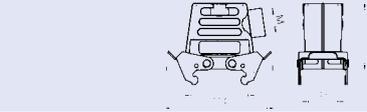
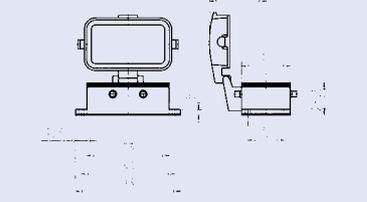
Description	M	Part Number	Drawing	Drawing	
Housings			h		
Housing single side entry low profile	20	C146 10N010 501 1	57		
	25	C146 10N010 500 1	57		
Housing single side entry high profile	25	C146 10N010 501 2	74		
	32	C146 10N010 500 2	74		
			Screw plug for one cable entry		
Housing double side entry low profile	20	C146 10N010 601 1	57		
	25	C146 10N010 601 2	74		
Housing double side entry high profile	32	C146 10N010 600 2	74		

Panel cut out for bulkhead mounting



Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	20	C146 21R010 656 1		
	25	C146 21R010 606 1		
	32	C146 21R010 607 1		
Hood top entry high profile	25	C146 21R010 656 8		
	32	C146 21R010 606 8		
	40	C146 21R010 607 8		
Hood side entry low profile	20	C146 21R010 556 1		
	25	C146 21R010 506 1		
Hood side entry high profile	25	C146 21R010 556 8		
	32	C146 21R010 506 8		
Housings			h	
Hood coupling application low profile	20	C146 21R010 854 1		
	25	C146 21R010 804 1		
	32	C146 21R010 805 1		
Hood coupling application high profile	25	C146 21R010 854 8		
	32	C146 21R010 804 8		
	40	C146 21R010 805 8		
Housing bulkhead mounting with gasket	-	C146 10F010 001 1		
Housing bulkhead mounting with thermoplastic spring cover with gasket	-	C146 10F010 003 1		
Housing bulkhead mounting with metal spring cover with gasket	-	C146 30F010 003 1		

Description	M	Part Number	Drawing	Figure	
Housings			h		
Housing single side entry low profile	20	C146 10N010 803 1	57		
Housing single side entry high profile	25 32	C146 10N010 803 2 C146 10N010 802 2	74 74		
				1 closed if single entry	
Housing double side entry low profile	20	C146 10N010 603 1	57		
Housing double side entry high profile	25	C146 10N010 603 2	74		
Housing with spring cover single side entry low profile	20	C146 10N010 807 1	57		
Housing with spring cover single side entry high profile	25 32	C146 10N010 807 2 C146 10N010 806 2	74 74		
				1 closed if single entry	
Housing with spring cover double side entry low profile	20	C146 10N010 607 1	57		
Housing with spring cover double side entry high profile	25 32	C146 10N010 607 2 C146 10N010 606 2	74 74		

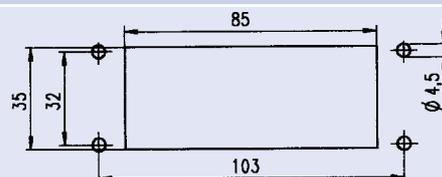
Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	20	C146 21R010 652 1		
Hood top entry high profile	25 32	C146 21R010 652 8 C146 21R010 602 8		
Hood side entry low profile	20	C146 21R010 552 1		
Hood side entry high profile	25 32	C146 21R010 552 8 C146 21R010 502 8		
Housings				
Housing with spring cover with gasket	-	C146 10F010 002 1		

Description	M	Part Number	Drawing	Figure
Housings			h	
Housing single side entry low profile	20	C146 10N010 509 1	57	
Housing single side entry high profile	32	C146 10N010 508 2	74	
			1 closed if single entry	
Housing double side entry low profile	20	C146 10N010 609 1	57	
Housing double side entry high profile	25	C146 10N010 609 2	74	
Housing with spring cover single side entry low profile	20	C146 10N010 805 1	57	
Housing with spring cover single side entry high profile	32	C146 10N010 804 2	74	
			1 closed if single entry	
Housing with spring cover double side entry low profile	20	C146 10N010 605 1	57	
Housing with spring cover double side entry high profile	32	C146 10N010 604 2	74	

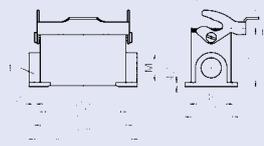
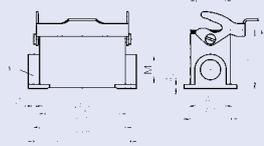
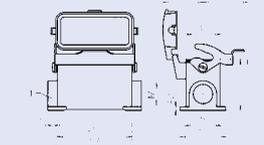
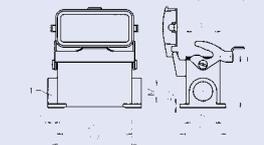
Description	M	Part Number	Drawing	Figure
Hoods				
Hood 2 top entry high profile	25	C146 10R010 902 8		
Protective cover (only in connection with male insert)				
Cover for housings	-	C146 10Z010 100 1		
Cover for hoods	-	C146 10Z010 200 1		
Further special housings on request.				

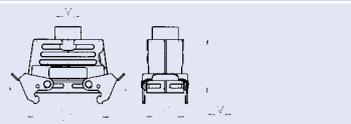
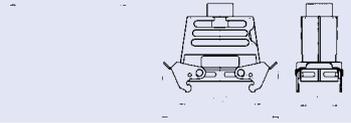
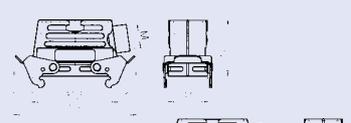
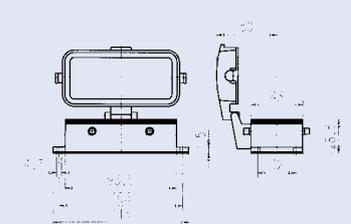
Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	25	C146 21R016 650 1		
	32	C146 21R016 600 1		
Hood top entry high profile	32	C146 21R016 600 8		
	40	C146 21R016 601 8		
Hood side entry low profile	25	C146 21R016 550 1		
	32	C146 21R016 500 1		
Hood side entry high profile	32	C146 21R016 500 8		
	40	C146 21R016 501 8		
Housings			h	
Hood coupling application low profile	25	C146 21R016 852 1	62	
	32	C146 21R016 802 1	62	
Hood coupling application high profile	32	C146 21R016 802 8	76	
	40	C146 21R016 803 8	76	
Housing bulkhead mounting with gasket	-	C146 10F016 000 1		
Housing single side entry low profile	25	C146 10N016 500 1	64	
Housing single side entry high profile	32	C146 10N016 500 2	77	
			1 closed if single entry	
Housing double side entry low profile	25	C146 10N016 600 1	64	
Housing double side entry high profile	25	C146 10N016 601 2	77	
	32	C146 10N016 600 2	77	

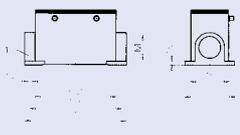
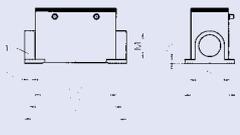
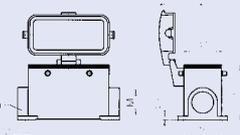
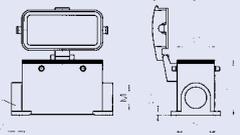
Panel cut out for bulkhead mounting



Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	25	C146 21R016 656 1		
	32	C146 21R016 606 1		
Hood top entry high profile	32	C146 21R016 606 8		
	40	C146 21R016 607 8		
Hood side entry low profile	25	C146 21R016 556 1		
	32	C146 21R016 506 1		
Hood side entry high profile	32	C146 21R016 506 8		
	40	C146 21R016 507 8		
Housings			h	
Hood coupling application low profile	25	C146 21R016 854 1		
	32	C146 21R016 804 1		
Hood coupling application high profile	32	C146 21R016 804 8		
	40	C146 21R016 805 8		
Housing bulkhead mounting with gasket	-	C146 10F016 001 1		
Housing bulkhead mounting with thermoplastic spring cover with gasket	-	C146 10F016 003 1		
Housing bulkhead mounting with metal spring cover with gasket	-	C146 30F016 003 1		

Description	M	Part Number	Drawing	Figure	
Housings			h		
Housing single side entry low profile	25	C146 10N016 802 1	64		
Housing single side entry high profile	32	C146 10N016 802 2	77		
Housing double side entry low profile	25	C146 10N016 602 1	64		
Housing double side entry high profile	25 32	C146 10N016 603 2 C146 10N016 602 2	77 77		
Housing with spring cover single side entry low profile	25	C146 10N016 806 1	64		
Housing with spring cover single side entry high profile	32	C146 10N016 806 2	77		
Housing with spring cover double side entry low profile	25	C146 10N016 606 1	64		
Housing with spring cover double side entry high profile	25 32	C146 10N016 607 2 C146 10N016 606 2	77 77		

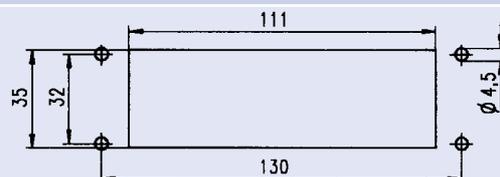
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Hoods				
Hood top entry low profile	25	C146 21R016 652 1		
	32	C146 21R016 602 1		
Hood top entry high profile	32	C146 21R016 602 8		
	40	C146 21R016 603 8		
Hood side entry low profile	25	C146 21R016 552 1		
	32	C146 21R016 502 1		
Hood side entry high profile	32	C146 21R016 502 8		
	40	C146 21R016 503 8		
Housings				
Housing bulkhead mounting with spring cover with gasket	-	C146 10F016 002 1		

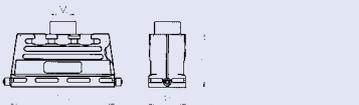
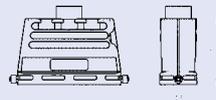
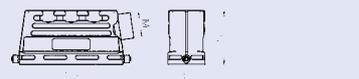
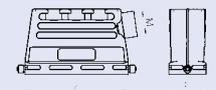
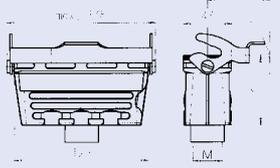
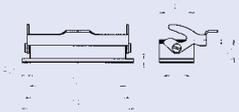
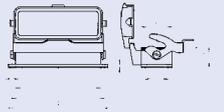
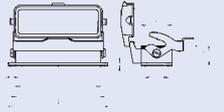
Description	M	Part Number	Drawing	Figure
Housings			h	
Housing single side entry low profile	25	C146 10N016 508 1	64	 
Housing single side entry high profile	32	C146 10N016 508 2	77	
			1 closed if single entry	
Housing double side entry low profile	25	C146 10N016 608 1	64	 
Housing double side entry high profile	32	C146 10N016 608 2	77	
Housing with spring cover single side entry low profile	25	C146 10N016 804 1	64	 
Housing with spring cover single side entry high profile	32	C146 10N016 804 2	77	
			1 closed if single entry	
Housing with spring cover double side entry low profile	25	C146 10N016 604 1	64	 
Housing with spring cover double side entry high profile	32	C146 10N016 604 2	77	

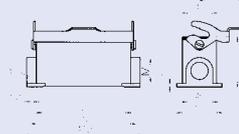
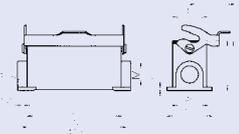
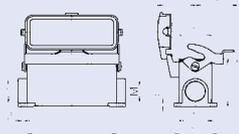
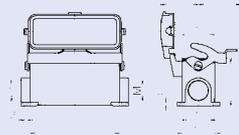
Description	M	Part Number	Drawing	Figure
Hoods				
Hood	25	C146 10R016 910 8		

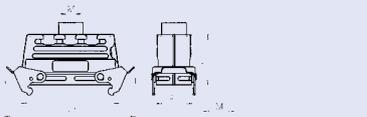
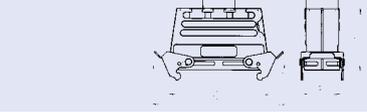
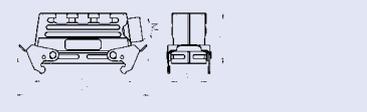
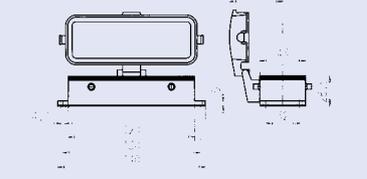
Description	M	Part Number	Drawing	Figure	
Hoods					
Hood top entry low profile	25	C146 21R024 650 1			
	32	C146 21R024 600 1			
Hood top entry high profile	32	C146 21R024 600 8			
	40	C146 21R024 601 8			
Hood side entry low profile	25	C146 21R024 550 1			
	32	C146 21R024 500 1			
Hood side entry high profile	32	C146 21R024 500 8			
	40	C146 21R024 501 8			
Housings			h		
Hood coupling application low profile	25	C146 21R024 852 1	62		
	32	C146 21R024 802 1	62		
Hood coupling application high profile	32	C146 21R024 802 8	76		
	40	C146 21R024 803 8	76		
Housing bulkhead mounting with gasket	-	C146 10F024 000 1			
Housing single side entry low profile	25	C146 10N024 500 1	64		
Housing single side entry high profile	32	C146 10N024 500 2	80		
			1 closed if single entry		
Housing double side entry low profile	25	C146 10N024 600 1	64		
Housing double side entry high profile	25	C146 10N024 601 2	80		
	32	C146 10N024 600 2	80		

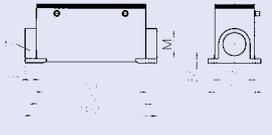
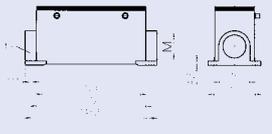
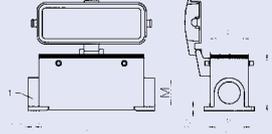
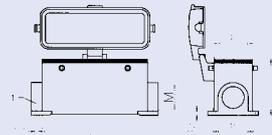
Panel cut out for bulkhead mounting



Description	M	Part Number	Drawing	Figure	
Hoods					
Hood top entry low profile	25	C146 21R024 656 1			
	32	C146 21R024 606 1			
Hood top entry high profile	32	C146 21R024 606 8			
	40	C146 21R024 607 8			
Hood side entry low profile	25	C146 21R024 556 1			
	32	C146 21R024 506 1			
Hood side entry high profile	32	C146 21R024 506 8			
	40	C146 21R024 507 8			
Housings			h		
Hood coupling application low profile	25	C146 21R024 854 1	62		
	32	C146 21R024 804 1	62		
Hood coupling application high profile	32	C146 21R024 804 8	76		
	40	C146 21R024 805 8	76		
Housing bulkhead mounting with gasket	-	C146 10F024 001 1			
Housing bulkhead mounting with thermoplastic spring cover with gasket	-	C146 10F024 003 1			
Housing bulkhead mounting with metal spring cover with gasket	-	C146 30F024 003 1			

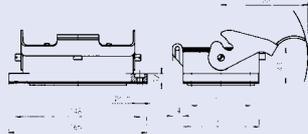
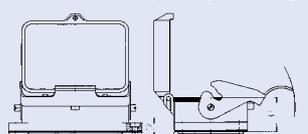
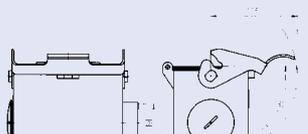
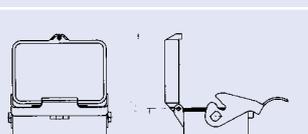
Description	M	Part Number	Drawing	Figure
Hoods			h	
Housing single side entry low profile	25	C146 10N024 802 1	64	 
Housing single side entry high profile	32	C146 10N024 802 2	80	
			1 closed if single entry	
Housing double side entry low profile	25	C146 10N024 602 1	64	 
Housing double side entry high profile	32	C146 10N024 602 2	80	
Housing with spring cover single side entry low profile	25	C146 10N024 806 1	64	 
Housing with spring cover single side entry high profile	32	C146 10N024 806 2	80	
			1 closed if single entry	
Housing with spring cover double side entry low profile	25	C146 10N024 606 1	64	 
Housing with spring cover double side entry high profile	25 32	C146 10N024 607 2 C146 10N024 606 2	80 80	

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	25	C146 21R024 652 1		
	32	C146 21R024 602 1		
Hood top entry high profile	32	C146 21R024 602 8		
	40	C146 21R024 603 8		
Hood side entry low profile	25	C146 21R024 552 1		
	32	C146 21R024 502 1		
Hood side entry high profile	32	C146 21R024 502 8		
	40	C146 21R024 503 8		
Housings				
Housing bulkhead mounting with spring cover with gasket	-	C146 10F024 002 1		

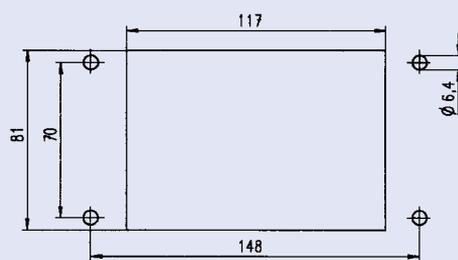
Description	M	Part Number	Drawing	Figure	
Housings			h		
Housing single side entry low profile	25	C146 10N024 508 1	64		
Housing single side entry high profile	32	C146 10N024 508 2	80		
			1 closed if single entry		
Housing double side entry low profile	25	C146 10N024 608 1	64		
Housing double side entry high profile	32	C146 10N024 608 2	80		
Housing with spring cover single side entry low profile	25	C146 10N024 804 1	64		
Housing with spring cover single side entry high profile	32	C146 10N024 804 2	80		
			1 closed if single entry		
Housing with spring cover double side entry low profile	25	C146 10N024 604 1	64		
Housing with spring cover double side entry high profile	32	C146 10N024 604 2	80		
	25	C146 10N024 808 1 ¹²	64		

Description	M	Part Number	Drawing	Figure
Hoods				
Hood	32	C146 10R024 903 8		
2 top entry high profile	40	C146 10R024 908 8		
Protective cover (only in connection with male insert)				
Cover for housings	-	C146 10Z024 100 1		
Cover for hoods	-	C146 10Z024 200 1		
Further special housings on request.				

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	40 50	C146 21R048 607 1 C146 21R048 608 1		
Hood top entry high profile				
Hood side entry low profile	40 50	C146 21R048 507 1 C146 21R048 508 1		
Hood side entry high profile				

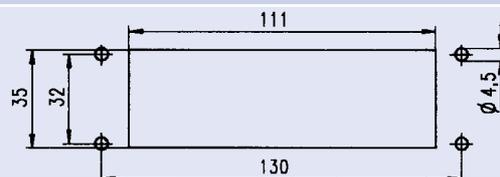
Description	M	Part Number	Drawing	Figure
Hoods				
Housing bulkhead mounting with gasket	-	C146 10F048 001 1		
Housing bulkhead mounting with spring cover with gasket	-	C146 10F048 003 1		
Housing single side entry	40	C146 10N048 803 1		
Housing with spring cover	40	C146 10N048 807 1		

Panel cut out for bulkhead mounting



Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	25	C146 10R024 650 3		
	32	C146 10R024 600 3		
Hood side entry low profile	25	C146 10R024 550 3		
	32	C146 10R024 500 3		
Housings				
Hood coupling application low profile	25	C146 10R024 852 3		
	32	C146 10R024 802 3		
Housing bulkhead mounting with gasket	-	C146 10F024 000 3		
Housing single side entry low profile	25	C146 10N024 500 3	<p>1 closed if single entry</p>	
Housing double side entry low profile	25	C146 10N024 600 3		

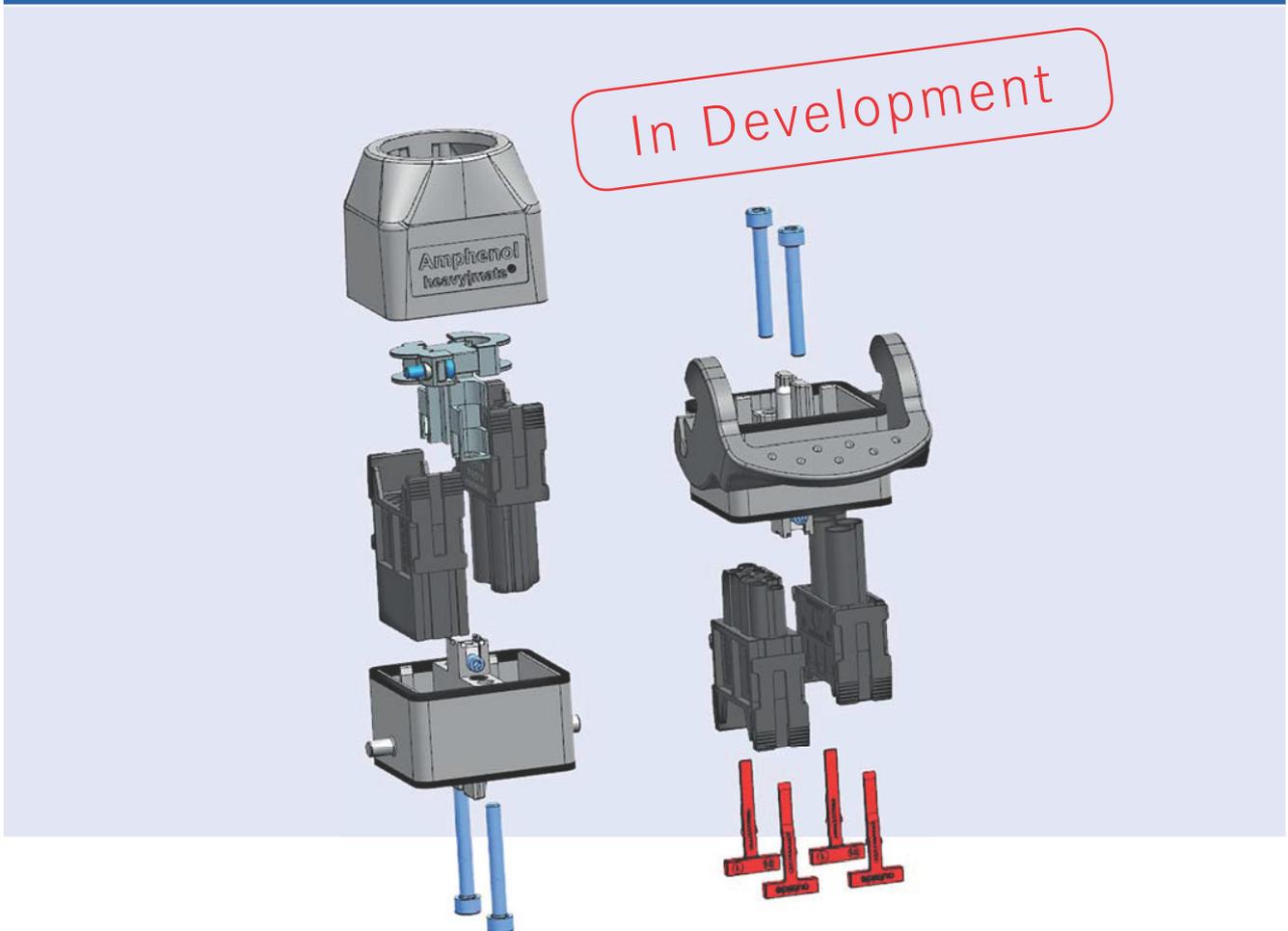
Panel cut out for bulkhead mounting



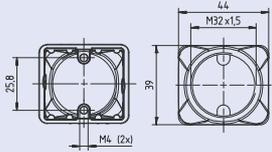
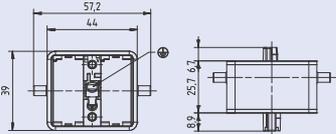
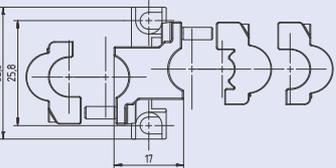
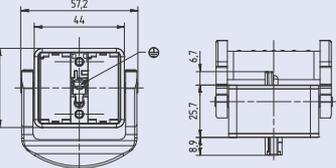
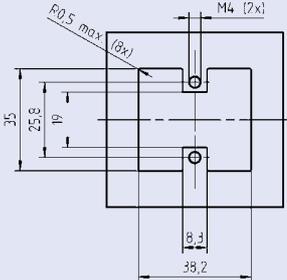
heavy|mate® Twin Housings Series F | Characteristics

General Characteristics	Standard	Value
Entry		M32 x 1.5 top entry
Protection class housing		IP65
Number of modules		2
Number of contacts		1 x PE
Wire Gauge		0.5 – 6 mm ² (AWG 20-10)
Locking system		locking levers
Climatical Characteristics		
Temperature range		- 40 °C / + 125 °C
Mechanical Characteristics		
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles
Materials		
Housings		Zinc die cast alloy
Colour housings		grey
Rubber gasket		HNBR
Surface		nickel plated

Schematic construction



heavy|mate® Twin Housings Series F

Description	M	Part Number	Drawing	Figure
Hoods				
Hood	32	C146 21R002 600 15		
Carrier hood	-	C146 21R002 000 15		
Shielding frame	-	C146 G05 003 G15		
Housings				
Housing bulkhead mounting	-	C146 10F002 000 15		
Panel cut out for bulkhead mounting				
				

heavy | mate[®] Housings

- Housings in IP67

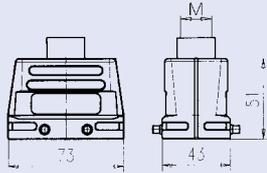
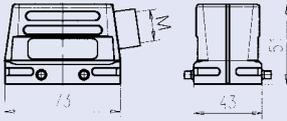
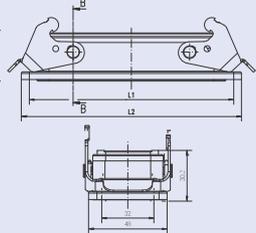
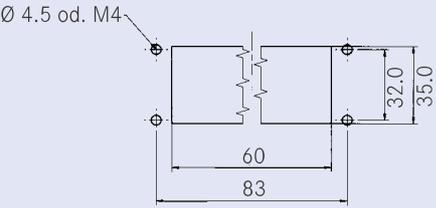
heavy|mate® Housings IP67 Characteristics

General Characteristics	Standard	Value
Protection class housing		IP67
Locking system		2 locking levers
Climatical Characteristics		
Climatic category	IEC 60068-1	40 / 125 / 21
Temperature range	IEC 60068-1	- 40 °C / + 125 °C
Upper temperature	IEC 60512-11-9	+ 125 °C
Lower temperature	IEC 60512-11-10	- 40 °C
Mechanical Characteristics		
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles
Materials		
Housings		Aluminium die cast alloy
Colour housings		grey
Rubber gasket		CR
Locking lever		steel / zinc coated
Surface		powder coating

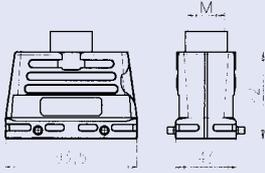
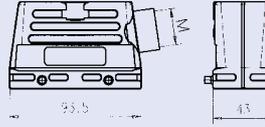
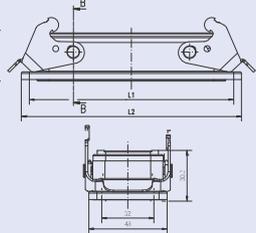
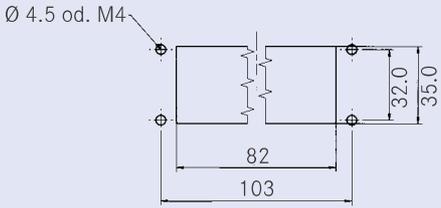
heavy|mate® Housings IP67 Size E6

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	25	C146 67R006 607 1		
Hood side entry	25	C146 67R006 507 1		
Housings			L1	L2
Housing bulkhead mounting		C146 67F006 000 8	70	80
Panel cut out for bulkhead mounting				
<p>Version A + B</p>				

heavy|mate® Housings IP67 Size E10

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	25	C146 67R010 600 1		
Hood side entry	25	C146 67R010 500 1		
Housings			L1	L2
Housing bulkhead mounting		C146 67F010 000 8	83	93
				
Panel cut out for bulkhead mounting				
 <p>Version A + B</p>				

heavy|mate® Housings IP67 Size E16

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	32	C146 67R016 600 8		
Hood side entry	32	C146 67R016 500 8		
Housings			L1	L2
Housing bulkhead mounting		C146 67F016 000 8	103	113
				
Panel cut out for bulkhead mounting				
 <p>Version A + B</p>				

A red high-speed train is shown from a low angle, moving along a track. The train has a sleek, aerodynamic front with a prominent red nose and a white stripe. The background features a blue lake, green hills, and a clear blue sky with power lines overhead. A semi-transparent white banner is overlaid on the middle of the image, containing the text 'heavy | mate® Housings' and a bullet point '• Housings in IP68'.

heavy | mate[®] Housings

- Housings in IP68

heavy|mate® Housings IP68 Characteristics

General Characteristics	Standard	Value
Protection class housing		IP68 / IP69K
Locking system		screw M6
Climatical Characteristics		
Climatic category	IEC 60068-1	40 / 125 / 21
Temperature range	IEC 60068-1	- 40 °C / + 125 °C
Upper temperature	IEC 60512-11-9	+ 125 °C
Lower temperature	IEC 60512-11-10	- 40 °C
Mechanical Characteristics		
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles
Materials		
Housings		Aluminium die cast alloy
Colour housings		black – similar to RAL 9005
Rubber gasket		NBR
Locking lever		stainless steel
Surface		powder coating

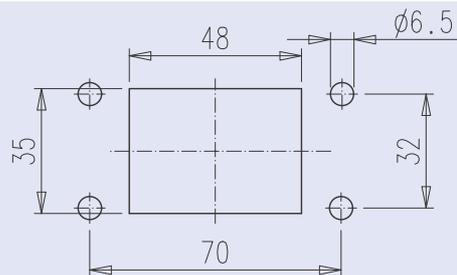
heavy|mate® Housings IP68 Size A3

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	20	C146 68R003 600 4		
Housings				
Housing bulkhead mounting		C146 68F003 000 4		
Panel cut out for bulkhead mounting				

heavy|mate® Housings IP68 Size E6

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	32	C146 68R006 600 8		
Hood side entry	32	C146 68R006 500 8		
Housings				
Housing bulkhead mounting		C146 68F006 001 1		
Housing	32	C146 68N006 500 2		

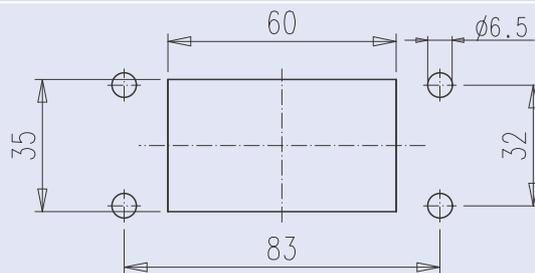
Panel cut out for bulkhead mounting



heavy|mate® Housings IP68 Size E10

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	32	C146 68R010 600 8		
Hood side entry	32	C146 68R010 500 8		
Housings				
Housing bulkhead mounting		C146 68F010 001 1		
Housing	32	C146 68N010 500 2		

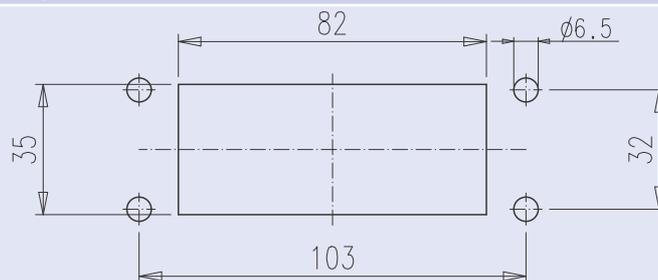
Panel cut out for bulkhead mounting



heavy|mate® Housings IP68 Size E16

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	40	C146 68R016 601 8		
Hood side entry	40	C146 68R016 501 8		
Housings				
Housing bulkhead mounting		C146 68F016 001 1		
Housing	32	C146 68N016 501 2		

Panel cut out for bulkhead mounting



heavy|mate® Housings IP68 Size E24

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	40	C146 68R024 601 8		
Hood side entry	40	C146 68R024 501 8		
Housings				
Housing bulkhead mounting		C146 68F024 001 1		
Housing	32	C146 68N024 501 2		
Panel cut out for bulkhead mounting				

heavy | mate[®] Housings

- EMC-Housings

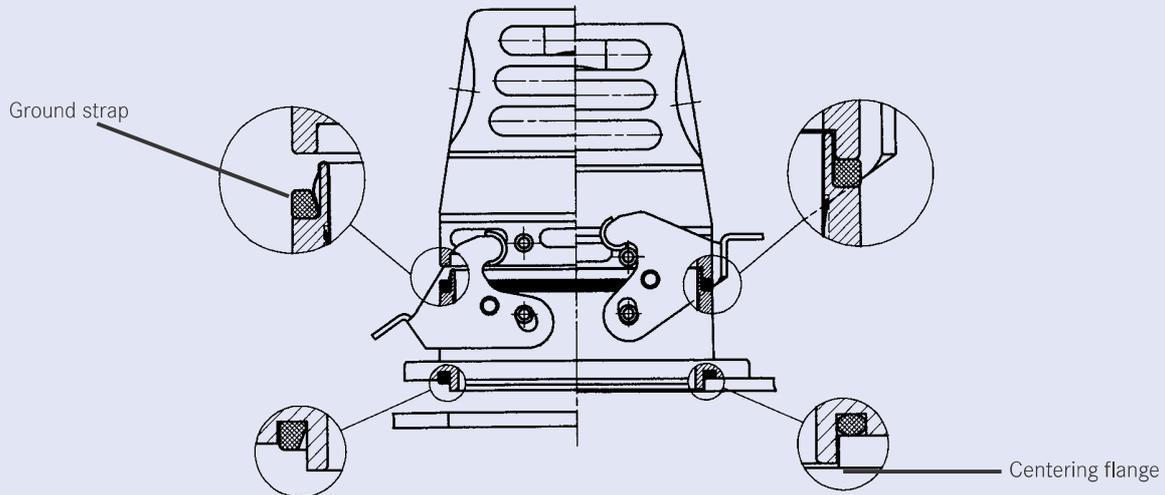


General information

- conductive surface
- standard locking levers
- same housing dimensions like standard housings
- two housing sizes
- with or without ground strap
- high attenuation
- protection class IP65
- mating cycles > 500



Concept



Range of housings in two housing sizes

Version A Standard flange without ground strap	Version B Standard flange with ground strap	Version C Centering flange with ground strap

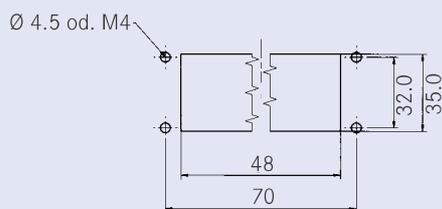
General Characteristics	Standard	Value
Protection class housing		IP65
Locking system		2 locking levers
Climatical Characteristics		
Climatic category	IEC 60068-1	40 / 125 / 21
Temperature range	IEC 60068-1	- 40 °C / + 125 °C
Upper temperature	IEC 60512-11-9	+ 125 °C
Lower temperature	IEC 60512-11-10	- 40 °C
Mechanical Characteristics		
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles
Materials		
Housings		Aluminium die cast alloy
Colour housings		grey – similar to RAL 9005
Rubber gasket		EPDM
Locking lever		steel / zinc coated
Surface		conducting special surface

heavy|mate® Housings EMC Size A3

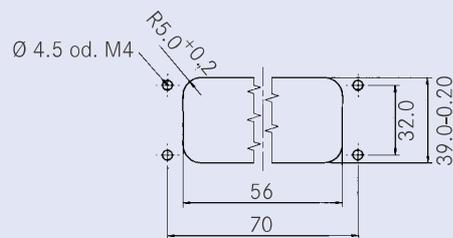
Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	PG 11	C146 11R003 600 4		
Hood side entry	20	C146 11R003 500 4		
Housings				
Hood cable to cable coupling	20	C146 11R003 804 4		
Housing bulkhead mounting		C146 11F003 000 4		
Housing bulkhead mounting with spring cover		C146 11F003 003 4		
Housing		C146 11N003 500 4		

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	20	C146 11R006 606 1		
	25	C146 11R006 607 1		
Hood top entry high profile	25	C146 11R006 656 8		
	32	C146 11R006 606 8		
Hood side entry low profile	16	C146 11R006 556 1		
	20	C146 11R006 506 1		
Hood side entry high profile	25	C146 11R006 556 8		
	32	C146 11R006 506 8		
Housings				
Housing bulkhead mounting Version A Standard flange without ground strap		C146 11F006 901 8		
Housing bulkhead mounting Version B Standard flange with ground strap		C146 11F006 902 8		
Housing bulkhead mounting Version C Centering flange with ground strap		C146 11F006 001 8		

Panel cut out for bulkhead mounting



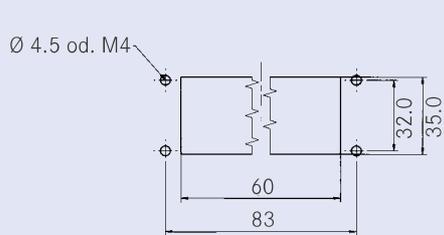
Version A + B



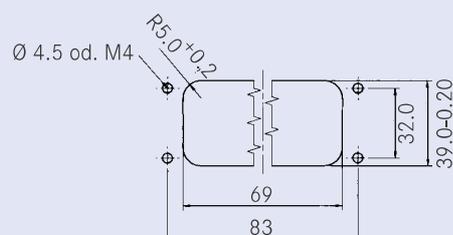
Version C

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	20 25 32	C146 11R010 650 1 C146 11R010 600 1 C146 11R010 601 1		
Hood top entry high profile	25 32 40	C146 11R010 650 8 C146 11R010 600 8 C146 11R010 601 8		
Hood side entry low profile	20 25	C146 11R010 550 1 C146 11R010 500 1		
Hood side entry high profile	25 32	C146 11R010 550 8 C146 11R010 500 8		
Housings				
Housing bulkhead mounting Version A Standard flange without ground strap		C146 11F010 901 8		
Housing bulkhead mounting Version B Standard flange with ground strap		C146 11F010 902 8		
Housing bulkhead mounting Version C Centering flange with ground strap		C146 11F010 000 8		

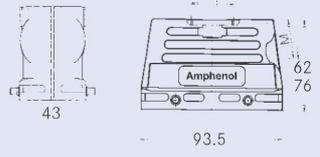
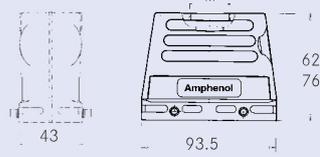
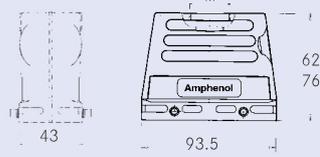
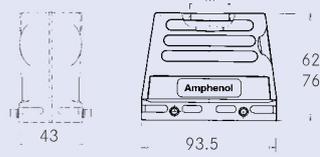
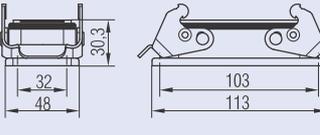
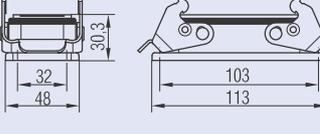
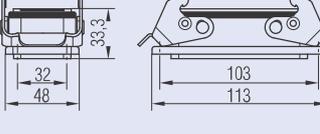
Panel cut out for bulkhead mounting



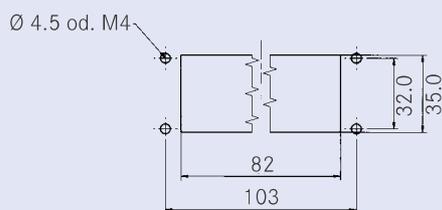
Version A + B



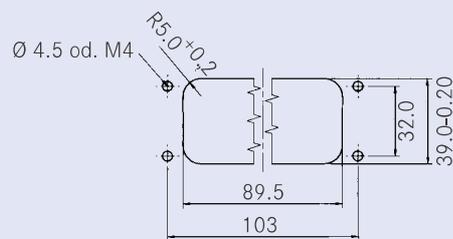
Version C

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	25	C146 11R016 650 1		
	32	C146 11R016 600 1		
Hood top entry high profile	25	C146 11R016 650 8		
	32	C146 11R016 600 8		
	40	C146 11R016 601 8		
Hood side entry low profile	25	C146 11R016 550 1		
	32	C146 11R016 500 1		
Hood side entry high profile	25	C146 11R016 550 8		
	32	C146 11R016 500 8		
	40	C146 11R016 501 8		
Housings				
Housing bulkhead mounting Version A Standard flange without ground strap	C146 11F016 901 8			
Housing bulkhead mounting Version B Standard flange with ground strap	C146 11F016 902 8			
Housing bulkhead mounting Version C Centering flange with ground strap	C146 11F016 000 8			

Panel cut out for bulkhead mounting



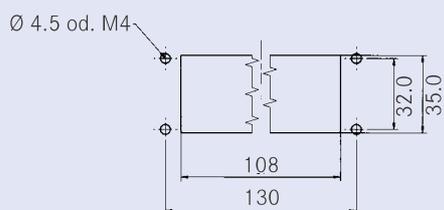
Version A + B



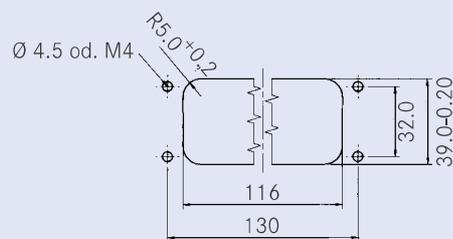
Version C

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry low profile	25	C146 11R024 650 1		
	32	C146 11R024 600 1		
Hood top entry high profile	25	C146 11R024 650 8		
	32	C146 11R024 600 8		
	40	C146 11R024 601 8		
Hood side entry low profile	25	C146 11R024 550 1		
	32	C146 11R024 500 1		
Hood side entry high profile	25	C146 11R024 550 8		
	32	C146 11R024 500 8		
	40	C146 11R024 501 8		
Housings				
Housing bulkhead mounting Version A Standard flange without ground strap	C146 11F024 901 8			
Housing bulkhead mounting Version B Standard flange with ground strap	C146 11F024 902 8			
Housing bulkhead mounting Version C Centering flange with ground strap	C146 11F024 000 8			

Panel cut out for bulkhead mounting



Version A + B



Version C

A photograph of an offshore wind farm in the ocean. The image shows several white wind turbines in the distance and a close-up of a turbine's nacelle and hub in the foreground. The sky is clear and blue, and the water is a deep blue.

heavy | mate[®] Housings

- Corrosion resistant Housings

heavy|mate® Housings corrosion resistant Characteristics + Notes

General Characteristics	Standard	Value
Protection class housing		IP65
Locking system		2 locking levers
Salt mist resistance	IEC 60512-11-6:2002	>500h
Climatical Characteristics		
Climatic category	IEC 60068-1	40 / 125 / 21
Temperature range	IEC 60068-1	- 40 °C / + 125 °C
Upper temperature	IEC 60512-11-9	+ 125 °C
Lower temperature	IEC 60512-11-10	- 40 °C
Mechanical Characteristics		
Mechanical operation	IEC 60512-9-1	≥ 500 mating cycles
Materials		
Housings		Aluminium die cast alloy
Colour housings		grey – similar to RAL 9005
Rubber gasket		NBR
Locking lever		steel / special coated
Surface		conducting special surface

General information

500h salt mist resistance can be achieved when using a plastic cable gland.

When a metal cable gland is required, we recommend to use additionally our special studs on the hoods to achieve this value.

Order codes are:

N16 025 0112 5X Metal stud M25 corrosion resistant

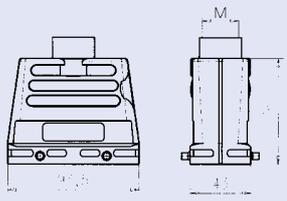
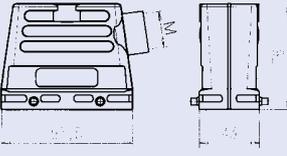
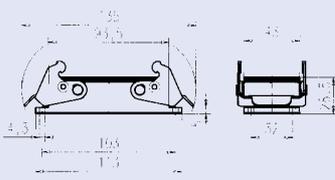
N16 032 0112 5X Metal stud M32 corrosion resistant

N16 040 0112 5X Metal stud M40 corrosion resistant

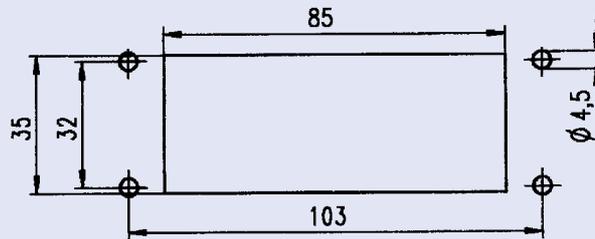
heavy|mate® Housings corrosion resistant Size E6

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	25	C146 50R006 607 1		
Hood side entry	25	C146 50R006 507 1		
Housings				
Housing bulkhead mounting		C146 50F006 000 1		
Panel cut out for bulkhead mounting				

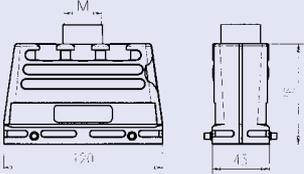
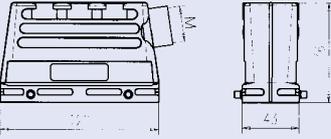
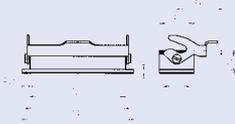
heavy|mate® Housings corrosion resistant Size E16

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	32	C146 50R016 600 8		
Hood side entry	32	C146 50R016 500 8		
Housings				
Housing bulkhead mounting		C146 50F016 000 1		

Panel cut out for bulkhead mounting



heavy|mate® Housings corrosion resistant Size E24

Description	M	Part Number	Drawing	Figure
Hoods				
Hood top entry	40	C146 50R024 601 8		
Hood side entry	40	C146 50R024 501 8		
Housings				
Housing bulkhead mounting		C146 50F024 000 1		

Panel cut out for bulkhead mounting

