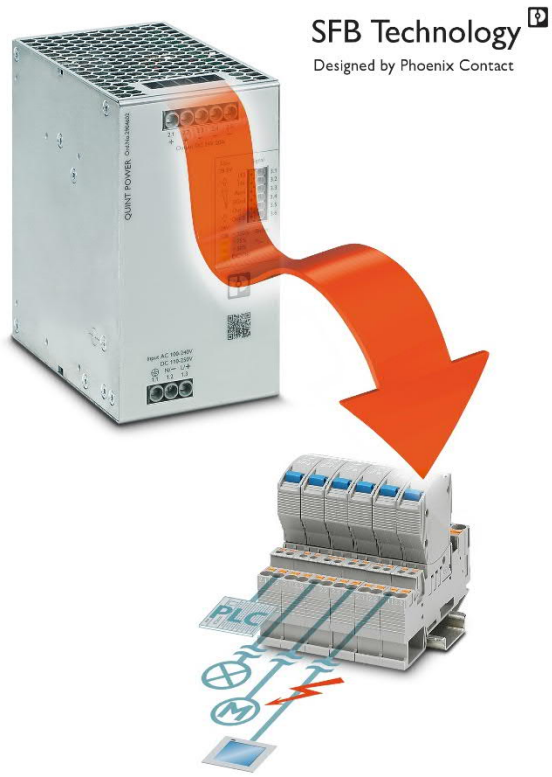
QUINT POWER –
Highst system availability due to SFB Technology

Standard circuit-breakers triggered reliably and quickly

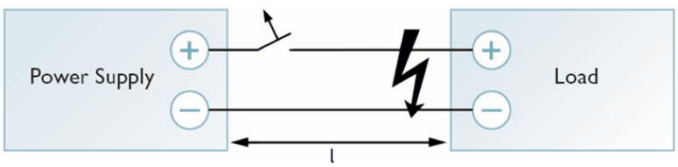


In order to be able to trigger standard circuit- breakers magnetically and quickly the SFB Technology supplies up to six times the nominal current for 15 ms.

SFB configuration

Observe the following framework conditions for determining the maximum distance between the power supply and load:

- ☑ The performance class of the power supply.
- ☑ The cross section of the connecting cable.
- ☑ The tripping characteristic of the fuse component.



Schematic diagram of the maximum cable length

Maximum distance between the power supply and load

The distances given in the table are worst-case values and therefore cover the entire tolerance range for the magnetic tripping of circuit breakers. The possible distances are often greater in practice.

QUINT POWER 24V/5A

Maximum distance l [m] with fuse		Melting integral I^2t [A^2s]	Conductor cross section			
			A [mm^2]	0.75	1.0	1.5	2.5
			AWG	18	(17)	16	14
Cooper Bussman	GMA 1A	0.48		48	64	97	162
	GMA 1.25A	0.84		36	48	72	120
	GMA 1.5A	1.6		19	25	38	64
	GMA 1.6A	2		15	20	31	51
	GMA 2A	3.1		9	13	19	33
	GMC 1.A	1.8		15	20	31	52
	GMC 1.25A	3.4		8	11	16	27

QUINT POWER 24V/10A

Maximum distance l [m] with fuse		Melting integral I^2t [A^2s]	Conductor cross section			
			A [mm^2]	0.75	1.0	1.5	2.5
			AWG	18	(17)	16	14
Cooper Bussman	GMA 1A	0.48		48	64	97	162
	GMA 1.25A	0.84		36	49	73	122
	GMA 1.5A	1.6		26	35	53	88
	GMA 1.6A	2		23	31	47	79
	GMA 2A	3.1		19	25	38	63
	GMA 2.5A	4.9		12	16	25	42
	GMA 3A	8.8		7	9	14	23
	GMA 3.15A	9.7		6	8	12	21
	GMA 3.5A	13		4	6	9	16
	GMC 1A	1.8		23	31	47	78
	GMC 1.25A	3.4		17	22	34	56
	GMC 1.5A	5.4		10	14	21	36
	GMC 1.6A	5.8		10	13	20	34
	GMC 2A	8.9		6	9	13	22
	GMC 2.5A	13		4	6	9	15

QUINT POWER 24V/20A

Maximum distance l [m] with fuse		Melting integral I^2t [A^2s]	Conductor cross section					
		A [mm^2]	0.75	1.0	1.5	2.5	4.0	6.0
		AWG	18	(17)	16	14	12	10
Cooper Bussman	GMA 1A	0.48	48	64	97	162	259	389
	GMA 1.25A	0.84	36	49	73	122	196	294
	GMA 1.5A	1.6	26	35	53	88	142	212
	GMA 1.6A	2	23	31	47	79	127	190
	GMA 2A	3.1	19	25	38	63	101	152
	GMA 2.5A	4.9	15	20	30	51	81	122
	GMA 3A	8.8	11	15	22	37	60	90
	GMA 3.15A	9.7	10	14	21	36	57	86
	GMA 3.5A	13	9	12	18	31	49	74
	GMA 4A	19	6	8	12	21	34	51
	GMA 5A	29	4	5	8	14	22	34
	GMC 1A	1.8	23	31	47	78	125	188
	GMC 1.25A	3.4	17	23	34	58	93	140
	GMC 1.5A	5.4	13	18	27	46	74	111
	GMC 1.6A	5.8	13	18	27	45	72	108
	GMC 2A	8.9	11	14	22	37	59	89
	GMC 2.5A	13	9	12	18	30	49	73
	GMC 3A	19	6	8	12	21	34	51
	GMC 3.15A	23	5	7	10	17	28	42
	GMC 3.5A	25	4	6	9	16	26	39
	GMC 4A	36	3	4	6	11	18	27

QUINT POWER 24V/40A

Maximum distance l [m] with fuse		Schmelz-integral I^2t [A^2s]	Conductor cross section						
			A [mm^2]	0.75	1.0	1.5	2.5	4.0	6.0	10.0
			AWG	18	(17)	16	14	12	10	8
Cooper Bussman	GMA 1A	0.48		48	64	97	162	259	388	648
	GMA 1.25A	0.84		36	49	73	122	196	294	490
	GMA 1.5A	1.6		26	35	53	88	141	212	354
	GMA 1.6A	2		23	31	47	79	127	190	317
	GMA 2A	3.1		19	25	38	63	101	152	254
	GMA 2.5A	4.9		15	20	30	51	81	122	204
	GMA 3A	8.8		11	15	22	37	60	90	151
	GMA 3.15A	9.7		10	14	21	36	57	86	144
	GMA 3.5A	13		9	12	18	31	49	74	124
	GMA 4A	19		7	10	15	25	41	61	103
	GMA 5A	29		6	8	12	20	33	50	83
	GMC 1A	1.8		23	31	47	78	125	188	314
	GMC 1.25A	3.4		17	23	34	58	93	139	233
	GMC 1.5A	5.4		13	18	27	46	74	111	185
	GMC 1.6A	5.8		13	18	27	45	72	108	180
	GMC 2A	8.9		11	14	22	37	59	89	149
	GMC 2.5A	13		9	12	18	30	49	74	123
	GMC 3A	19		7	10	15	25	41	61	103
	GMC 3.15A	23		6	9	13	23	37	55	93
	GMC 3.5A	25		6	8	13	22	35	53	89
	GMC 4A	36		5	7	11	18	29	44	74

Fuse, type: Cooper Bussmann GMA xA, GMC xA

The cable lengths determined are based on the following parameters:

Tripping:	thermal
Characteristic:	Cooper Bussmann GMA (fast-blow - fast acting) Cooper Bussmann GMC (medium-blow - medium time delay)
Ambient temperature:	+20 °C
Reaching the set output voltage again (U_{Out} ≤ 90% U_{Set}):	<10 ms
Internal resistance R_i of the fuse:	taken into consideration
Comments:	In addition to the short-circuit current, the power supply unit also supplies half the nominal current for load paths connected in parallel.