



TERMINAL BLOCKS, FLEXIBLE BUSBAR AND BRAIDS

symbol description

terminal blocks



Polycarbonate body



Zinc plated Steel screws



Polyamide PA6.6 body



Chrome plated Steel screws



Polypropylene body



Brass clamp



Steatite body



Operating temperature range



Polyvinylchloride insulating sheath



Italian Institute of the Quality Mark type approval



Electrolytically Tin plated Copper interconnections



Lloyd's Register of Shipping type approval



Electrolytically Tin plated to avoid oxidation



Italian Naval Register type approval



Nominal voltage V



Marking CE



Degree of Protection IP20



Self-extinguishing class V0 UL94



example applications

terminal blocks

type
ZETApiù®

Z35T-11 uninterrupted,
main earth loop, terminal block.
Used for equipotential bonding

UNINTERRUPTED
MAIN EARTH
LOOP



Z6-10D terminal blocks
used in a control panel.

SUITABLE
FOR DIN RAIL
MOUNTING



Z16-8D and Z6-6D
mounted on DIN rails.
Used in control panels

type
ZETAmini®

ZETAmini terminal blocks
used for domestic/commercial
applications.



type
ZETAblock®

A typical application of the
Z50-DP12-160 and Z35-DP14B-125
installed in a distribution panel



Z6

SINGLE POLE TERMINAL BLOCKS

indirect clamping - nominal section 6 sqmm

type
ZETApiù®



The "Z...D" version has been designed for mounting on DIN rails



3, 5, 6 and 10 way, single pole terminal blocks for conductor section 1 to 6 sqmm.

Self contained and robust, they are quick and easy to install for both industrial and domestic use.

The indirect clamping of the "ZETApiù" terminal blocks guarantees a low and stable contact resistance. Indirect clamping eliminates damage to the conductor strands.

The easy-entry receptacles also grant a fast and reliable insertion of the cable.

Connecting Capacity sqmm	Type	No. of Ways	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
(3 way) 1÷6	Z6-3	3	450	85	IP20	V-0 (UL 94)	23x23xh27,5	15,0	30
	Z6-3D						23x40xh36,5	18,5	10
(5 way) 1÷6	Z6-5	5	450	85	IP20	V-0 (UL 94)	35x23xh27,5	23,0	20
	Z6-5D						35x40xh36,5	26,5	10
(6 way) 1÷6	Z6-6	6	450	85	IP20	V-0 (UL 94)	23x43xh28,5	26,0	15
	Z6-6D						23x53xh33	31,0	10
(10 way) 1÷6	Z6-10	10	450	85	IP20	V-0 (UL 94)	35x43xh28,5	41,0	10
	Z6-10D						35x53xh33	46,0	15

D= Version with clamp for DIN rail

Technical features:

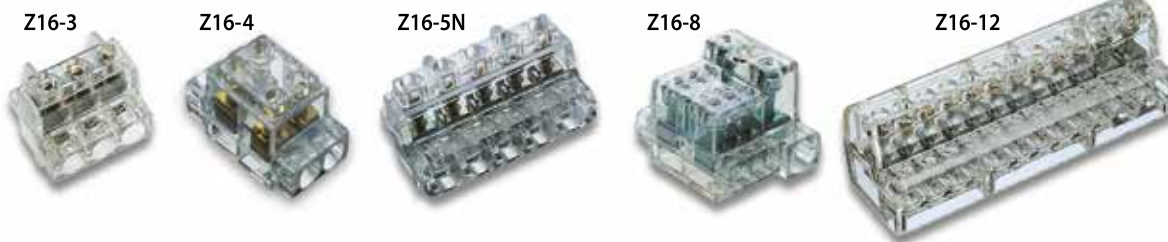
- Self-extinguishing Polycarbonate body
- Tempered Steel clamps
- Electrolytically Tin plated Copper interconnections

Z16

SINGLE POLE TERMINAL BLOCKS

indirect clamping - nominal section 16 sqmm

type
ZETApiù®



3, 4, 5, 8 and 12 way, single pole terminal blocks.

Ideal for use as an equipotential bonding connector for both industrial and domestic use.

Connecting Capacity sqmm	Type	No. of Ways	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
16	Z16-3	3	450	85	IP20	V-0 (UL 94)	38x31,3xh38	52,0	20
	Z16-3D						38x50xh44	55,5	15
16	Z16-4	4	450	85	IP20	V-0 (UL 94)	27x54xh37	50,0	15
	Z16-4D						27x58xh43	54,0	10
16	Z16-5N	5	450	85	IP20	V-0 (UL 94)	61x31,5xh38	64,5	10
	Z16-5ND						61x50xh44	68,0	4
(2 way) 16 + (6 way) 6	Z16-8	8 (2÷6)	450	85	IP20	V-0 (UL 94)	35,5x50xh36,5	50,0	15
	Z16-8D						35,5x57xh42	56,0	10
(2 way) 16 + (10 way) 6	Z16-12	12 (2÷10)	450	85	IP20	V-0 (UL 94)	104,5x32,5xh36,5	115,0	8
	Z16-12D						104,5x50xh42	125,0	5

D= Version with clamp for DIN rail

SINGLE POLE TERMINAL BLOCKS

indirect clamping - nominal section 35 sqmm

type
ZETApiù®

Z35-3



Z35-4



Z35-6



Connecting Capacity sqmm	Type	No. of Ways	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
35	Z35-3	3	450	85	IP20	V-0 (UL 94)	53x48,5xh42	110	10
	Z35-3D						53x50xh48	114	5
35	Z35-4	4	450	85	IP20	V-0 (UL 94)	37x85xh42	129	5
	Z35-4D						37x85xh48	133	5
(2 way) 35 + (4 way) 16	Z35-6	6 (2÷4)	450	85	IP20	V-0 (UL 94)	83x41xh43	130	8
	Z35-6D						83x49xh52	140	5

D= Version with clamp for DIN rail



3, 4 and 6 way, single pole terminal blocks. Ideal for use as an equipotential bonding connector for both industrial and domestic use.

SINGLE POLE TERMINAL BLOCKS

indirect clamping - for earthing applications ⊕

type
ZETApiù®

Z50-10D



Z35T-11
Z35T-11D



Z35-26D



Connecting Capacity sqmm	Type	No. of Ways	Maximum Operating Temperature °C	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
(1 way) 35 + (10 way) 6	Z35T-11	11	85	V-0 (UL 94)	58x43xh42	70	10
	Z35T-11D	(1+10)			58x53xh47	75	10
(2 way) 35 + (24 way) 10	Z35-26D	26 (2+24)	85	V-0 (UL 94)	151x52xh48	379	4
(2 way) 50 + (8 way) 25	Z50-10D	10 (2+8)	85	V-0 (UL 94)	77,5x55xh49	320	6

D= Version with clamp for DIN rail



























10, 11 and 26 way, single pole terminal blocks. Ideal for use as an equipotential bonding connector for both industrial and domestic use.

CONNECTING CAPACITY OF TERMINAL BLOCKS

indirect clamping

type
ZETApiù®

Type	Nominal Section	No. of Ways x Nominal Section	Connecting Capacity of Each Way* No. of Conductors x Section	Markings
Z6-3 Z6-3D	6 [□]	3 x 6 [□]		  6 sqmm 450 V T 85°C  
Z6-5 Z6-5D	6 [□]	5 x 6 [□]	1 x 6 [□] R/F 1 x 4 [□] R/F	
Z6-6 Z6-6D	6 [□]	6 x 6 [□]	1÷2 x 2,5 [□] R/F 1÷2 x 1,5 [□] R/F 1÷4 x 1 [□] R/F	  6 sqmm 450 V T 85°C  
Z6-10 Z6-10D	6 [□]	10 x 6 [□]		
Z16-3 Z16-3D	16 [□]	3 x 16 [□]	1 x 16 [□] R/F 1 x 10 [□] R/F 1÷2 x 6 [□] R/F 1÷3 x 4 [□] R/F 1÷4 x 2,5 [□] R/F 1÷8 x 1,5 [□] R/F	  16 sqmm 450 V T 85°C  
Z16-4 Z16-4D	16 [□]	4 x 16 [□]	1 x 16 [□] F 1 x 10 [□] F 1÷2 x 6 [□] F 1÷3 x 4 [□] F 1÷4 x 2,5 [□] F 1÷8 x 1,5 [□] F	
Z16-5N Z16-5ND	16 [□]	5 x 16 [□]	1 x 16 [□] R/F 1 x 10 [□] R/F 1÷2 x 6 [□] R/F 1÷3 x 4 [□] R/F 1÷4 x 2,5 [□] R/F 1÷8 x 1,5 [□] R/F	  16 sqmm 450 V T 85°C  
Z16-8 Z16-8D	16 [□] / 6 [□]	2 x 16 [□]	1 x 16 [□] R/F 1 x 10 [□] R/F 1÷2 x 6 [□] R/F 1÷3 x 4 [□] R/F 1÷4 x 2,5 [□] R/F 1÷8 x 1,5 [□] R/F	
		6 x 6 [□]	1 x 6 [□] R/F 1 x 4 [□] R/F 1÷2 x 2,5 [□] R/F 1÷2 x 1,5 [□] R/F 1÷4 x 1 [□] R/F	  16~6 sqmm 450 V T 85°C  
Z16-12	16 [□] / 6 [□]	2 x 16 [□]	1 x 16 [□] F 1 x 10 [□] F 1÷2 x 6 [□] F 1÷3 x 4 [□] F 1÷4 x 2,5 [□] F	
Z16-12D		10 x 6 [□]	1 x 6 [□] F 1 x 4 [□] F 1÷2 x 2,5 [□] F 1÷2 x 1,5 [□] F 1÷4 x 1 [□] F	  16~6 sqmm 450 V T 85°C  

* A mixture of conductor sizes may be connected to the terminal block provided that the sum of their sections is less than the nominal section.
R = Rigid conductor F = Flexible conductor

CONNECTING CAPACITY OF TERMINAL BLOCKS

indirect clamping

type
ZETApiù®

Type	Nominal Section	No. of Ways x Nominal Section	Connecting Capacity of Each Way* No. of Conductors x Section	Markings
Z35-3 Z35-3D	35 [□]	3 x 35 [□]	1 x 35 [□] R/F 1 x 25 [□] R/F 1÷2 x 16 [□] R/F 1÷3 x 10 [□] R/F 1÷5 x 6 [□] R/F	CE, Italian Institute of the Quality Mark, 35 sqmm 450 V T 85°C
Z35-4 Z35-4D	35 [□]	4 x 35 [□]	1 x 35 [□] F 1 x 25 [□] F 1÷2 x 16 [□] F 1÷3 x 10 [□] F 1÷6 x 6 [□] F	CE, Italian Institute of the Quality Mark, 35 sqmm 450 V T 85°C
Z35-6 Z35-6D	35 [□] / 16 [□]	2 x 35 [□]	1 x 35 [□] R/F 1 x 25 [□] R/F 1÷2 x 16 [□] R/F 1÷3 x 10 [□] R/F 1÷6 x 6 [□] F	CE, Italian Institute of the Quality Mark, 35~16 sqmm 450 V T 85°C, Lloyd's Register, Italian Naval Register
		4 x 16 [□]	1 x 16 [□] R/F 1 x 10 [□] R/F 1÷2 x 6 [□] R/F 1÷3 x 4 [□] R/F 1÷5 x 2,5 [□] F	
Z35T-11 Z35T-11D	35 [□] / 6 [□]	1 x 35 [□]	1 x 35 [□] R/F 1 x 25 [□] R/F 1 x 16 [□] R/F 1 x 10 [□] R/F	CE, Italian Institute of the Quality Mark, 35~6 sqmm T 85°C
		10 x 6 [□]	1 x 6 [□] R/F 1 x 4 [□] R/F 1÷2 x 2,5 [□] R/F 1÷2 x 1,5 [□] R/F 1÷4 x 1 [□] R/F	
Z35-26D	35 [□] / 10 [□]	2 x 35 [□]	1 x 35 [□] R/F 1 x 25 [□] R/F 1÷2 x 16 [□] R/F 1÷3 x 10 [□] R/F 1÷6 x 6 [□] R/F	CE, Italian Institute of the Quality Mark, 35~10 sqmm T 85°C, Lloyd's Register, Italian Naval Register
		24 x 10 [□]	1 x 10 [□] R/F 1 x 6 [□] R/F 1÷2 x 4 [□] R/F 1÷4 x 2,5 [□] R/F	
Z50-10D	50 [□] / 25 [□]	2 x 50 [□]	1 x 50 [□] R/F 1 x 35 [□] R/F 1÷2 x 25 [□] R/F 1÷4 x 16 [□] R/F	CE, Italian Institute of the Quality Mark, ** 50~25 sqmm T 85°C
		8 x 25 [□]	1 x 25 [□] R/F 1÷2 x 16 [□] R/F 1÷3 x 10 [□] R/F 1÷6 x 6 [□] R/F 1÷9 x 4 [□] R/F	

* A mixture of conductor sizes may be connected to the terminal block provided that the sum of their sections is less than the nominal section.
R = Rigid conductor F = Flexible conductor

MARKINGS



Italian Institute of the Quality Mark
type approval



Lloyd's Register of Shipping
type approval



Italian Naval Register
type approval

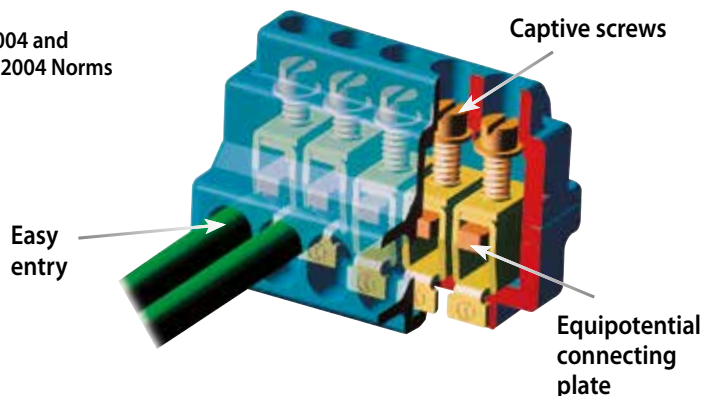


**
EN60947-1: 2007+A1: 2011: 2014
and EN 60947-7-1: 2002 Norms

Conforms to:

Directives 2014/35/UE

EN 60998-1: 2004 and
EN 60998-2-1: 2004 Norms



indirect clamping

type
ZETAblock®



Type	No. of poles	No. of Ways per pole	Nominal CSA for each pole sqmm	Maximum operating voltage (U _i)	Impulse voltage (U _{imp})	Maximum operating current (I _n)	Allowable short duration fault current (I _{cw})	Maximum allowed peak fault current (I _{pk})	Self Extinguishing Specification	Dimensions mm	Weight g	Qty
Z25-DP7-100	4	7 (2+5)	(2 way) 25 + (5 way) 6	800 V	8 kV	100 A	3 kA	18 kA	V-0 (UL 94)	70x84xh45	290	2
Z35-DP14-125	4	14 (2+2+10)	(2 way) 35 + (2 way) 16 + (10 way) 6	800 V	8 kV	125 A	4,2 kA	18 kA	V-0 (UL 94)	137x83xh46	700	1
Z35-DP14B-125	2	14 (2+2+10)	(2 way) 35 + (2 way) 16 + (10 way) 6	800 V	8 kV	125 A	4,2 kA	18 kA	V-0 (UL 94)	137x44xh46	360	2
Z50-DP12-160	4	12 (2+4+6)	(2 way) 50 + (4 way) 25 + (6 way) 16	800 V	8 kV	160 A	6 kA	18 kA	V-0 (UL 94)	150x84xh48	780	1

100, 125 and 160A, 2–4 pole distribution blocks with 7, 14 and 12 ways per pole respectively.

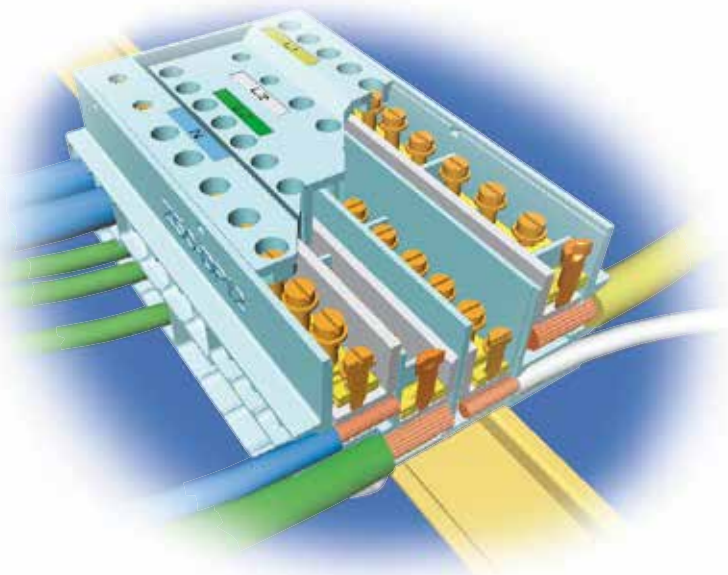
Accepting a wide cable CSA range (1 - 50 sqmm) and of compact size, Zeta-blocks are ideal for control cabinets and distribution panels.

The lateral arrangement of terminals on upper and lower faces (Z35-DP14B one face only), simplifies connection and promotes tidy, homogeneous cable routing to assist subsequent wiring operations.

Easy entry apertures provide quick, effective cable insertion while the indirect clamping feature eliminates damage to cable strands and assures a low, stable contact resistance.

Technical features:

- Self extinguishing antishock Polycarbonate body
- Tempered Steel captive clamping screws and plates
- Electrolytically Tin plated Copper interconnectors



POWER DISTRIBUTION BLOCK

Z-DP

indirect clamping







type

ZETAblock®



CONNECTING CAPACITY OF POWER DISTRIBUTION BLOCK

indirect clamping

Type	Nominal Section	No. of Ways x Nominal Section	Connecting Capacity of Each Way No. of Conductors x Section	Markings
Z25-DP7-100	25□/6□	2 x 25□	1 x 25□ F 1 x 16□ F 1÷2 x 10□ F	  25÷6 sqmm
		5 x 6□	1 x 6□ F 1 x 4□ F 1÷2 x 2,5□ F 1÷2 x 1,5□ F 1÷4 x 1□ F	
Z35-DP14-125 Z35-DP14B-125	35□/16□/6□	2 x 35□	1 x 35□ F 1 x 25□ F 1÷2 x 16□ F 1÷3 x 10□ F	  35÷16÷6 sqmm
		2 x 16□	1 x 16□ F 1 x 10□ F 1÷2 x 6□ F 1÷3 x 4□ F 1÷4 x 2,5□ F	
		10 x 6□	1 x 6□ F 1 x 4□ F 1÷2 x 2,5□ F 1÷2 x 1,5□ F 1÷4 x 1□ F	
Z50-DP12-160	50□/25□/16□	2 x 50□	1 x 50□ F 1 x 35□ F 1÷2 x 25□ F	  50÷25÷16 sqmm
		4 x 25□	1 x 25□ F 1 x 16□ F 1÷2 x 10□ F	
		6 x 16□	1 x 16□ F 1 x 10□ F 1÷2 x 6□ F	

F = Flexible conductor

MARKINGS



Italian Institute of the Quality Mark
type approval

Conforms to:

Directives 2014/35/UE

EN 60947-7-1: 2009 Norms

indirect clamping



type
ZETAmini®



Connecting Capacity sqmm	Type	Nominal Voltage V	Maximum Operating Temperature °C	Insulation Specification	Self Extinguishing Specification	Dimensions mm	Weight g	Quantity
2,5	Z2.5-1	450	85	IP20	V-0 (UL 94)	7,6x20xh23,5	3	500/25
6	Z6-1	450	85	IP20	V-0 (UL 94)	11,5x28xh29	6	250/25
10	Z10-1	450	85	IP20	V-0 (UL 94)	15,6x32xh32,5	11	100/10
16	Z16-1	450	85	IP20	V-0 (UL 94)	18x34xh38	15	100/10
25	Z25-1	450	85	IP20	V-0 (UL 94)	20,8x42,5xh43,5	29	50/10
35	Z35-1	450	85	IP20	V-0 (UL 94)	25x45xh51,5	37	40/10

One way, single pole terminal blocks for conductors sections from 0.5 to 35 sqmm.

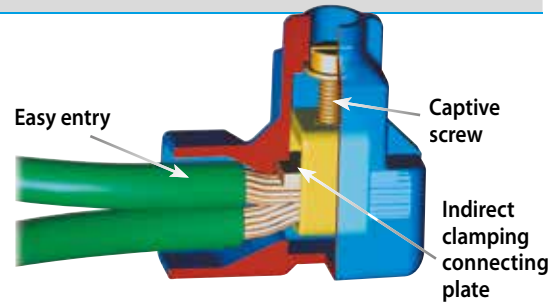
Self contained and robust, they are ideal for the fast and safe installation for industrial and domestic applications.

The indirect clamping of the "ZETAmini" terminal blocks guarantees a low and stable contact resistance.

The easy-entry receptacle also grants a fast and reliable insertion of the cable.

Technical features:

- Self-extinguishing Polycarbonate body
- Electrolytically Zinc plated, tempered Steel clamp and screw
- Electrolytically Tin plated Steel connection plate



Type	Nominal Section	Connecting Capacity of Each Way* No. of Conductors x Section	Markings
Z2.5-1	2,5 [□]	2 x 2,5 [□] R/F 2 ÷ 3 x 1,5 [□] R/F 2 ÷ 5 x 1,0 [□] R/F 2 ÷ 6 x 0,75 [□] R/F 2 ÷ 10 x 0,5 [□] R/F 2 ÷ 18 x Ø 0,4 ÷ 0,6 mm communication type wire	CE, TÜV, 2,5 sqmm, 450 V, T 85°C, IP 20, UL, CSA
Z6-1	6 [□]	2 x 6 [□] R/F 2 ÷ 3 x 4 [□] R/F 2 ÷ 4 x 2,5 [□] R/F 2 ÷ 6 x 1,5 [□] R/F 2 ÷ 6 x 1 [□] R/F 2 ÷ 10 x 0,75 [□] R/F 2 ÷ 12 x 0,5 [□] R/F (1 x 6 [□] F) + (4 x 1,5 [□] F) (1 x 6 [□] F) + (2 x 2,5 [□] F)	CE, TÜV, 6 sqmm, 450 V, T 85°C, IP 20, UL, CSA
Z10-1	10 [□]	2 x 10 [□] R/F 2 ÷ 3 x 6 [□] R/F 2 ÷ 5 x 4 [□] R/F 2 ÷ 8 x 2,5 [□] R/F 2 ÷ 12 x 1,5 [□] R/F 2 ÷ 20 x 1 [□] R/F 2 ÷ 25 x 0,75 [□] R/F (1 x 6 [□] F) + (1 x 4 [□] F) + (2 x 2,5 [□] F) + (3 x 1,5 [□] F)	CE, TÜV, 10 sqmm, 450 V, T 85°C, IP 20, UL, CSA
Z16-1	16 [□]	2 x 16 [□] R/F 2 ÷ 3 x 10 [□] R/F 2 ÷ 5 x 6 [□] R/F 2 ÷ 8 x 4 [□] R/F 2 ÷ 12 x 2,5 [□] R/F 2 ÷ 18 x 1,5 [□] R/F	CE, TÜV, 16 sqmm, 450 V, T 85°C, IP 20, UL, CSA
Z25-1	25 [□]	2 x 25 [□] R/F 2 ÷ 3 x 16 [□] R/F 2 ÷ 4 x 10 [□] R/F 2 ÷ 8 x 6 [□] R/F 2 ÷ 11 x 4 [□] R/F 4 ÷ 16 x 2,5 [□] R/F	CE, TÜV, 25 sqmm, 450 V, T 85°C, IP 20, UL, CSA
Z35-1	35 [□]	2 x 35 [□] R/F 2 ÷ 3 x 25 [□] R/F 2 ÷ 4 x 16 [□] R/F 2 ÷ 7 x 10 [□] R/F 2 ÷ 11 x 6 [□] R/F 4 ÷ 17 x 4 [□] R/F 5 ÷ 28 x 2,5 [□] R/F	CE, TÜV, 35 sqmm, 450 V, T 85°C, IP 20, UL, CSA

*A mixture of conductor sizes may be connected to the terminal block provided that the sum of their sections is less than twice the nominal section.

R = Rigid conductor F = Flexible conductor

Conforms to:

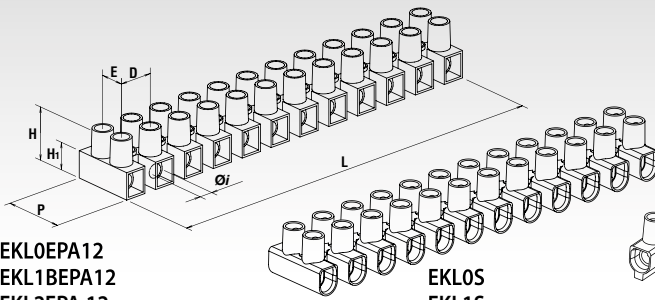
Directives 2014/35/UE

EN 60998-1: 2004 and

EN 60998-2-1: 2004 Norms

TERMINAL BLOCK TYPE EKL

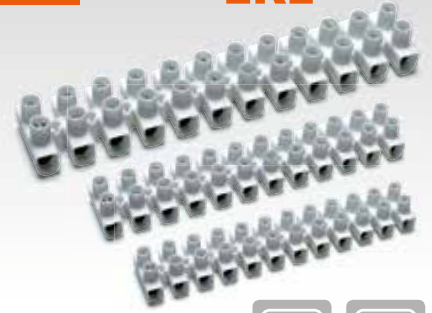
EKL



EKLOEPA12
EKL1BEPA12
EKL2EPA 12
EKL3EM4PA12

EKLOS
EKL1S
EKL2S
EKL3S

EKL4BEPA12
EKL4BESVCE



Type 12 Poles of Polyamide (PA6)

Type	Nominal section sqmm	Dimensions mm								Screw	Quantity
		Øi	L 12 poles	H	H1	P	E	D			
△ EKLOEPA12	2,5	2,8	94,0	13,4	7,6	16,2	6,4	8,0	M2,6	50	
△ EKL1BEPA12	4	3,5	117,0	15,0	7,7	18,6	7,3	10,0	M3	30	
△ EKL2EPA12	6	4,2	133,7	17,3	8,8	22,2	10,0	11,5	M3,5	15	
□ EKL3EM4PA12	16	5,8	175,0	20,8	11,4	25,2	11,0	15,0	M4	25	
○ EKL4BEPA12	25	7,0	187,3	28,0	15,5	30,0	11,0	16,0	M5	25	


Type 12 Poles of Polypropylene (PP)

Type	Nominal section sqmm	Dimensions mm								Screw	Quantity
		Øi	L 12 poles	H	H1	P	E	D			
● EKLOS	4	3,2	94,9	13,0	-	16,6	6,4	8,1	M2,6	50	
● EKL1S	6	3,5	116,5	14,9	-	18,9	7,3	10,0	M3	30	
● EKL2S	10	4,3	133,8	17,3	-	23,4	10,0	11,5	M3,5	15	
● EKL3S	16	5,5	174,5	25,0	-	20,7	11,0	15,0	M4	25	
○ EKL4BESVCE	25	7,0	187,3	28,0	-	30,0	11,0	16,0	M5	25	

- △ Nominal voltage : 450 V
Ambient temperature : max 85°C
Test temperature EN 60998: 115°C
- Nominal voltage : 450 V
Ambient temperature: max 110°C
Test temperature EN 60998: 140°C

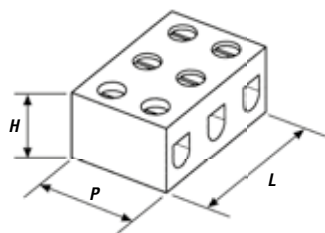
- Nominal voltage: 750 V
Ambient temperature: max 80°C
Test temperature: EN 60998: 140°C
- Nominal voltage: 450 V
Ambient temperature: max 80°C

DS 
2B 

EKL OE PA XX XX FG
 N° poles 2B / DS reinforced version


TERMINAL BLOCK TYPE ZS

ZS



Type	Nominal section sqmm		No. of poles	Dimensions mm				Quantity
	Low Str.	Flex		Øi	L	H	P	
ZS-U6	4/6	4	1	3	9	18	19	200
ZS-B6	4/6	4	2	3	22	18	19	80
ZS-T6	4/6	4	3	3	36	18	19	60
ZS-U10	10	6	1	4	13	20	21	200
ZS-B10	10	6	2	4	24	20	21	80
ZS-T10	10	6	3	4	36	20	21	70
ZS-U16	16	10	1	6	15	22	27	100
ZS-B16	16	10	2	6	31	22	27	50
ZS-T16	16	10	3	6	48	22	27	30



- Material:**
- insulating body in STEATITE
 - screw in GALVANIZED STEEL
 - BRASS clamp

Nominal voltage: 450 V
Operating temperature: 300°C



Designation

SFI	8	x 24	x 1
Insulated flexible busbar	Number of strips	Strip width mm	Strip thickness mm

Advantages

Insulated flexible busbar is a self-contained system combining convenient layout and connection with assured insulation and self-supporting construction, resulting in reduced cost installations with extreme ease of use.

Compared to plain busbar:

- Higher current capacity size for size
- Space saving as individual insulated busbars may be positioned in closer proximity
- Layout easier and quicker due to flexibility
- Insulated support not required.

Compared to cables:

- Simple and rapid installation
- Space saving due to tighter bend radius
- Insulated support not required.

Principle of selection

The following charts allow selection of the appropriate configuration based on:

- ambient temperature of 35°C
- required current carrying capacity in Amps
- maximum permitted temperature increase

Example of selection

Required current carrying capacity per phase is 630A.

Maximum permitted temperature in the equipment enclosure is 85°C:

- ambient temperature is 35°C
- maximum permitted temperature rise is 85°C - 35°C = 50°C

The possible selections are where the red vertical line (630A) intersects the green temperature band (50°C):

SFI8X24X1
SFI6X32X1
SFI4X40X1

The final selection will depend on limitations relating to connection palm width.

Technical features

PVC Insulation (for width 9 - 50mm):

- Density: 1,31 g/cm³
- Hardness Shore: 85A
- Breaking resistance: 19,6 MPa
- Breaking elongation: 365%
- Thermal conductivity: 3÷4 10⁻⁴ cal/s/cm²°C
- Dielectric strength: 20 kV/mm
- Self-extinguishing class: Vo (UL 94)

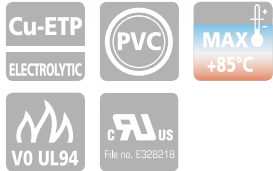
Strip:

- Copper designation: Cu-ETP
- Copper purity min: 99,9%
- Max electrical resistivity at 20°C: 1,7241 μΩ/cm (100% IACS)
- Breaking resistance min: 200MPa
- Breaking elongation min: 30%
- Hardness: <55 HV

Insulated flexible busbar:

- max working voltage: 1000 V
- Working temperature: -40°C ÷ +105°C
- Average thickness of extruded PVC: 2mm
- Average dielectric strength: 20kV/mm

Total conductor c.s.a. sqmm	Type
21,6	SFI3X9X0.8
43,2	SFI6X9X0.8
13,0	SFI2X13X0.5
19,5	SFI3X13X0.5
26	SFI4X13X0.5
39	SFI6X13X0.5
37,2	SFI3X15.5X0.8
49,6	SFI4X15.5X0.8
74,4	SFI6X15.5X0.8
124	SFI10X15.5X0.8
40	SFI2X20X1
60	SFI3X20X1
80	SFI4X20X1
100	SFI5X20X1
120	SFI6X20X1
160	SFI8X20X1
48	SFI2X24X1
72	SFI3X24X1
96	SFI4X24X1
120	SFI5X24X1
144	SFI6X24X1
192	SFI8X24X1
240	SFI10X24X1
64	SFI2X32X1
96	SFI3X32X1
128	SFI4X32X1
160	SFI5X32X1
192	SFI6X32X1
256	SFI8X32X1
320	SFI10X32X1
160	SFI4X40X1
200	SFI5X40X1
240	SFI6X40X1
320	SFI8X40X1
400	SFI10X40X1
200	SFI4X50X1
250	SFI5X50X1
300	SFI6X50X1
400	SFI8X50X1
500	SFI10X50X1
315	SFI5X63X1
378	SFI6X63X1
504	SFI8X63X1
630	SFI10X63X1
320	SFI4X80X1
400	SFI5X80X1
480	SFI6X80X1
640	SFI8X80X1
800	SFI10X80X1
500	SFI5X100X1
600	SFI6X100X1
800	SFI8X100X1
1000	SFI10X100X1
1200	SFI12X100X1



Concept and design

Cembre SFI series insulated flexible busbar comprises a set of Cu strips within an insulated sleeve - for widths 9-50mm this is extruded PVC, for widths 63-100mm it is heat shrunk material.

The dielectric strength of the insulation is guaranteed independent of the eventual formation of the busbar and its working conditions (humidity, temperature and environmental aggressors).

Dimensions

Standard length:

2000 mm (consult us for other lengths)

Strip thickness:

0,5 - 1 mm

Number of strips:

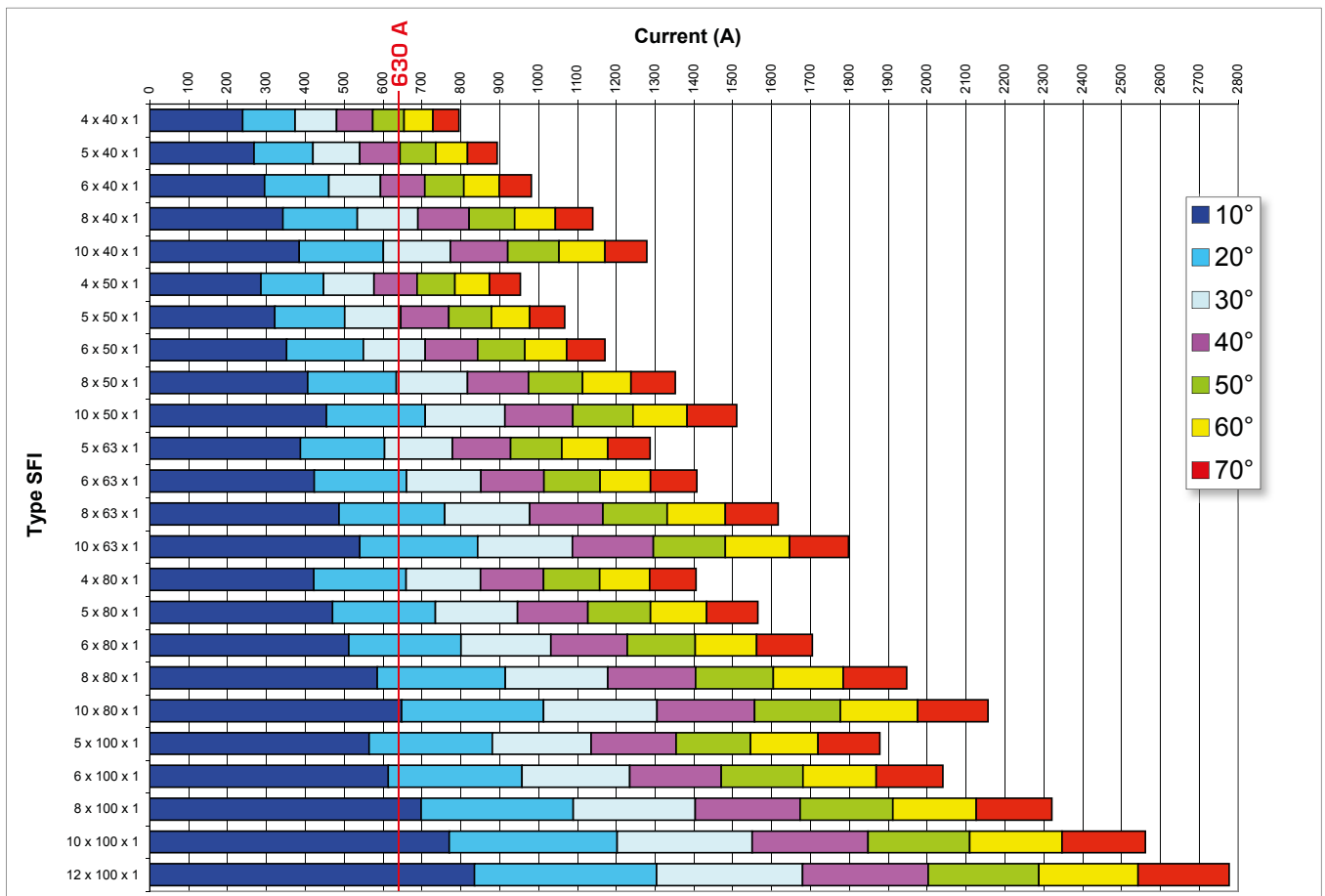
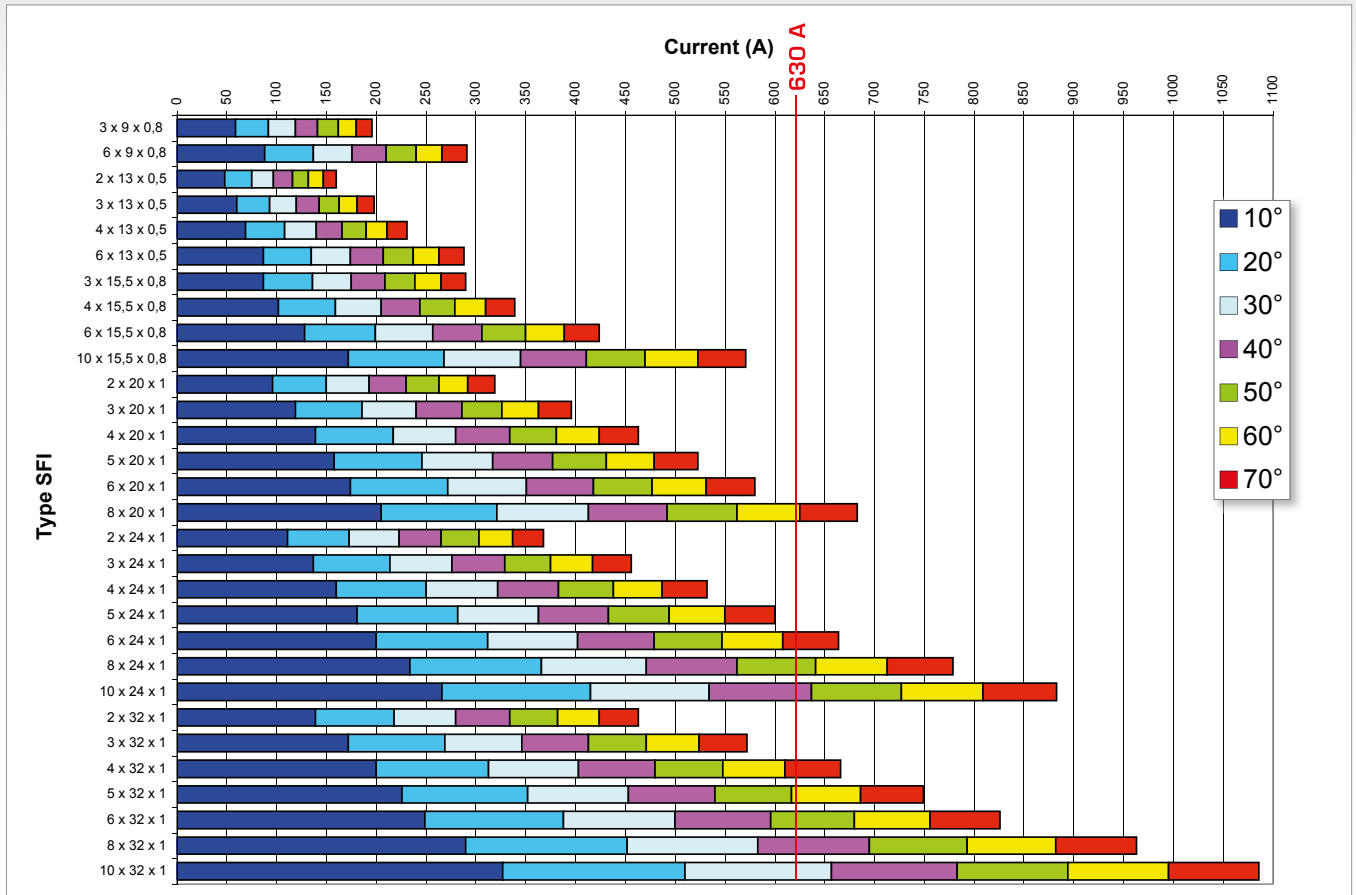
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Applications

- Power distribution, substituting cable with extruded insulation and rigid busbar
- Electrical equipment (racks, circuit breakers, rectifiers)
- Transformers

Current carrying capacity (A)

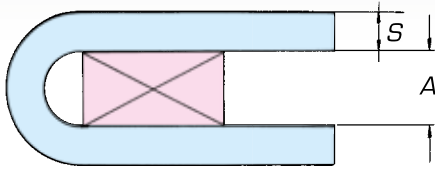
Temperature increase for each configuration based on an ambient temperature of 35°C



Mechanical bending and torsion testing

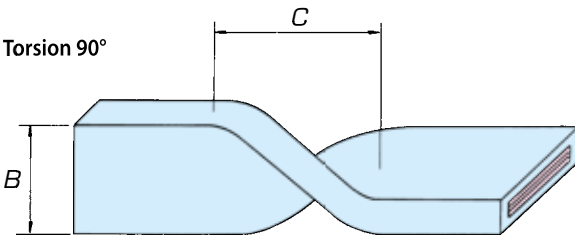
Test temperatures: -10°C and +80°C.

Bending 180°



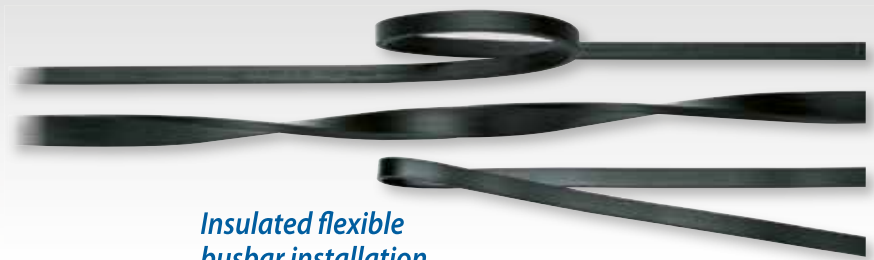
S = Bar thickness (conductor + insulation)
A = 2 x S

Torsion 90°



B = Bar width (conductor + insulation)
C = 1,5 x B

In both cases the tests do not show damage to the insulation



Insulated flexible busbar installation

Bending:

Small section configurations may be bent manually. When tooling is used, protect the insulated sleeve of the busbar from damage. As the Cu strips move relative to each other during bending, this operation

Drilling:

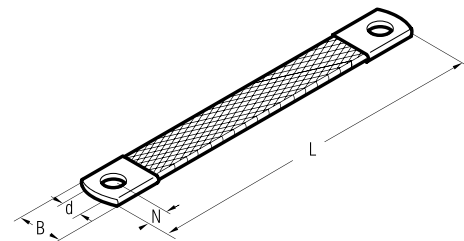
Drilling templates type **MFB 13-40** and type **MFB 50-63** (available as optional extras) are designed to facilitate accurate location of fixing holes in the busbar of Ø 8, 10, 12 mm. It is recommended that the insulation of the busbar is not removed before drilling is completed, as it assists the operation.

Template type	includes drilling inserts	for bar width mm
MFB 13-40	SFB13-16	for bar width 13÷15,5 mm
	SFB20-24	for bar width 20÷24 mm
	SFB32-40	for bar width 32÷40 mm
MFB 50-63	SFB50-63	for bar width 50÷63 mm



Flexible braids are manufactured from electrolytic Copper wire. Braids of different conductor sizes or lengths are available on request. Standard finish - bright Copper. Flexible braids can be supplied Tin plated, in this case add the suffix "ST" to reference.

E.g.:
- FL 10-150 (Bright Copper)
- FL 10-150-ST (Tin plated)



Size sqmm	Ø Stud mm	Type	Dimensions mm				Quantity
			B	N	L	d	
10	8	FL10-150	17	10	150	8,5	50
	8	FL10-200	17	10	200	8,5	50
	8	FL10-250	17	10	250	8,5	50
16	8	FL16-150	17	10	150	8,5	50
	8	FL16-200	17	10	200	8,5	50
	8	FL16-250	17	10	250	8,5	50
	8	FL16-320	17	10	320	8,5	50
	8	FL16-350	17	10	350	8,5	50
	8	FL16-420	17	10	420	8,5	25
25	8	FL16-570	17	10	570	8,5	25
	8	FL16-660	17	10	660	8,5	25
	8	FL25-150	21	10	150	8,5	50
	8	FL25-200	21	10	200	8,5	50
	8	FL25-250	21	10	250	8,5	50
	8	FL25-300	21	10	300	8,5	50