

COMBICON Direct Plug Connectors ZEC 1 and ZEC 1,5 3.5 / 5.0 and 7.5 mm Pitch

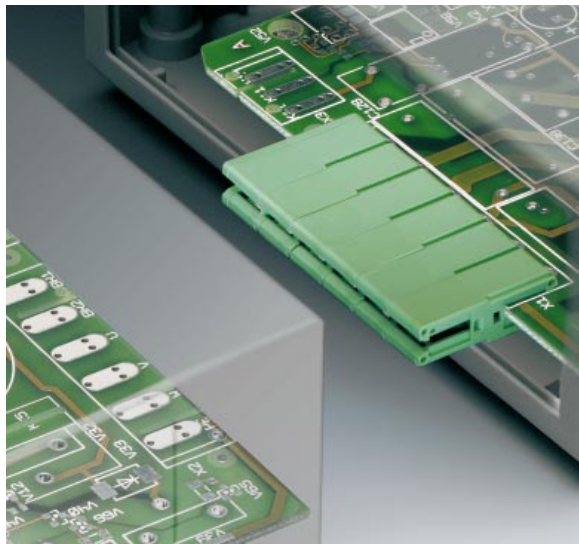
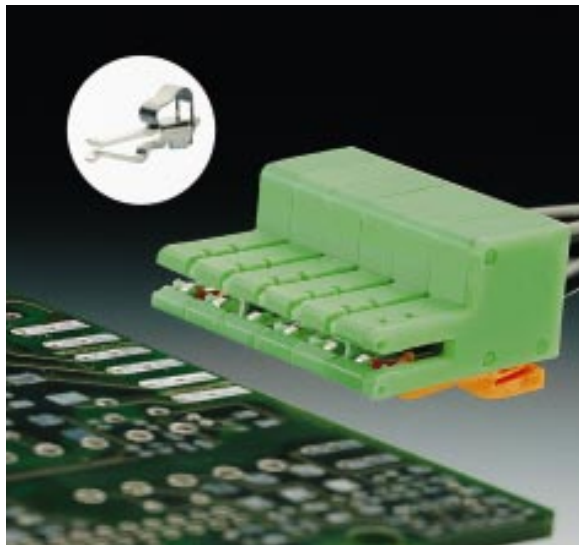
The direct plug connectors ZEC 1 and ZEC 1,5 make contact directly on the p.c.b. without the need for an extra pin strip. The plugs are simply snapped onto the pads at the edge of the 1.6 mm thick p.c.b. The plugs are available with 3.5 mm or 5 and 7.5 mm pitches and can be used for nominal voltages up to 400 V. Currents of up to 10 A can be transmitted through the solid contact springs.

The conductor connection is designed in spring-cage technology that can be accessed from the front with a screwdriver. The terminal compartment can hold solid and flexible conductors up to 1.5 mm² (1 mm² in case of 3.5 mm pitch) with and without ferrule.

To code the plug components, housings with a solid side element can be inserted at any position (standard pos. 2, individual coding on request). An appropriate slit has to be cut on the p.c.b. at this position. This combination guarantees that the plug cannot be inserted incorrectly or the poles reversed.

With the aid of two spring engagement latches, the plugs can be locked onto the p.c.b. All that is needed are two holes at the appropriate positions on the p.c.b. The plug is labeled with the self-adhesive marker cards SK 3,5/2,8, SK 5/3,8 or SK 7,5/3,8 (see COMBICON catalog).

The printed circuit board connectors are used to connect printed circuit boards to each other. If, for example, you want to connect a motor filter to a frequency converter, you simply plug it in. The external connection - i.e. the ZEC direct plug - then changes over to the auxiliary device. Mechanical forces have to be constructively absorbed via the housings of the devices.



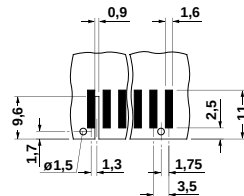
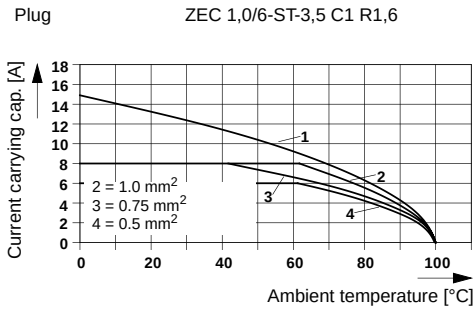
ZEC 1,0/...-ST-3,5
3.5 mm Pitch



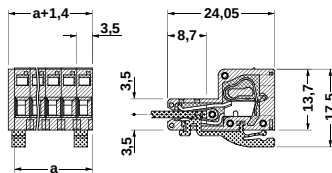
Note:
Only actuate COMBICON plug connectors when under no load condition. If for operating reasons small loads must be switched, experimental values are available upon request.

Description	No. of pos.	Dim. a [mm]	Type	Order No.	Pcs./Pkt.
Direct plug connector, 3.5 mm pitch,					
Color: green	2	7	ZEC 1,0/2-ST-3,5 C1 R1	18 93 68 5	50
	3	10.5	ZEC 1,0/3-ST-3,5 C1 R1,3	18 93 69 8	
	4	14	ZEC 1,0/4-ST-3,5 C1 R1,4	18 93 70 8	
	5	17.5	ZEC 1,0/5-ST-3,5 C1 R1,5	18 93 71 1	
	6	21	ZEC 1,0/6-ST-3,5 C1 R1,6	18 93 72 4	
	7	24.5	ZEC 1,0/7-ST-3,5 C1 R1,7	18 93 73 7	
	8	28	ZEC 1,0/8-ST-3,5 C1 R1,8	18 93 74 0	
	9	31.5	ZEC 1,0/9-ST-3,5 C1 R1,9	18 93 75 3	
	10	35	ZEC 1,0/10-ST-3,5 C1 R1,10	18 93 76 6	
	11	38.5	ZEC 1,0/11-ST-3,5 C1 R1,11	18 93 77 9	
	12	42	ZEC 1,0/12-ST-3,5 C1 R1,12	18 93 78 2	
(1) Screwdriver,					
Blade: 0.4 x 2.5 x 75 mm, Length: 160 mm,			SZF 0-0,4 x 2,5	12 04 50 4	10
(2) Marker card, with 14 pcs., 10-section marker strips, white, self-adhesive, for 140 terminal blocks					
Technical data					
Dimensions			see description		
Pitch			3.5		
Technical data in acc. with IEC / DIN VDE					
Insulating material group			I		
Surge voltage category / contamination class			III / 3 III / 2 II / 2		
Rated voltage			160 200 320		
Rated surge voltage			2.5 2.5 2.5		
Nominal current / cross section			8 / 1		
Maximum load current / cross section			8 / 1		
Capacity connection					
Solid / stranded / conductor sizes			0.2 - 1.0 / 0.2 - 1.0 / 24 - 16		
Stranded with ferrule without / with plastic sleeve			0.34 - 1 / 0.25 - 0.75		
Stripping length			7		
Insulating material			PA		
Inflammability class in acc. with UL 94			V0		
Approval data (UL/CUL and CSA)					
Nominal voltage / current / conductor sizes			300 / 10 / 26 - 16		
			--		
UL/CUL: [V]/[A]/AWG					
CSA: [V]/[A]/AWG					

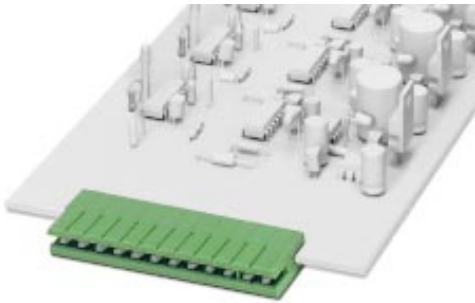
Current carrying capacity depending on the ambient temperature
1 = base curve



Size of the p.c.b.: 1.6 ±0.2 mm.



ZEC 1,0/...-LPV-3,5
3.5 mm Pitch

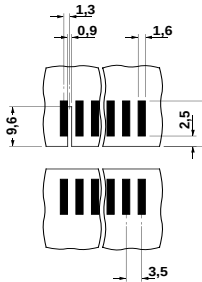
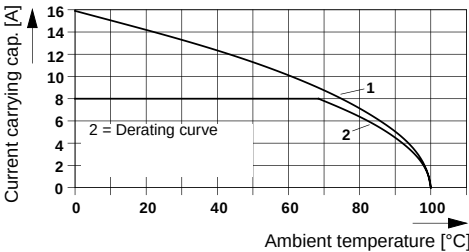


Note:
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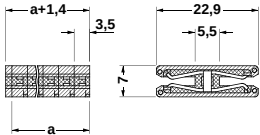
Description	No. of pos.	Dim. a [mm]	Type	Order No.	Pcs./Pkt.
P.C.B. connector, 3.5 mm pitch,					
Color: green	2	7	ZEC 1,0/2-LPV-3,5 C1	19 15 65 7	50
	3	10.5	ZEC 1,0/3-LPV-3,5 C1	19 15 66 0	
	4	14	ZEC 1,0/4-LPV-3,5 C1	19 15 67 3	
	5	17.5	ZEC 1,0/5-LPV-3,5 C1	19 15 68 6	
	6	21	ZEC 1,0/6-LPV-3,5 C1	19 15 69 9	
	7	24.5	ZEC 1,0/7-LPV-3,5 C1	19 15 70 9	
	8	28	ZEC 1,0/8-LPV-3,5 C1	19 15 71 2	
	9	31.5	ZEC 1,0/9-LPV-3,5 C1	19 15 72 5	
	10	35	ZEC 1,0/10-LPV-3,5 C1	19 15 73 8	
	11	38.5	ZEC 1,0/11-LPV-3,5 C1	19 15 74 1	
	12	42	ZEC 1,0/12-LPV-3,5 C1	19 15 75 4	
Technical data					
Dimensions			see description		
Pitch		[mm]	3.5		
Technical data in acc. with IEC/ DIN VDE					
Insulating material group		–	I		
Surge voltage category / contamination class		–/–	III / 3	III / 2	II / 2
Rated voltage		[V]	160	200	320
Rated surge voltage		[kV]	2.5	2.5	2.5
Nominal current / cross section		[A]/[mm²]	8 / -		
Maximum load current / cross section		[A]/[mm²]	8 / -		
Capacity connection					
Solid / stranded / conductor sizes		[mm²]/[mm²]/AWG	--		
Stranded with ferrule without / with plastic sleeve		[mm²]	--		
Stripping length		[mm]	--		
Insulating material				PA	
Inflammability class in acc. with UL 94				V0	
Approval data (UL/CUL and CSA)					
Nominal voltage / current / conductor sizes		UL/CUL: [V]/[A]/AWG	--		
		CSA: [V]/[A]/AWG	--		

Current carrying capacity depending on the ambient temperature
1 = base curve

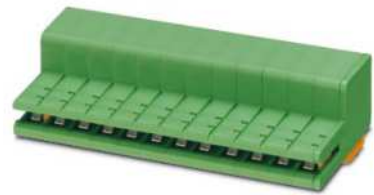
Plug: ZEC 1,0/6-LPV-3,5 C1



Size of the p.c.b.: 1.6 ± 0.2 mm.



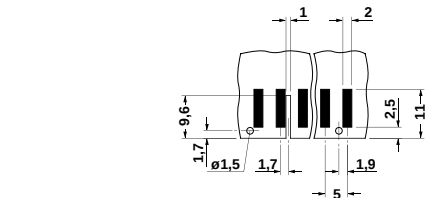
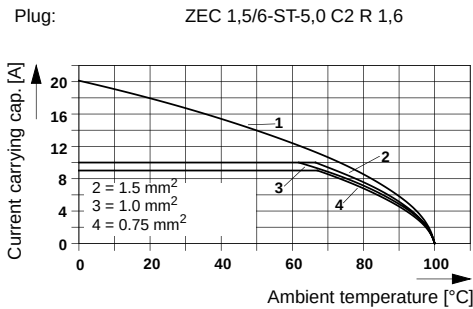
ZEC 1,5/...-ST-5,0
5.0 mm Pitch



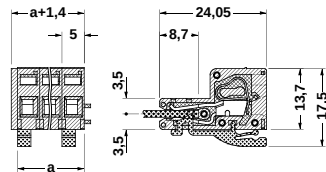
Note:
Only actuate COMBICON plug connectors when under no load condition. If for operating reasons small loads must be switched, experimental values are available upon request.

Description	No. of pos.	Dim. a [mm]	Type	Order No.	Pcs./Pkt.
Direct plug connector, 5.0 mm pitch, Color: green	2	10	ZEC 1,5/2-ST-5,0 C2 R 1,2	18 83 04 8	50
	3	15	ZEC 1,5/3-ST-5,0 C2 R 1,3	18 83 05 1	
	4	20	ZEC 1,5/4-ST-5,0 C2 R 1,4	18 83 06 4	
	5	25	ZEC 1,5/5-ST-5,0 C2 R 1,5	18 83 07 7	
	6	30	ZEC 1,5/6-ST-5,0 C2 R 1,6	18 83 08 0	
	7	35	ZEC 1,5/7-ST-5,0 C2 R 1,7	18 83 09 3	
	8	40	ZEC 1,5/8-ST-5,0 C2 R 1,8	18 83 10 3	
	9	45	ZEC 1,5/9-ST-5,0 C2 R 1,9	18 83 11 6	
	10	50	ZEC 1,5/10-ST-5,0 C2 R 1,10	18 83 12 9	
	11	55	ZEC 1,5/11-ST-5,0 C2 R 1,11	18 83 13 2	
	12	60	ZEC 1,5/12-ST-5,0 C2 R 1,12	18 83 80 2	
(1) Screwdriver, Blade: 0.6 x 3.5 x 100 mm, Length: 180 mm			SZF 1-0,6 x 3,5	12 04 51 7	100
(2) Marker card, with 12 pcs., 10-section marker strips, white, self-adhesive, for 120 terminal blocks			SK 5,08/3,8 (see COMBICON catalog)		
Technical data					
Dimensions					
Pitch			see description		
			5		
Technical data in acc. with IEC/ DIN VDE					
Insulating material group			I		
Surge voltage category / contamination class			III / 3 III / 2 II / 2		
Rated voltage			250 320 630		
Rated surge voltage			4 4 4		
Nominal current / cross section			10 / 1.5		
Maximum load current / cross section			10 / 1.5		
Capacity connection					
Solid / stranded / conductor sizes			0.2 - 1.5 / 0.2 - 1.5 / 24 - 16		
Stranded with ferrule without / with plastic sleeve			0.25 - 1.5 / 0.25 - 1.5		
Stripping length			7		
Internal cylindrical gauge (IEC 60 947-1)			A 1		
Insulating material			PA		
Inflammability class in acc. with UL 94			V0		
Approval data (UL/CUL and CSA)			300 / 10 / 26 - 16		
Nominal voltage / current / conductor sizes			UL/CUL: [V]/[A]/AWG CSA: [V]/[A]/AWG		
			--		

**Current carrying capacity depending on
the ambient temperature**
1 = base curve



Size of the p.c.b.: 1.6 ± 0.2 mm.



ZEC 1,5/...-LPV-5,0
5.0 mm Pitch



Note:
Only actuate COMBICON plug connectors when under no load condition. If for operating reasons small loads must be switched, experimental values are available upon request.

Description	No. of pos.	Dim. a [mm]
P.C.B. connector, 5.0 mm pitch, Color: green	2	10
	3	15
	4	20
	5	25
	6	30
	7	35
	8	40

Technical data	
Dimensions	
Pitch	[mm]
Technical data in acc. with IEC/ DIN VDE	
Insulating material group	-
Surge voltage category / contamination class	-/-
Rated voltage	[V]
Rated surge voltage	[kV]
Nominal current / cross section	[A]/[mm²]
Maximum load current / cross section	[A]/[mm²]
Capacity connection	
Solid / stranded / conductor sizes	[mm²]/[mm²]/AWG
Stranded with ferrule without / with plastic sleeve	[mm²]
Stripping length	[mm]
Internal cylindrical gauge (IEC 60 947-1)	-
Insulating material	
Inflammability class in acc. with UL 94	
Approval data (UL/CUL and CSA)	
Nominal voltage / current / conductor sizes	UL/CUL: [V]/[A]/AWG CSA: [V]/[A]/AWG

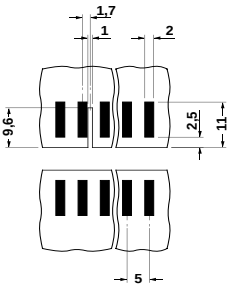
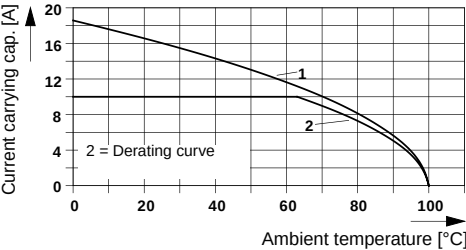
Type	Order No.	Pcs./Pkt.
ZEC 1,5/2-LPV-5,0 C2	18 98 26 6	50
ZEC 1,5/3-LPV-5,0 C2	18 98 27 9	
ZEC 1,5/4-LPV-5,0 C2	18 98 28 2	
ZEC 1,5/5-LPV-5,0 C2	18 98 29 5	
ZEC 1,5/6-LPV-5,0 C2	18 98 30 5	
ZEC 1,5/7-LPV-5,0 C2	18 98 31 8	
ZEC 1,5/8-LPV-5,0 C2 ¹⁾	18 98 32 1	

see description		
5		
	I	
III / 3	III / 2	II / 2
250	320	630
4	4	4
	10 / -	
	10 / -	
	--	
	--	
	--	
	--	
	PA	
	V0	
	--	
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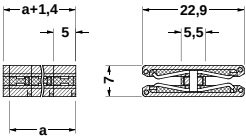
¹⁾ Further numbers of positions on request.

Current carrying capacity depending on the ambient temperature
1 = base curve

Plug: ZEC 1,5/6-LPV-5,0 C2



Size of the p.c.b.: 1.6 ± 0.2 mm.



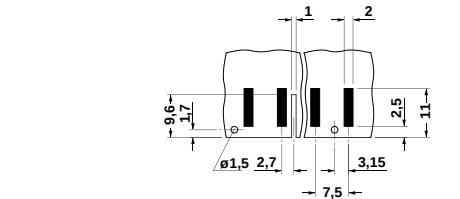
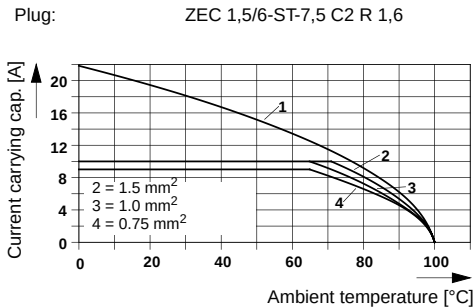
ZEC 1,5/...-ST-7,5
7.5 mm Pitch



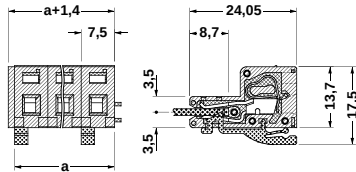
Note:
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Description	No. of pos.	Dim. a [mm]	Type	Order No.	Pcs./Pkt.
Direct plug connector, 7.5 mm pitch,					
Color: green	2	15	ZEC 1,5/2-ST-7,5 C2 R 1,2	18 83 14 5	50
	3	22.5	ZEC 1,5/3-ST-7,5 C2 R 1,3	18 83 15 8	
	4	30	ZEC 1,5/4-ST-7,5 C2 R 1,4	18 83 16 1	
	5	37.5	ZEC 1,5/5-ST-7,5 C2 R 1,5	18 83 17 4	
	6	45	ZEC 1,5/6-ST-7,5 C2 R 1,6	18 83 18 7	
	7	52.5	ZEC 1,5/7-ST-7,5 C2 R 1,7	18 83 19 0	
	8	60	ZEC 1,5/8-ST-7,5 C2 R 1,8	18 83 20 0	
	9	67.5	ZEC 1,5/9-ST-7,5 C2 R 1,9	18 83 21 3	
	10	75	ZEC 1,5/10-ST-7,5 C2 R 1,10	18 83 22 6	
	11	82.5	ZEC 1,5/11-ST-7,5 C2 R 1,11	18 83 23 9	
	12	90	ZEC 1,5/12-ST-7,5 C2 R 1,12	18 83 24 2	
(1) Screwdriver,					
Blade: 0.6 x 3.5 x 100 mm, Length 180 mm			SZF 1-0,6 x 3,5	12 04 51 7	100
(2) Marker card, with 12 pcs.,					
10-section marker strips, white, self-adhesive, for 120 terminal blocks					
Technical data					
Dimensions					
Pitch		[mm]	see description		
Pitch		[mm]	7.5		
Technical data in acc. with IEC/ DIN VDE					
Insulating material group		—	I		
Surge voltage category / contamination class		—/—	III / 3 III / 2 II / 2		
Rated voltage		[V]	400 630 1000		
Rated surge voltage		[kV]	6 6 6		
Nominal current / cross section		[A]/[mm²]	10 / 1.5		
Maximum load current / cross section		[A]/[mm²]	10 / 1.5		
Capacity connection					
Solid / stranded / conductor sizes		[mm²]/[mm²]/AWG	0.2 - 1.5 / 0.2 - 1.5 / 24 - 16		
Stranded with ferrule without / with plastic sleeve		[mm²]	0.25 - 1.5 / 0.25 - 1.5		
Stripping length		[mm]	7		
Internal cylindrical gauge (IEC 60 947-1)		—	A 1		
Insulating material		—	PA		
Inflammability class in acc. with UL 94		—	V0		
Approval data (UL/CUL and CSA)					
Nominal voltage / current / conductor sizes		UL/CUL: [V]/[A]/AWG	300 / 10 / 26 - 16		
		CSA: [V]/[A]/AWG	—		

Current carrying capacity depending on the ambient temperature
1 = base curve



Size of the p.c.b.: 1,6 ± 0.2 mm.



ZEC 1,5/...-LPV-7,5
7.5 mm Pitch

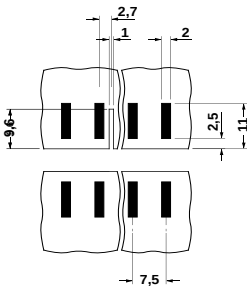
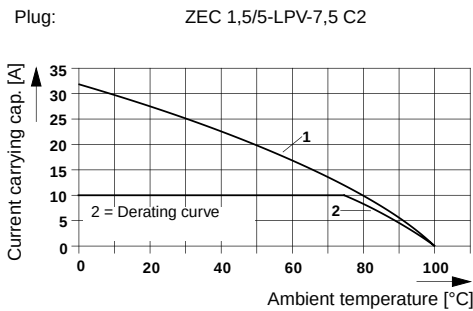


Note:
Only actuate COMBICON plug connectors when under no load condition. If for operating reasons small loads must be switched, experimental values are available upon request.

Description	No. of pos.	Dim. a [mm]	Type	Order No.	Pcs./Pkt.
P.C.B. connector, 7.5 mm pitch,					
Color: green	2	15	ZEC 1,5/2-LPV-7,5 C2	18 98 37 6	50
	3	22.5	ZEC 1,5/3-LPV-7,5 C2	18 98 38 9	
	4	30	ZEC 1,5/4-LPV-7,5 C2	18 98 39 2	
	5	37.5	ZEC 1,5/5-LPV-7,5 C2	18 98 40 2	
	6	45	ZEC 1,5/6-LPV-7,5 C2	18 98 41 5	
	7	52.5	ZEC 1,5/7-LPV-7,5 C2	18 98 42 8	
	8	60	ZEC 1,5/8-LPV-7,5 C2 ¹⁾	18 98 43 1	
Technical data					
Dimensions					
Pitch		[mm]	see description 7,5		
Technical data in acc. with IEC/ DIN VDE					
Insulating material group		–	III / 3	I	II / 2
Surge voltage category / contamination class		–/–	400	630	1000
Rated voltage		[V]	6	6	6
Rated surge voltage		[kV]		10 / --	
Nominal current / cross section		[A]/[mm²]		10 / --	
Maximum load current / cross section		[A]/[mm²]			
Capacity connection					
Solid / stranded / conductor sizes		[mm²]/[mm²]/AWG		--	
Stranded with ferrule without / with plastic sleeve		[mm²]		--	
Stripping length					
		[mm]		--	
Internal cylindrical gauge (IEC 60 947-1)					
		-		--	
Insulating material					
Inflammability class in acc. with UL 94				PA	
				V0	
Approval data (UL/CUL and CSA)					
Nominal voltage / current / conductor sizes		UL/CUL: [V]/[A]/AWG		--	
		CSA: [V]/[A]/AWG		--	

¹⁾ Further numbers of positions on request.

Current carrying capacity depending on the ambient temperature
1 = base curve



Size of the p.c.b.: 1.6 ± 0.2 mm.

