

Tables, technical data and explanations

facts & DATA

Maximum short-time current capability assigned to mounting rails

DIN EN 60 947-7-2/VDE 0611 part 3: 1996-06

Rail profile	Material	Equivalent E-Cu cross section mm ²	Short-time current capability 1 s kA	Rated thermal current of a PEN busbar A
DIN rail TH 15 – 5.5 to IEC 715	Steel Copper ¹⁾ Aluminum ¹⁾	10 25 16	1.2 3 1.92	– 101 76
G rail G32 to IEC 715	Steel Copper ¹⁾ Aluminum ¹⁾	35 120 70	4.2 14.4 8.4	– 269 192
DIN rail TH 35 -7.5 to IEC 715	Steel Copper ¹⁾ Aluminum ¹⁾	16 50 35	1.92 6 4.2	– 150 125
DIN rail TH 35 -15 to IEC 715 (made from 2.3 mm thick material)	Steel Copper ¹⁾ Aluminum ¹⁾	50 150 95	6 18 11.4	– 309 232
¹⁾ Selected copper or aluminum alloys from the manufacturer of the terminal block layout were used to achieve the values in the table.				

Electrical and thermal properties of insulating materials

					Duroplast	Thermoplast							
						Polyamide						Polybutylen- terephthalate	Poly- carbonate
Characteristics/properties	Standard		Unit		Typ 150	PA 6	PA 6 GF	PA 66	PA 66 GF	PA 66/6	PA 66/6 GF	PBT GF	PC
Dielectric strength	VDE 0303-T21	IEC 243/1	kV / mm	tr/lf.	ca. 10	100 / 60	40 / 31	120 / 80	80 / 65	55 / 45	26 / 23	40	35
Dielectric loss tan δ at 1 MHz	VDE 0303-T4	IEC 250		tr/lf.	0.3	0.03 / 0.3	0.015 / -	0.025 / 0.2	0.02 / 0.1	0.02 / 0.3	0.016 / -	0.017	0.01
Specific volume resistance	VDE 0303-T30	IEC 93	$\Omega \times \text{cm}$	lf.	10 ¹⁰	10 ¹²	10 ¹¹	10 ¹²	10 ¹²	10 ¹²	10 ¹⁵	10 ¹⁶	10 ¹⁵
Surface resistance	VDE0303-T30	IEC 93	Ω	lf.	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁰	10 ¹⁴	10 ¹³	10 ¹⁵
Tracking	VDE0303-T1	IEC 112	CTI		600	600	550	600	550	600	325	200	225
Operating temperature RTI*	UL 746 B		°C at 1.5mm			130	140	125	115	120	140	140	130
Temperature index TI **	VDE0304 T.21	IEC 216-1	°C		120 / 80	100 / 80	185 / 160	118 / 101	157 / 139	123 / 107		130 / 120	
Lower operating temperature without mechanical stress			°C		-55	-40	-40	-40	-40	-40	-40	-40	-40
Flammability	UL 94		class/material thickness		V0	V2 / 1.5	V2 / 0.8	V2 / 0.4	V0 / 0.8	V0 / 0.4	V0 / 1.5	V0 / 0.5	V0 / 1.04
Suitability for tropical areas					good	good	good	good	good	good	good	good	good
* electrical value													
** based on 50% drop in tensile strength after 5000/20000 hours													