

FISCHER MINIMAX TM SERIES

HIGH-DENSITY MINIATURIZATION | HIGH-SPEED DATA TRANSFER | RELIABILITY

KEY FEATURES

- Signal and Power
- Designed and tested to high-speed data transfer protocols
- IP68 sealed to-20m I 24h



J-2 / J-27

MINIMAX



PLUGS

|--|

CABLE MOUNTED

Body styles (MP11-L/S/Q)	J-7
Technical dimensions	J-8
Dimensions of overmolding	J_9

RECEPTACLES

■ Body styl

CABLE MOUNTED

Body styles (IVIR50-L/S/Q)	J-10
Technical dimensions	J-11
Dimensions of overmolding	J-9



PANEL REAR MOUNTED

Body styles (MR11-L/S/Q; MR12-L/S/Q)	J-12
Technical dimensions	J-13

FOR ALL MINIMAX

BodElecMecPCBPartAcceTool	tures	J-7 J-16 J-17 J-18 J-22 J-23
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This catalog covers our standard connector solutions. For specific requests, including hybrid or custom connectors, please contact your local sales representative.

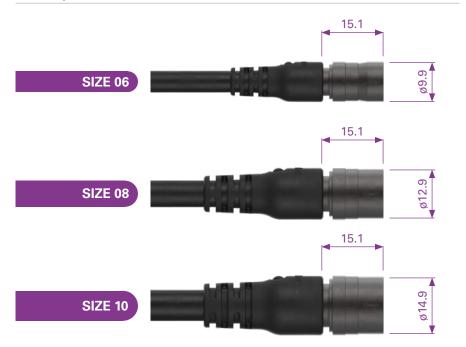
HIGH-DENSITY MINIATURIZATION

- Unique combinations of signal and power
- Replace multiple large connectors with fewer and smaller ones
- Combine multiple protocols into one connector

SIZE

COMPARISON 1:1

SIZE 06, 08 AND 10



UPTO 45% SMALLER

SIZE 08

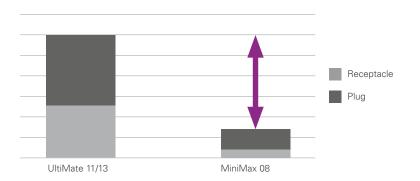
COMPARED TO STANDARD RECEPTACLES WITH SIMILAR NUMBER OF CONTACTS



UPTO 75% LIGHTER

SIZE 08

PLUGS & RECEPTACLES WEIGHT COMPARISON WITH SIMILAR NUMBER OF CONTACTS





HIGH-SPEED DATA TRANSFER



















	Size 06-4 pins	Size 06-7 pins	Size 06-12 pins	Size 08-8 pins	Size 08-09 pins	Size 08-19 pins	Size 08-19 pins	Size 08-24 pins	Size 10-12 pins	Size 10-30 pins
USB 2.0	YES	YES	YES	YES	YES	YES	-	YES	YES	YES
USB 3.2 GEN 1 (5 Gbit/s) USB 3.2 GEN 2 (10 Gbit/s)	-	-	-	-	YES	-	-	-	YES	-
ETHERNET Q (10 Gbit/s)	-	-	YES*	YES	-	-	-	-	-	-
Standard audio/ video protocol UHD (10.2 Gbit/s)] -	-	-	-	-	YES*	YES	-	-	-
Standard audio/video protocol UHD (18.0 Gbit/s)]0 -	-	-	-	-	-	YES	-	-	-
Single pair Ethernet (1 Gbit/s)	YES	-	-	-	-	-	-	-	-	-

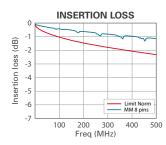
^{*} Application dependent

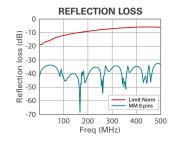
Note that for USB 3.2 the full spec is set with 1 m cable

ETHERNET SIZE 08 | 8 PINS 米

A unique robust and sealed miniature connector for Ethernet applications in harsh environments.

- AWG24, compatible with long range standard Ethernet cables
- Symmetrical hermaphroditic contact block
- 0.5 mm contacts

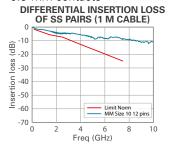




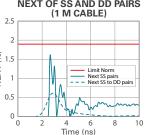
USB 3.2 SIZE 08 | 9 PINS + SIZE 10 | 12 PINS **SS**←

Optimized design for full USB 3.2 Gen 1 and Gen 2 performance, successfully tested to the full S-parameter standards with cables up to 1 m.

- Advanced power contacts
- Hermaphroditic contact block
- 0.5 mm contacts







FISCHER MINIMAX™ SERIES

RELIABILITY

- IP68,-20m/24h* water sealing <10-6 mbar l/s gas sealing
- 5,000 mating cycles
- 1,000 h salt mist spray



*The standard sealing level can be achieved on all MiniMax panel mounted receptacles when correctly integrated.

For all cabled mounted connectors, the sealing level depends on the quality of the assembly process and the size and type of cable being used. For MiniMax, Fischer Connectors guarantees an IP64 cable assembly sealing as standard. Upon request, MiniMax cable assemblies with an IP68 sealing rating-20 m for a duration of 24 hours are available and might require additional testing.



HOUSING COLOR

MiniMax is available in Anthracite Nickel.

■The anthracite treatment offers an improved panel grounding of <5 m Ω as required by MIL specs.

Anthracite

Ground contact connected to housing:

- Pin for PCB contact (P) versions
- Solder barrel for solder contact
 (S) versions



CONTACT COMBINATIONS

The MiniMax contact block is specified by a combination of 4 digits:

- First digit indicates the number of advanced contacts for first mate / last break.
- Second digit indicates the number of larger contacts (and with larger solder cup) for power.
- Digits 3 and 4 are to be considered as one number and will indicate the number of remaining contacts (of standard size and not advanced).

MiniMax uses a hermaphroditic contact block for all configurations except for the 4-pin (2 power + 2 signal) and the 7-pin (3 power + 4 signal) in size 06.

For the 4-pin and 7-pin in size 06, a polarity choice¹⁾ has to be specified and the mating part will reflect an opposite polarity (F mating M; M mating F).

For clarity reasons, the 4-pin in size 06 with 2 power contacts that are also advanced is designated by the digits 0202 and not 2202. A designation by the digits 2202 may confusingly suggest it has 6 contacts instead of the actual 4.

The table on the right shows **all** available standard contact block combinations to help specify the correct product designation. (Also see page J-20).

Size	MR11 / MR12 / MR50		MP11
06	0202 xxFx		0202 xxMx
	0202 xxMx		0202 xxFx
Ub	0304 xxFx		0304 xxMx
	0210		0210
	0008		0008
	0009	Mates with	2007
08	0019 2017		0019
	H019		H019
	0420 2418		0420
10	0309		2307
10	0624		0624

¹⁾ Size 06 7-pin configuration is receptacle with female contacts and plug with male contacts. For customization please contact your local sales representative.

PLUGS

CABLEMOUNTED







Body style		MP11-L	MP11-S	MP11-Q	References to detailed information			
Protection	Sealed up to IP68	•	•	•	Cooling actoroxics mags A 6			
Protection	Hermetic				Sealing categories, page A-6			
	Push-pull	•						
Locking System	Quick-release			•				
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Screw		•					
Termination	Crimp contact				Flactrical & contact configurations, page 1-16			
lemmation	Solder contact	•	•	•	Electrical & contact configurations, page J-16			
Housing color	Anthracite Nickel	•	•	•	Part numbering, page J-20			
	Shortened body							
	60° angle 1)	•	•	•	Dedicate les abandan l			
Design	Straight	•	•	•	Body styles, chapter J			
	Right-angle 1)	•	•	•				
	Cable clamp sets							
Cabling	Overmoldable	•	•	•	-			
	Heat shrinkable	•	•	•				
	Cable bend reliefs 1)	•	•	•				
Accessories	Protective sleeves				Accessories, page J-21 and J-22			
	Sealing caps	•	•	•				
	06	•	•	•	T			
Size	08	•	•	•	Technical dimensions, page J-8 and J-9 For more information visit our website www.fischerconnectors.com/technical			
	10	•		•	To more information visit out website www.nscherconnectors.com/technical			

¹⁾ Not available for size 10.



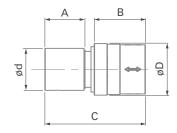
PLUGS

CABLEMOUNTED

MP11-L / PUSH-PULL

BODY STYLE

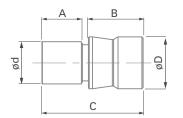




MP11-Q / QUICK-RELEASE

BODY STYLE

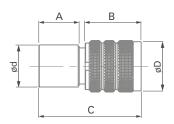




MP11-S / SCREW-LOCKING

BODY STYLE





Size	Locking	ød	øD	Α	В	~ C
	Push-pull	8.5	9.9	10.1	12.8	25
06	Quick-release	8.5	9.9	10.1	13.6	25
	Screw	8.5	9.9	10.1	14.0	25
	Push-pull	10.4	12.9	10.1	12.8	25
08	Quick-release	10.4	12.9	10.1	13.6	25
	Screw	10.4	12.9	10.1	14.0	25
	Push-pull	12.4	14.9	10.1	12.8	25
10	Quick-release	12.4	14.9	10.1	13.6	25
	Screw	-	-	-	-	-

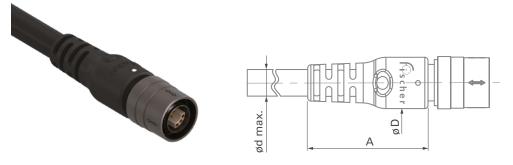
DIMENSIONS OF OVERMOLDING 1)

CABLEMOUNTED

MP11-L/S/Q - MR50-L/S/Q

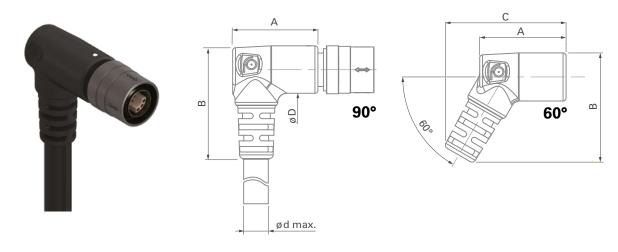
Technical dimensions

STRAIGHT OVERMOLDING



MP11-L/S/Q

RIGHT ANGLE & 60° OVERMOLDING



¹⁾ Overmolding available on request. Contact your Fischer Connectors sales representative for details.

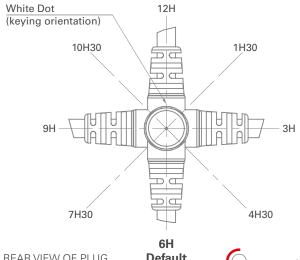
All dimensions and images shown are in millimeters and are for reference only.

Size Angle		ød max.	øD	Α	В	С
	Straight	4.7 ²⁾	10.8	30	-	-
06	60°	4.7 ²⁾	10.8	23	29.1	32.2
	90°	4.7 ²⁾	10.8	23	30	-
	Straight	6.7	12.8	30	-	-
08	60°	6.7	12.8	23	29.1	32.2
	90°	6.7	12.8	23	30	-
	Straight	8.7	14.8	30	-	-
10	60°	-	-	-	-	-
	90°	-	-	-	-	-

²⁾ 5.8 for MiniMax size 06 with 7 contacts.

8 POSITIONS

ORIENTATION PARALLEL TO PANEL



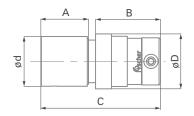
CABLE MOUNTED					
Body style		MR50-L	MR50-S	MR50-Q	References to detailed information
Protection	Sealed up to IP68	•	•	•	Sealing categories, page A-6
Fiotection	Hermetic				Sealing Categories, page A-0
Lastrian	Push-pull	•			
Locking system	Quick-release			•	
0,010111	Screw		•		
Termination	Crimp contact				Electrical & contact configurations, page J-16
	Solder contact	•	•	•	Electrical & contact configurations, page 3-16
Housing	Anthracite Nickel	•	•	•	Part numbering, page J-20
3	Shortened body				
Doolan	60° angle				Body styles, chapter J
Design	Straight	•	•	•	Body styles, chapter 3
	Right-angle				
	Cable clamp sets				
Cabling	Overmoldable	•	•	•	-
	Heat shrinkable	•	•	•	
	Cable bend reliefs	•	•	•	
Accessories	Protective sleeves				Accessories, page J-21 and J-22
	Sealing caps	•	•	•	
	06	•	•	•	
Size	08	•	•	•	Technical dimensions, page J-11 For more information visit our website www.fischerconnectors.com/technical
	10				To more information visit our website www.iischerconnectors.com/technical

CABLEMOUNTED

MR50-L / PUSH-PULL

BODY STYLE

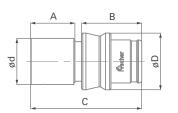




MR50-Q / QUICK-RELEASE

BODY STYLE

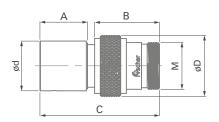




MR50-S / SCREW-LOCKING

BODY STYLE





Size	Locking	ød	øD	Α	В	~ C	M
	Push-pull	8.5	9.9	10.1	13.7	25	-
06	Quick-release	8.5	9.9	10.1	13.7	25	-
	Screw	8.5	9.9	10.1	13.7	25	M8x2
	Push-pull	10.5	11.6	10.1	13.7	25	-
80	Quick-release	10.5	12.9	10.1	13.7	25	-
	Screw	10.5	12.9	10.1	13.7	25	M10x2
	Push-pull	-	-	-	-	-	-
10	Quick-release	-	-	-	-	-	-
	Screw	-	-	-	-	-	-

PANEL MOUNTE	D				(·)			
Body style		MR11-L	MR11-S	MR11-Q	MR12-L	MR12-S	MR12-Q	References to detailed information
Protection	Sealed up to IP68	•	•	•	•	•	•	Sealing categories, page A-6
Protection	Hermetic							Sealing categories, page A-6
	Crimp contact							FI
Termination	Solder contact	•	•	•	•	•	•	Electrical & contact configurations, page J-16
	PCB contact	•	•	•	•	•	•	page e le
Housing color	Anthracite Nickel	•	•	•	•	•	•	Part numbering, page J-20
	Right-angle							
Design	Flush							
Design	Front-projecting	•	•	•	•	•	•	Body styles, chapter J
	Bulkhead feedthrough							Body styles, chapter 3
Assambly	Front-mounting							
Assembly	Rear-mounting	•	•	•	•	•	•	
	Sealing caps	•	•	•	•	•	•	
	Spacers							
Accessories	Color-coded washers							Accessories, page J-21 and J-22
	Grounding washers							page 3-21 and 3-22
	Locking washers							
	06	•	•	•	•	•	•	Technical dimensions, page J-13 to J-15
Size	08	•	•	•	•	•	•	For more information visit our website
	10	•		•				www.fischerconnectors.com/technical

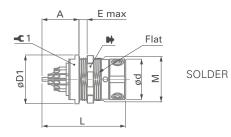
PANEL REAR

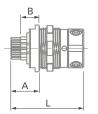
MOUNTED

MR11-L / PUSH-PULL

BODY STYLE





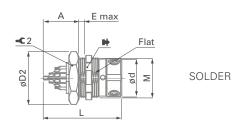


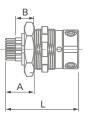
PCB

MR12-L / PUSH-PULL

BODY STYLE



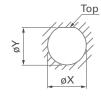




PCB

Size	Locking	Termination	ød	øD1	øD2	Α	В	L	E max	M Panel thread	-c 1	-c 2	Torque
06	Push-pull	Solder contact	8.0	10.0	11.4	7.6	-	19.1	3.0	M8.5x0.35	8	10	1.0 Nm
Ub	Pusn-pull	PCB contact	8.0	10.0	11.4	7.3	4.7	18.8	3.0	M8.5x0.35	8	10	1.0 Nm
00	Duah mull	Solder contact	10.0	12.0	13.7	9.1	-	20.6	3.0	M10.5x0.5	10	12	1.5 Nm
08	Push-pull	PCB contact	10.0	12.0	13.7	7.3	4.7	18.8	3.0	M10.5x0.5	10	12	1.5 Nm
40	Decele accell	Solder contact	12.0	14.0	-	7.6	-	19.1	3.0	M12.5x0.5	12	-	2.0 Nm
10	Push-pull	PCB contact	12.0	14.0	-	7.3	4.7	18.8	3.0	M12.5x0.5	12	-	2.0 Nm





Size	øX	øΥ
06	8.58 +0.1/0	8.25 +0.1/0
08	10.45 +0.1/0	10.2 +0.1/0
10	12.45 +0.1/0	12.2 +0.1/0



FISCHER MINIMAX™ SERIES Technical dimensions

RECEPTACLES

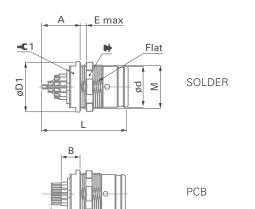
PANEL REAR

MOUNTED

MR11-Q / QUICK-RELEASE

BODY STYLE

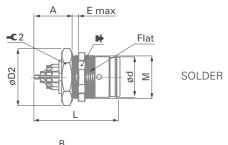


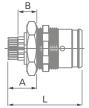


MR12-Q / QUICK-RELEASE

BODY STYLE



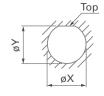




PCB

Size	Locking	Termination	ød	øD1	øD2	Α	В	L	E max	M Panel thread	-€ 1	-€ 2	Torque
06	Ouisk valages	Solder contact	7.8	10.0	11.4	7.6	-	19.1	3.0	M8.5x0.35	8	10	1.0 Nm
06	Quick- release	PCB contact	7.8	10.0	11.4	7.3	4.7	18.8	3.0	M8.5x0.35	8	10	1.0 Nm
00	0 : 1 1	Solder contact	9.8	12.0	13.7	9.1	-	20.6	3.0	M10.5x0.5	10	12	1.5 Nm
08	Quick-release	PCB contact	9.8	12.0	13.7	7.3	4.7	18.8	3.0	M10.5x0.5	10	12	1.5 Nm
40	0	Solder contact	11.8	14.0	-	7.6	-	19.1	3.0	M12.5x0.5	12	-	2.0 Nm
10	Quick-release	PCB contact	11.8	14.0	-	7.3	4.7	18.8	3.0	M12.5x0.5	12	-	2.0 Nm





Size	х	Υ
06	8.58 +0.1/0	8.25 +0.1/0
08	10.45 +0.1/0	10.2 +0.1/0
10	12.45 +0.1/0	12.2 +0.1/0

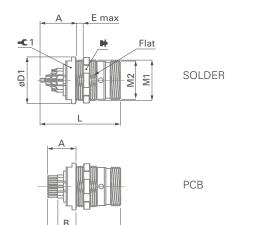
PANEL REAR

MOUNTED

MR11-S / SCREW-LOCKING

BODY STYLE

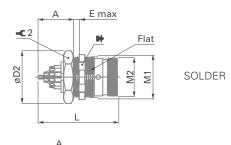


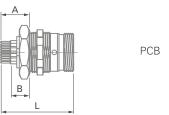


MR12-S / SCREW-LOCKING

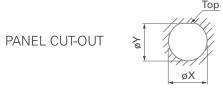
BODY STYLE







Size	Locking	Termination	øD1	øD2	Α	В	L	E max	M1 Panel thread	M2 Locking thread	-€ 1	-€ 2	Torque
06	Screw	Solder contact	10.0	11.4	7.6	N/A	19.1	2.3	M8.5x0.35	M8x2	8	10	1.0 Nm
Ub	Screw	PCB contact	10.0	11.4	7.3	4.7	18.8	2.3	M8.5x0.35	M8x2	8	10	1.0 Nm
00	C	Solder contact	12.0	13.7	9.1	-	20.6	2.3	M10.5x0.5	M10x2	10	12	1.5 Nm
08	Screw	PCB contact	12.0	13.7	7.3	4.7	18.8	2.3	M10.5x0.5	M10x2	10	12	1.5 Nm
40		Solder contact	-	-	-	-	-	-	-	-	-	-	-
10	Screw	PCB contact	-	-	-	-	-	-	-	-	-	-	-



Size	øX	øY			
06	8.58 +0.1/0	8.25 +0.1/0			
08	10.45 +0.1/0	10.2 +0.1/0			
10	-	-			



			v		Wire size 1)	РСВ	Current [A]	Rated voltage	Tes	t voltage [kV]		tion					
	out	ter tact		Wille Size	contacts		r.m.s [V]			4-1 test 4a							
	lay		nbe ont	tac net		Pin diameter	IEC	IEC		.m.s.		С					
Size	Pin layout		Number of contacts	Contact diameter [mm]	Solder contacts	[mm]	60512-5-2-5b ²⁾	60664-1 ³⁾	Contact to body	Contact to contact	Contact to body	Contact to contact					
	8)		2	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	1.0	1200	-		-						
		4	2	1.3	Max ø1.33 mm – AWG18 [19/30]	0.7	10	≤200	1.4	1.2	2.3	1.9					
06		7	4	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	0.02 (2x) + 1.5 (2x)	-160	1.0	1.2	2.0	1.7					
Ub		/	3	0.7	Max ø0.90 mm – AWG22 [19/34]	0.5	7.0	≤160	1.0	0.9 7)	2.0	1.3 7)					
		10	10	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	1.0	≤50	0.0	0.0	1.5	1.0					
			12	12	12	12	12	2	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≤50	0.9	0.9	1.5	1.2
	ETHERNET USB 3.2		8	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	3.8	≤320	1.6	1.6	2.2	2.2					
			7	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	1.0	-050	4.5	4.0	0.4	4.0					
		9	2 5)	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≤250	1.5	1.2	2.4	1.8					
		10	15	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	1.0	-100	0.0	0.0	1.5	1.0					
		19	4	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≤100	0.9	0.9	1.5	1.2					
08	000	10	19	13+2 4)	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	1.0	≤100	0.9	0.9	1.5	1.2				
08		19	4	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≥ 100	0.9	0.9	1.5	1.2					
	9)	19 H	12	0.5	Max ø0.55 mm – AWG26 [19/38]	0.4	1.5 ¹⁰⁾	≤125	1.0	1.0	1.8	1.8					
	UHD	іэп	7	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	1.5	≤125	1.0	1.0	1.0	1.0					
		24	20	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	1.0	100	0.0	0.0	1.5	1.0					
		24	4	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≤63	0.9	0.9	1.5	1.2					
		24	18+2 4)	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	1.0	100	0.0	0.0	1.5	1.0					
		24	4	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≤63	0.9	0.9	1.5	1.2					
			7	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	0.02		1.7	1.5	2.3	2.0					
		10	2 5)	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	3.0	*250	1.7	1.5	2.3	2.0					
10		12		0.0	NA (4.00 AVA/COO [00/04]	0.7	0.0	≤250	1.8	3.1	2.4	4.5					
10	USB 3.2		3	0.9	Max ø1.03 mm – AWG20 [26/34]	0.7	8.0		-	2.0 6)	-	2.7 6)					
		20	24	0.5	Max ø0.43 mm – AWG28 [19/40]	0.4	1.0	-160	1.2	1.0	1.9	1.7					
		30	6	0.5	Max ø0.70 mm – AWG24 [19/36]	0.4	5.0	≤160	1.2	1.0	1.9	1.7					

¹⁾ Stranding values in brackets.

²⁾ Current per contact at 40 °C temperature rise measured on the basic curve according to IEC 60512-5-2-5b. For the max, operating current a reduction factor must be used and limitations due to the size of the wires and the permissible upper temperature limit of the materials employed must be taken into account. See page A-12 for details.

³⁾ Recommended operating voltage at sea level. This rated voltage is a general guideline where no other electrical safety standard applies. In

cases where other standards rule a specific use of the connector, the application-specific safety criteria shall be considered first. This must be evaluated in the framework of equipment engineering.

⁴⁾ Two advanced signal contacts for USB power are available for Solder (S) or PCB (P) receptacles.

⁵⁾ USB 3.2 contact blocks come with two advanced power contacts on the plug side (MP11) as standard (size 08 plug 9-pin contact block 2007 and size 10 plug 12-pin contact block 2307).

⁶⁾Test voltage between contacts 0.9 and contacts 0.5 for configuration MiniMax size 10 2307/0309.

⁷⁾ Test voltage between contacts 0.7 and contacts 0.5 for configuration MiniMax size 06 0304.

⁸⁾ Contacts 0.7mm suitable for SPE data protocol 1 Gbit/s.

⁹⁾ Layout dedicated to 4K UHD Audio/Video Protocol 18.0 Gbit/s.

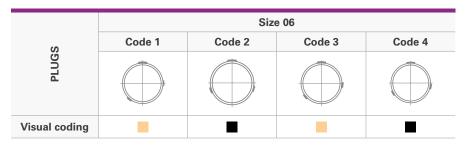
¹⁰⁾ Current of 1.4 A at a maximum temperature rise of 30 °C according to UHD specifications.

MECHANICAL AND VISUAL CODING

The mechanical coding for MiniMax is available as standard in 4 different variants : code 1, 2, 3, 4.

When size, body type, configuration and code matches the plug and receptacle will mate by aligning the exterior white marks (coding guide).

For additional differentiation, the odd codes are visually identified by a beige contact block while the even codes will vary with a black insulator.



	Size 08									
(A)	Code 1	Code 2	Code 3	Code 4						
PLUGS										
Visual coding										

		Size	e 10	
(A)	Code 1	Code 2	Code 3	Code 4
PLUGS				
Visual coding				



Ground contact connected to housing:

- Pin for PCB contact (P) versions Solder barrel for solder contact (S) versions

Recommended wiring

Size		06			10		
Configuration	2+2	3+4	12	8	19	24	30
Power	2; 4	5; 6; 7	5; 9	any2	9; 12; 15; 18	14; 17; 20; 23	14; 17; 20; 23; 26; 29
Ethernet	-	-	1/6; 3/10; 7/8; 11/12	1/2; 3/4; 5/6; 7/8	8/19; 10/11; 13/14; 16/17	15/16; 18/19; 21/22; 13/24	Any other
Advanced pin	2; 4	-	-	-	13; 19	18; 24	-

¹⁾ Recommended

USB Signal name 3)

Size 08, configuration 9 contacts



- 1) USB 2.0 D-
- 2) SS drain 3) USB 2.0 D+
- 4) Vbus 5 V
- 5) SS TX+
- 6) SS TX-
- 7) SS RX+ 8) SS RX-
- 9) Vbus GND

UHD 18.0 Gbit/s protocol

Size 08, configuration 19 contacts



- 1) +5 V Power 2) DDC/CEC Ground
- 3) Utility 4) Hot plug
- detect
- SDA
- 6) SCL
- 7) CEC (delayed contact)
- 8) TMDS data 2-
- 9) TMDS data 1 shield
- 10) TMDS data 1+

- 11) TMDS data 1-12) TMDS data 0 shield
- 13) TMDS data 0+
- 14) TMDS data 0-
- 15) TMDS data CLK shield
- 16) TMDS data CLK+
- 17) TMDS data
- CLK -
- 18) TMDS data 2 shield
- 19) TMDS data 2+

Size 10, configuration 12 contacts



- 1) USB 2.0 D-
- 2) SS drain
- 3) USB 2.0 D+
- 4) Vbus 5 V
- 5) SS TX+ 6) SS TX-
- 7) SS RX+
- 8) SS RX-9) Vbus GND
- 10) Power
- 11) Power 12) Power
- 3) RX/TX labelling of Fischer Rugged Flash Drive.

The RX of one device must always connect to the TX of the other device and vice versa.

²⁾ Optional on MR11 / MR12

View from the back of the plug/front of receptacle (guide mark at 12 o'clock)

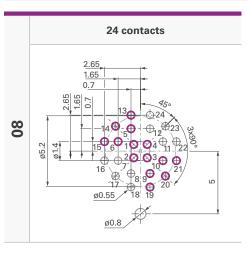
	2+2 contacts	3+4 contacts	12 contacts
90	All contacts are male or female depending on polarity.	Ø0.65 (Ø3.2) 8 00.55 (Ø3.2) 8 00.55 Ø0.8	1.7 0.7 0.9 0.4 12 0.9 12 0.9 12 0.9 10.4 11 12 0.9 0.9 0.9 0.9 0.9 0.9 0.9 0.9

	Contacts					
	Plugs	Receptacles				
0	Male	Female				
0	Female	Male				

FISCHER MINIMAX™ SERIES PCB hole layout

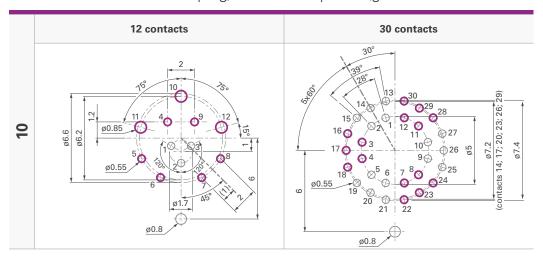
View from the back of the plug/front of receptacle (guide mark at 12 o'clock)

	8 contacts	9 contacts	19 contacts	19 contacts UHD
80	22.5 10 8 20 7 20 5 40 5 6	Ø0.55 (1) Ø5 (1) Ø5	15.5° 15.5° 29° 29° 29° 29° 29° 29° 29° 29° 29° 29	9 8 0 19 0 18 10 0 17 17 11 19 0 0 16 0 16 0 16 0 16 0 16 0 16 0



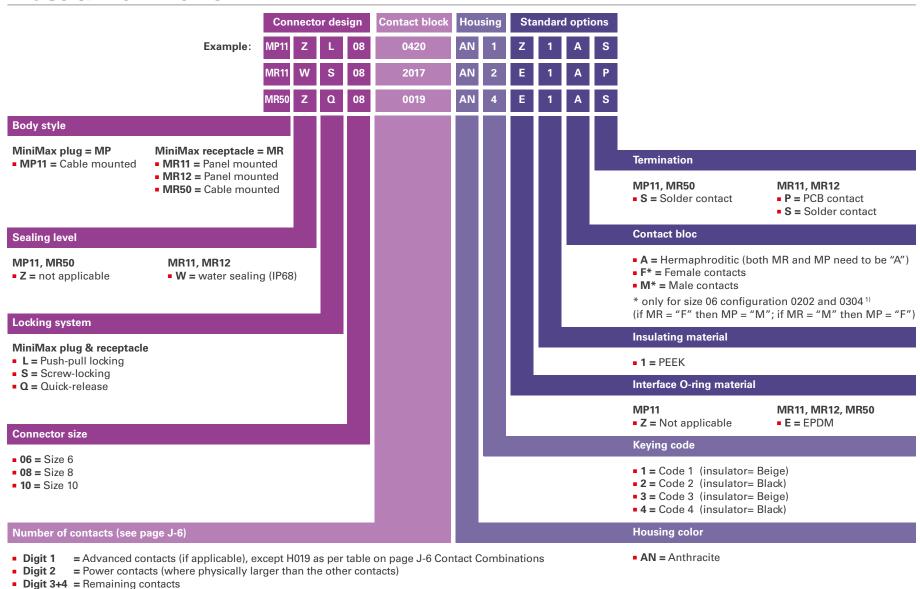
	Contacts					
	Plugs	Receptacles				
0	Male	Female				
0	Female	Male				

View from the back of the plug/front of receptacle (guide mark at 12 o'clock)



	Contacts				
	Plugs	Receptacles			
0	Male	Female			
0	Female	Male			

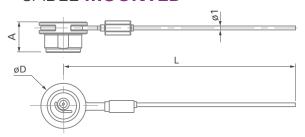
PLUGS & RECEPTACLES



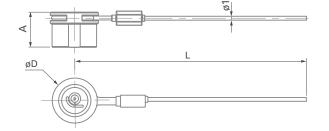
¹⁾ Configuration 0304 is standard with F for receptacle and M for plug. For customization please contact your local sales representative.

SOFT CAPS

CABLE MOUNTED



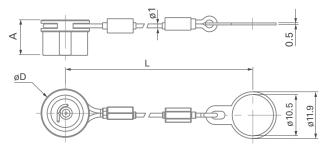
Size	Body style	Images	Push-pull	Quick-release	Screw-lock	Α	øD	L	Part number
06			•			9.6	10.0	200	MCP06C 1B2 A200 AA
				•	•	7.8	10.0	200	MCP06C 1B2 A200 BA
08	MP11 1)		•			9.6	12.3	200	MCP08C 1B2 A200 AA
00				•	•	7.8	12.3	200	MCP08C 1B2 A200 BA
10			•		-	9.6	14.3	200	MCP10C 1B2 A200 AA
10		T		•	-	7.8	14.3	200	MCP10C 1B2 A200 BA
00			_	_	_	0.0	10.0	000	MODOCO 4 DO A COO A A



06		•	•	•	9.0	10.0	200	MCR06C 1B2 A200 AA
08	MR50 1)	•	•	•	9.0	12.3	200	MCR08C 1B2 A200 AA
10		•	•	•	9.0	14.3	200	MCR10C 1B2 A200 AA

¹⁾Crimp ferrule and heat shrink tube are included.

PANEL MOUNTED

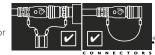


Size	Body style	Images	Push- pull	Quick- release	Screw- lock	Α	øD	L	ød1	ød2	Part number
06			•	•	•	9.0	10.0	95	8.5	9.9	MCR06P 1B2 A095 AA
08	MR11 1) MR12 1)		•	•	•	9.0	12.3	95	10.5	11.9	MCR08P 1B2 A095 AA
10			•	•	-	9.0	14.3	95	12.6	13.9	MCR10P 1B2 A095 AA

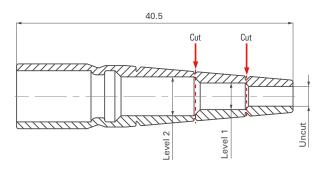
¹⁾Crimp ferrule, heat shrink tube and mounting ring are included.

To avoid getting debris into the caps when the connectors are mated, please mate the caps together.

Please make sure that the cap is in place when the plug or the receptacle is in unmated position.



STRAIGHT BEND RELIEF



CUTTING DIAMETERS

Size	Uncut	Level 1	Level 2	Part Number
06	ø2.9	ø3.9	ø5.7	MB06 A1BK
08	ø3.9	ø5.4	ø6.7	MB08 A1BK
10	-	-	-	-

SPANNER & NUT DRIVER

DOUBLE-ENDED OPEN SPANNER EXTRATHIN ♀



Size	Part number	Opening across flats	Length	Fork thickness	
06	TX00.008	8	96	2.3	
08	TX00.010	10	104	2.5	
Vo	TX00.012	12	104	2.5	
10	TX00.012	12	104	2.5	

Material – Chrome Alloy Steel, Chrome plated, Fork Angles – 15° and 75°.

NUT DRIVER WITH T-HANDLE AND HEX DRIVE ▶



Part number	Thread size	Nut outer dia.	øD	Hex drive
TX00.383	M8.5x0.35	10	14	7
TC00.007	M10.5x0.5	12	16	7
TX00.403	M12.5x0.5	14	18	7

Material - Hardened Tool Steel, Nickel plated.

SINGLE SIDED HEX NUT DRIVER



Part number	Thread size	Nut outer dia.	øD	Hex drive
TX00.386	M8.5x0.35	10	14	12
TX00.385	M10.5x0.5	13	16	12
TX00.412	M12.5x0.5	15	18	12

Material - Hardened Tool Steel, Nickel plated and plastic.

CABLE ASSEMBLY

Note: Cable assembly is only possible with special tooling developed by Fischer Connectors. Due to the complexity of the connector purchase costs may be significant. As an alternative solution, Fischer Connectors offers premium cable assembly services.



Part number	Description
130257	Hand press Luthy HP150T or equivalent



	Part number	Description
	130254	MiniMax support tool



Part number	Description
130252	MiniMax tool kit Size 06
139451	MiniMax tool kit Size 06 (7 contacts)
130253	MiniMax tool kit Size 08
137461	MiniMax tool kit Size 10



MATERIAL & SURFACE FINISH

Matel components		Material			Finish	
Metal components	5	Designation ISO	Standard	Designation	Standard	
Housing, Nut		Brass CuZn39Pb3	CW614N UNS C 38500	Anthracite Nickel	SAE-AMS2404 SAE-AMS-QQ-N-290	
Back nut (MP11, MR50) Ground contact Push-pull locking spring Quick-release locking spring		Brass CW614N Nickel UNS C 38500		SAE-AMS-QQ-N-290B SAE-AMS2404G		
		Brass CuZn39Pb3	CW614N UNS C 38500	Nickel	SAE-AMS-QQ-N-290B SAE-AMS2404G	
		Stainless steel	X10CrNi18-8 (1.4310)	-	-	
Contacts	- Male, Ground Pin	Brass CuZn39Pb3 Bronze CuSn4Zn4Pb4	CW614N; UNS C 38500 CW456K; ASTM B139 UNS C 54400	1 μm Gold over Nickel 1 μm Gold over Nickel	MIL-DTL-45204D Type I; ASTM B488 MIL-DTL-45204D Type I; ASTM B488	
Ball-locking		Ceramic Si3N4	-	-	-	

Insulator and sealing		International symbol	Flammability UL 94 V-0	
Insulators		PEEK ¹⁾		
O-rings	- General - Interface	FPM (Viton®) EPDM	-	
Sealant	- Cable connectors - Panel receptacles	Epoxy compound Silicone/Epoxy ²⁾ compound	- UL 94 V-0	
Bend relief	- Cable connectors	Santoprene™ TPV 101-73	UL 94 HB	
Сар	- Cable connectors - Panel receptacles	TPV (Santoprene™)	UL 94 HB	

¹⁾ Or any material in the PAEK family that provides equal or better overall performances.

²⁾ For panel receptacle size 10.

ENVIRONMENTAL & MECHANICAL DATA

Characteristic	Performance	Standard
Sealing performance mated and unmated	IP68, -20m/24h water sealing <10-6 mbar I/s gas sealing	IEC 60529 IEC 60068-2-17 Test Ok, Method 3
Sealing performance Soft Cap IP67; 15 cm submersion for 30 min		IEC 60529
Operating temperature range 1)	-40 °C to +135 °C	IEC 60512-6-1 IEC 60068-2-14-Nb
Corrosion resistance mated	Salt mist 1,000 hours; 5% salt solution, 35 °C Plug and receptacle in mated position or with cap when unmated. Appearance may change over time without impacting mechanical or electrical functions.	IEC 60068-2-11 Test Ka; MIL-STD-202 Method 101; EIA-364-26
Endurance	5,000 mating cycles Preserved mechanical and electrical functionality. Normal wear will appear.	IEC 60512-9-1
Vibration Screw-locking version only	10 to 2,000 Hz, 1.5 mm or 15 g, 12 sweep cycles per axis, 20 minutes per 10-2,000-10 Hz sweep cycle, no discontinuity >1 μs, no visible signs of damage	MIL-STD-202 Method 204 Condition B
7ibration 10 to 500 Hz, (1.5 mm or 10 g, 12 sweep cycles per axis, 15 minutes per 10-500-10 Hz sweep cycle, no discontinuity >1 μs, no visible signs of damage		MIL-STD-202 Method 204 Condition A
Unlocking Force Quick-release version only	Size 06 = Typical 25 N±40% Size 08 = Typical 35 N±40% Size 10 = Typical 60 N±40%	
Shock	300 g	MIL-STD-202 Method 213; EIA-364-27

¹⁾ Max temperature of +85 °C for soft caps.

ELECTRICAL DATA

Characteristic		Performance	Standard	
Contact resistance		5 mΩ (typical value)	IEC 60512-2-1-2a; IEC 60512-2-2-2b	
Shell resistance 2)	ANTHRACITE	<5 mΩ (Cabled)	IEC 60512-2-6-2f	
Insulation resistance		>10 ¹⁰ Ω	IEC 60512-3-1-3a	
Shielding effectiveness		360° shielded	-	

²⁾ Measured for a mated pair of panel receptacle and cable plug between the grounding pin and the cable shielding.