

BUSBARS 160 - 2500A

OUR MISSION

EPS wants to help his customers to make a better distribution and transport of electric current in the most easy way. The mission is to make the best busbars at the best possible price using the state of the art knowledge.

SCOPE

This catalogue refers to EDA® busbars 160 – 1600 A in aluminium and EDR® busbars 250 – 2500 A in copper execution.

GENERAL CHARACTERISTICS

The general details of our EDA® busbars are the follows:

- Aluminium or copper conductors
- Aluminium conductors have been specially designed to make most of SKIN EFFECT
- Protection degree from IP50 to IP55
- 4 metres standard straight elements
- Neutral always like the phase section
- EDA 4: PE housing with section always bigger than phase section
- EDA 5: PE dedicated conductor
- Plug-In access opening



MANUFACTURING STANDARDS

The busbars described in this catalogue are designed and tested in accordance to the IEC 60439-1, IEC 60439-2, IEC60529 DIN VDE 0660 part 500 and part 502.

Type tested for:

Short resistance, casing degree of protection (IP code), insulation resistance, overheating limit, wiring, electrical operation, applied voltage resistance, operation, resistance to heavy loads, protection countermeasures, protective circuit efficiency, air and surface distances insulation.

Confirmed by numerous test marks and certificates, from the RINA, LLOYD'S, BUREAU VERITAS marks through to UL approval.

Quality you can rely on, certified as the standard DIN EN ISO 9001.

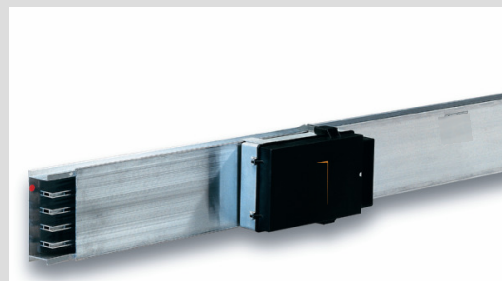
Ratings

AL (Serie EDA) 160 – 250 – 400 – 500 – 630 – 800 – 1000 – 1250 - 1600 [A]

CU (Serie EDR) 250 – 400 – 630 – 800 – 1250 – 1600 – 2000 - 2500 [A] see page 11

1 – Straight elements 4 m

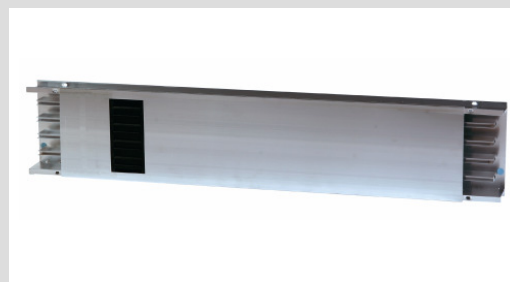
EDA 4			EDA 5	
A	Code	kg/m	Code	kg/m
160	EDA101000	4,0	EDA201000	4,3
250	EDA102000	4,4	EDA202000	4,7
400	EDA104000	6,2	EDA204000	6,5
500	EDA105000	7,7	EDA205000	8,45
630	EDA106000	9,0	EDA206000	9,75
800	EDA108000	10,0	EDA208000	10,75
1000	EDA110000	11,36	EDA210000	12,11
1250	EDA120000	14,7	EDA212000	15,6
1600	EDA160000	16,6	EDA216000	17,5



Straight elements are IP50, it is possible to have IP55 with accessories. The joint is always included in each element.

2 - Straight elements length 0,5 - 1,90 m

EDA 4		EDA 5
A	Code	Code
160	EDA101001	EDA201001
250	EDA102001	EDA202001
400	EDA104001	EDA204001
500	EDA105001	EDA205001
630	EDA106001	EDA206001
800	EDA108001	EDA208001
1000	EDA110001	EDA210001
1250	EDA120001	EDA212001
1600	EDA160001	EDA216001



The number of tap off boxes depending on the length of straight elements.

3 – Straight elements length 1,91 - 4 m

EDA 4		EDA 5
A	Code	Code
160	EDA101002	EDA201002
250	EDA102002	EDA202002
400	EDA104002	EDA204002
500	EDA105002	EDA205002
630	EDA106002	EDA206002
800	EDA108002	EDA208002
1000	EDA110002	EDA210002
1250	EDA120002	EDA212002
1600	EDA160002	EDA216002



The number of tap off boxes depending on the length of straight elements.

4 – Horizontal elbows

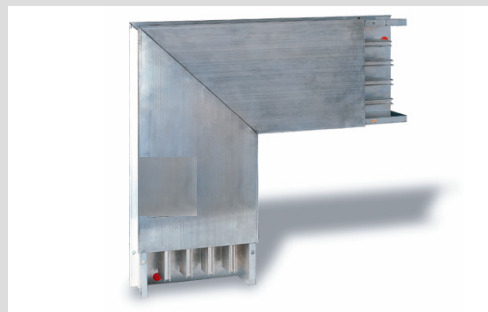
EDA 4		EDA 5	
RH		LH	
A	Code	Code	Code
160	EDA100102	EDA100101	EDA200102
250	EDA100102	EDA100101	EDA200102
400	EDA100102	EDA100101	EDA200102
500	EDA100106	EDA100105	EDA200106
630	EDA100106	EDA100105	EDA200106
800	EDA100106	EDA100105	EDA200106
1000	EDA100116	EDA100115	EDA200116
1250	EDA116116	EDA116115	EDA216116
1600	EDA116116	EDA116115	EDA216116



The joint is always included in each element.

5 – Vertical elbows

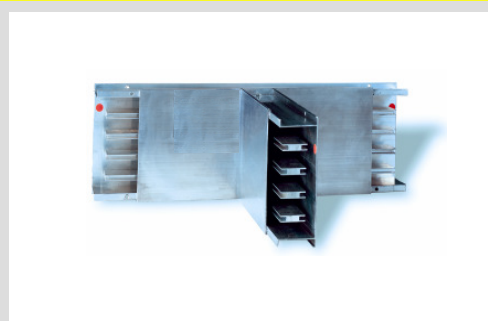
A	EDA 4		EDA 5	
	DX	SX	DX	SX
	Code	Code	Code	Code
160	EDA100104	EDA100103	EDA200104	EDA200103
250	EDA100104	EDA100103	EDA200104	EDA200103
400	EDA100104	EDA100103	EDA200104	EDA200103
500	EDA100108	EDA100107	EDA200108	EDA200107
630	EDA100108	EDA100107	EDA200108	EDA200107
800	EDA100108	EDA100107	EDA200108	EDA200107
1000	EDA100118	EDA100117	EDA200118	EDA200117
1250	EDA116118	EDA116117	EDA216118	EDA216117
1600	EDA116118	EDA116117	EDA216118	EDA216117



The joint is always included in each element.

6 – “T” elements

A	EDA 4		EDA 5	
	RH	LH	RH	LH
	Code	Code	Code	Code
160	EDA100111	EDA100109	EDA200111	EDA200109
250	EDA100111	EDA100109	EDA200111	EDA200109
400	EDA100111	EDA100109	EDA200111	EDA200109
500	EDA100112	EDA100110	EDA200112	EDA200110
630	EDA100112	EDA100110	EDA200112	EDA200110
800	EDA100112	EDA100110	EDA200112	EDA200110
1000	EDA100122	EDA100120	EDA200122	EDA200120
1250	EDA116122	EDA100120	EDA200122	EDA200120
1600	EDA116122	EDA100120	EDA200122	EDA200120



In every “T” element are included 2 joint.

7 – Fire barrier

A	EDA 4	EDA 5
	Code	Code
160	EDA101006	EDA201006
250	EDA102006	EDA202006
400	EDA104006	EDA204006
500	EDA105006	EDA205006
630	EDA106006	EDA206006
800	EDA108006	EDA208006
1000	EDA110006	EDA210006
1250	EDA112006	EDA212006
1600	EDA116006	EDA216006



It is possible to set the fire barrier REI 120 (2h) in any straight element to be ordered separately. Always indicate where the fire barrier has to be placed.

8 – End feed unit IP55

A	EDA 4		EDA 5	
	RH	LH	RH	LH
	Code	Code	Code	Code
160	EDA100021	EDA100020	EDA200021	EDA200020
250	EDA100021	EDA100020	EDA200021	EDA200020
400	EDA100021	EDA100020	EDA200021	EDA200020
500	EDA100023	EDA100022	EDA200023	EDA200022
630	EDA100023	EDA100022	EDA200023	EDA200022
800	EDA100023	EDA100022	EDA200023	EDA200022
1000	EDA100043	EDA100042	EDA200043	EDA200042
1250	EDA116043	EDA116042	EDA216043	EDA216042
1600	EDA116043	EDA116042	EDA216043	EDA216042



Cables entrance: 160 x 60 mm (160 – 1000 A)
535 x 357 mm (1250/1600 A).

9 – End feed unit with switch IP55

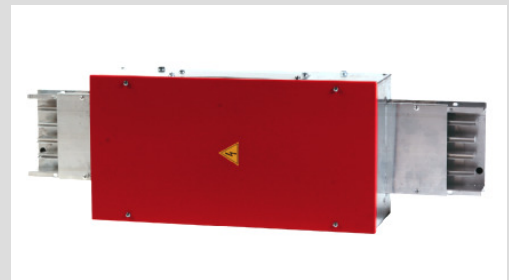
A	EDA 4		EDA 5	
	RH	LH	RH	LH
	Code	Code	Code	Code
160	EDA101004	EDA101003	EDA201004	EDA201003
250	EDA102004	EDA102003	EDA202004	EDA202003
400	EDA104004	EDA104003	EDA204004	EDA204003
500	EDA105004	EDA105003	EDA205004	EDA205003
630	EDA106004	EDA106003	EDA206004	EDA206003
800	EDA108004	EDA108003	EDA208004	EDA208003
1000	EDA110004	EDA110003	EDA210004	EDA210003
1250	EDA112004	EDA112003	EDA212004	EDA212003
1600	EDA116004	EDA116003	EDA216004	EDA216003



Cables entrance: 160 x 60 mm (160 – 1000 A)
535 x 357 mm (1250/1600 A)

10 – Centre feed unit IP55

A	EDA 4	EDA 5
	Code	Code
160	EDA100024	EDA200024
250	EDA100024	EDA200024
400	EDA100024	EDA200024
500	EDA100025	EDA200025
630	EDA100025	EDA200025
800	EDA100025	EDA200025
1000	EDA100045	EDA200045
1250	EDA100055	EDA200055
1600	EDA100055	EDA200055



Cables entrance: 200 x 80 mm (160 – 1000 A)
700 x 200 mm (1250/1600 A)

11 – End cap

A	EDA 4/5	
	Code	
160/400	EDA100028	
500/1000	EDA100029	
1250/1600	EDACT4	



12 – Switchboard feed unit

A	EDA 4		EDA 5	
	RH	LH	RH	LH
	Code	Code	Code	Code
160	EDA100030	EDA100032	EDA200030	EDA200032
250	EDA100030	EDA100032	EDA200030	EDA200032
400	EDA100030	EDA100032	EDA200030	EDA200032
500	EDA100031	EDA100033	EDA200031	EDA200033
630	EDA100031	EDA100033	EDA200031	EDA200033
800	EDA100031	EDA100033	EDA200031	EDA200033
1000	EDA100051	EDA100053	EDA200051	EDA200053
1250	EDA100061	EDA100063	EDA200061	EDA200063
1600	EDA100061	EDA100063	EDA200061	EDA200063



13 – Internal busbar clamp

	EDA 4	EDA 5
A	Code	Code
160	EDA101007	EDA204007
250	EDA102007	EDA204007
400	EDA104007	EDA204007
500	EDA105007	EDA208007
630	EDA106007	EDA208007
800	EDA108007	EDA208007
1000	EDA110007	EDA210007
1250	EDA160007	EDA260007
1600	EDA160007	EDA260007



The internal busbar clamp is inserted in a standard straight element (to be ordered separately) every 12 m of line. Start to mount the element with internal busbar clamp from lower line point.

14 – Hanger for vertical risers

	EDA 4/5
A	Code
160/400	EDA010002
500/1000	EDA010003
1250/1600	EDASSV4

One hanger for vertical risers must be foreseen, additional of universal fixing hangers, in each vertical and every 150 kg of busway.



15 – Fixing hanger

	EDA 4/5
A	Code
160/1000	EDA010001
1250/1600	EDACT4

The fixing hanger can be used on every type of EDA, simply shifting the pin. Each element need 2 fixing hangers.



16 – Bracket

	EDA 4/5
Length	Code
550 mm	EDA010004
750 mm	EDA010005

The brackets can be used wall or ceiling side



17 – Tap off box 32 A with fuse bases IP55

EDA 4/5	
EDA400250	
Tap off material	Plastic
Conductor material	Cu + AG
Max cable section	6 mm ²
Maximum entrance cable	22,5 Ø mm
Fuse base type	10,3 x 38
Execution	Without off load

Plug in access opening on each side of every straight element.



18 – Tap off box 63/125 A with fuse bases IP55

EDA 4/5		
	EDA400630	EDA401250
Tap off material	Plastic	Plastic
Conductor material	Cu + AG	Cu + AG
Max cable section	50 mm ²	50 mm ²
Maximum entrance cable	48 Ø mm	48 Ø mm
Fuse base type	NH00	NH00
Execution	With off load	With off load

Plug in access opening on each side of every straight element.



19 – Tap off box 160/250/400 A with fuse bases IP55

EDA 4/5			
	EDA401600	EDA402500	EDA404000
Tap off material	Steel	Steel	Steel
Conductor material	Cu + AG	Cu + AG	Cu + AG
Max cable section	70 mm ²	150 mm ²	185 mm ²
Maximum entrance cable	180 x 50 mm	160 x 60 mm	160 x 60 mm
Fuse base type	NH00	NH1	NH2
Execution	With off load	With off load	With off load

Plug in access opening on each side of every straight element.

On request are available for all ratings tap off boxes empty. Code: EDA40•••3



20 – Pen tap off box 32 A IP55

EDA 4/5	
EDA400251	
Tap off material	Plastic
Conductor material	Cu + AG
Max cable section	6 mm ²
Maximum entrance cable	22,5 Ø mm
Fuse base type	10,3 x 38
Execution	Without off load

Plug in access opening on each side of every straight element.



21 – Pen tap off box 63/125 A IP55

EDA 4/5		
	EDA400631	EDA401251
Tap off material	Plastic	Plastic
Conductor material	Cu + AG	Cu + AG
Max cable section	50 mm ²	50 mm ²
Maximum entrance cable	48 Ø mm	48 Ø mm
Fuse base type	NH00	NH00
Execution	With off load	With off load

Plug in access opening on each side of every straight element.



22 – Pen tap off box 160/250/400 A IP55

EDA 4/5			
	EDA401601	EDA402501	EDA404001
Tap off material	Steel	Steel	Steel
Conductor material	Cu + AG	Cu + AG	Cu + AG
Max cable section	70 mm ²	150 mm ²	185 mm ²
Maximum entrance cable	180 x 50 mm	160 x 60 mm	160 x 60 mm
Fuse base type	NH00	NH1	NH2
Execution	With off load	With off load	With off load

Plug in access opening on each side of every straight element.

On request are available for all ratings tap off boxes empty. Code: EDA40...3



23 – Tap off box 32 A prefitted for MCB

	EDA 4/5
	EDA400252
Tap off material	Plastic
Conductor material	Cu + AG
Max cable section	6 mm ²
Maximum entrance cable	22,5 Ø mm
MCB number of modules on DIN rail	8

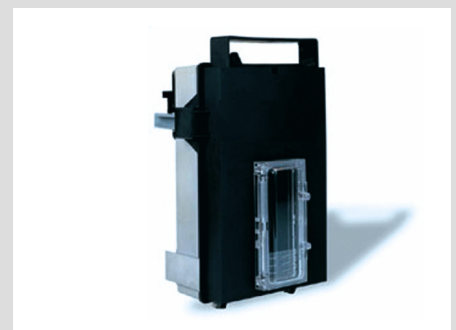
Plug in access opening on each side of every straight element.



24 – Tap off box 63/125 A IP55 prefitted for MCB

	EDA 4/5	
	EDA400632	EDA401252
Tap off material	Plastic	Plastic
Conductor material	Cu + AG	Cu + AG
Max cable section	50 mm ²	50 mm ²
Maximum entrance cable	48 Ø mm	48 Ø mm
MCB number of modules on DIN rail	8	8

Plug in access opening on each side of every straight element.



25 – Tap off box 160/250/400 A IP55 prefitted for MCB

	EDA 4/5		
	EDA401602	EDA402502	EDA404002
Tap off material	Steel	Steel	Steel
Conductor material	Cu + AG	Cu + AG	Cu + AG
Max cable section	70 mm ²	150 mm ²	185 mm ²
Maximum entrance cable	180 x 50 mm	160 x 60 mm	160 x 60 mm
MCB number of modules on DIN rail	8	12	12+12

Plug in access opening on each side of every straight element.

On request are available tap off boxes bolted up to 1250 A.

On request are available for all ratings tap off boxes empty. Code: EDA40***3



26 – One-bolt joint

	EDA 4	EDA 5
A	Code	Code
160/400	Plastic	Plastic
500/1000	Cu + AG	Cu + AG
1250/1600	50 mm ²	50 mm ²
Cover joint IP50		
A	EDA 4/5	
160/400	EDA6110	
500/1000	EDA6111	
1250/1600	EDACOG16	

Joint and cover joint IP50 are included with each straight elements and with each elbow. For the spare part see the table.



27 – Extension tool (Torque)

A	Without extension tool	With extension tool
160/400	30 Nm	17 Nm
500/1000	40 Nm	22 Nm
1250/1600	55 Nm	32 Nm

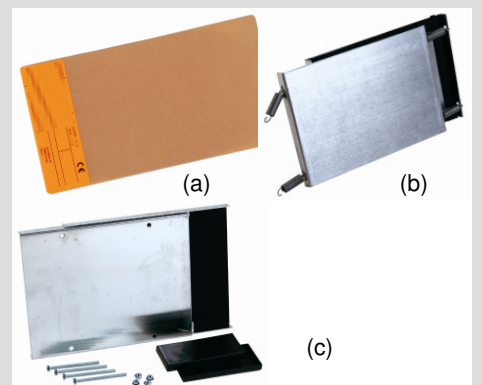
One extension tool is included with every delivery with straight elements. It is possible to buy separately (code EDA6129).



28 – IP55 accessories

	EDA 4/5		
A	Code		
Stuck plug outlet cover	160/1600	EDA500002	(a)
Stuck plug outlet cover	160/1000	EDA500003	(b)
IP55 joint cover	160/400	EDA500004	(c)
IP55 joint cover	500/1000	EDA500005	(c)
IP55 joint cover	1250/1600	EDA500006	(c)

(a) and (b) are alternatives. It is necessary 8 for every 4 m standard elements.



29 – Reduction unit

	EDA 4/5		
A	Code		
Stuck plug outlet cover	160/1600	EDARED * / ♦	(a)
* = indicate current to be reduced			
♦ = indicate current reduced			
Example EDARED 800/400			

Reduction unit as CEI 64/8 are made on request



30 – Features busbar-system EDR 250 – 2500 A

- Aluminium housing
- Copper conductors
- Protection degree from IP50 to IP55
- 4 metres standard straight elements
- Neutral section always like the phase section
- EDR 4: PE housing with section always bigger than phase section
- EDR 5: PE dedicated conductor
- Plug-in access opening on each side

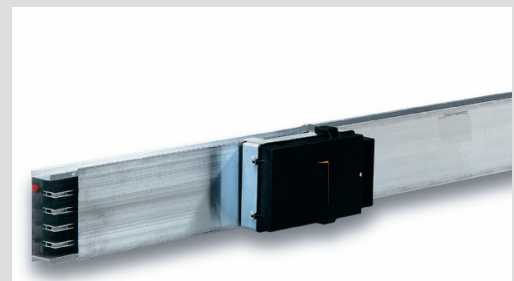
EDR

250 – 2500 A

31 – Straight elements system EDR

EDR 4			EDR 5	
A	Code	kg/m	Code	kg/m
250	EDR102000	7,0	EDR202000	7,4
400	EDR104000	11,4	EDR204000	11,7
630	EDR106000	14,8	EDR206000	15,1
800	EDR108000	17,3	EDR208000	17,6
1250	EDR112000	24,8	EDR212000	25,4
1600	EDR116000	28,4	EDR216000	29,0
2000	EDR120000	40,9	EDR220000	41,7
2500	EDR125000	48,0	EDR225000	48,9

Conductors		
	Material	Code
Standard	Copper (cu etp 99,9)	-
As option	Tinned copper (CU+SN)	STAGN
	Silvered copper (CU+AG)	ARG



32 – EDR accessories different from EDA

- Special straight elements
- Horizontal elbows
- Vertical elbows
- “T” elements
- End feed unit
- Center feed unit
- Switchboard feed unit
- One-bolt unit

EDR ≠

EDA

For the codes use EDA code writing EDR
EDA xxx → EDR xxx

33 – Common accessories EDR and EDA

- Fire barrier
- End cap
- Internal busbar clamp
- Hanger for vertical risers
- Fixing hanger
- Bracket
- Tap off boxes
- IP55 accessories

EDR =

EDA

EDA TECHNICAL DATA

Nominal current	In	[A]	160	250	400	500	630	800	1000	1250	1600
Operational voltage	Ue	[V]	1000	1000	1000	1000	1000	1000	1000	1000	1000
Insulation voltage	Ui	[V]	1000	1000	1000	1000	1000	1000	1000	1000	1000
Frequency	f	[Hz]	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60
Cross section phases	SF	[mm ²]	85	116	281	380	500	600	700	1000	1178
Cross section neutral	SN	[mm ²]	85	116	281	380	500	600	700	1000	1178
Cross section of protective conductor (housing)	SPE	[mm ²]	1083	1083	1083	1232	1232	1232	1232	1780	1780
Cross section of hearth bar (5th bar)	SPE	[mm ²]	120	120	120	210	210	210	210	360	360
Rated short circuit time current (1s)	IcW	[kA]	13	13	27	29	33	35	40	42	50
Peak current	Ipk	[kA]	26	26	57	61	70	77	84	92	110
Rated short circuits time of neutral bar (1s)	IcW	[kA]	8,5	8,5	17	20	22	22	22	25	33
Peak current of neutral bar	Ipk	[kA]	17	17	34	40	46	46	46	55	67
Rated short circuit time of protective circuit (1s)	IcW	[kA]	8,5	8,5	17	20	22	22	22	24	32
Peak current of protective circuit	Ipk	[kA]	17	17	34	40	46	46	46	50	65
Phase resistance (T=20°C)	R20	[mΩ/m]	0,376	0,261	0,112	0,072	0,065	0,052	0,048	0,030	0,026
Phase reactance	X	[mΩ/m]	0,168	0,135	0,093	0,059	0,063	0,062	0,059	0,0428	0,0428
Phase impedance (T=20°C)	Z20	[mΩ/m]	0,412	0,356	0,170	0,110	0,107	0,091	0,084	0,053	0,0578
Neutral resistance	RN	[mΩ/m]	0,376	0,261	0,112	0,072	0,065	0,052	0,048	0,030	0,026
Neutral reactance	XN	[mΩ/m]	0,168	0,135	0,093	0,059	0,063	0,062	0,060	0,0428	0,0428
Neutral impedance	ZN	[mΩ/m]	0,412	0,356	0,170	0,110	0,107	0,091	0,077	0,053	0,0578
Protective conductor resistance	RPE	[mΩ/m]	0,032	0,032	0,032	0,028	0,028	0,028	0,028	0,0169	0,0169
Protective conductor reactance	XPE	[mΩ/m]	0,102	0,102	0,102	0,087	0,087	0,087	0,087	0,006	0,006
Protective conductor impedance	ZPE	[mΩ/m]	0,107	0,107	0,107	0,091	0,091	0,091	0,091	0,018	0,018
Resistance of the fault loop	R0	[mΩ/m]	0,408	0,395	0,203	0,195	0,178	0,176	0,174	0,025	0,0207
Reactance of the fault loop	X0	[mΩ/m]	0,117	0,117	0,116	0,112	0,108	0,103	0,098	0,049	0,049
Impedance of the fault loop	Z0	[mΩ/m]	0,424	0,412	0,234	0,224	0,208	0,204	0,200	0,055	0,0532
Degree of protection IP	IP		50/55	50/55	50/55	50/55	50/55	50/55	50/55	50/55	50/55
Losses for the Joule effect at nominal current	Pj	[W/m]	28,91	48,94	53,76	54,00	77,40	99,20	144,0	140,6	199,7
Calorific power		[kJ/m]	2974	2974	3353	3353	3353	3353	3353	3411	3411

Voltage drop with end load [Δv]

	[A]	160	250	400	500	630	800	1000	1250	1600
Cosφ = 0,7	[mV/m]	53,08	60,36	50,11	40,02	49,31	55,67	65,33	55,8	71,5
Cosφ = 0,8	[mV/m]	55,63	62,67	50,32	40,22	48,94	54,35	63,67	53,8	68,8
Cosφ = 0,9	[mV/m]	57,03	63,52	48,91	39,15	46,84	50,88	59,46	49,4	63,3
Cosφ = 1,0	[mV/m]	52,10	56,44	38,75	31,14	35,42	35,75	41,41	32,5	41,6

Voltage drop with concentrated end line load [ΔV]

$$\Delta V = \sqrt{3} \ln (R_{\theta 1} \cos \varphi + x \sin \varphi) \text{ [mV/m]}$$

Schedule of ratings for the ambient temperature on average 24 h

	18°C	25°C	30°C	35°C	43°C	50°C	55°C
K	1,18	1,14	1,10	1,06	1	0,86	0,64

EDR TECHNICAL DATA

Nominal current	In	[A]	250	400	630	800	1250	1600	2000	2500
Operational voltage	Ue	[V]	1000	1000	1000	1000	1000	1000	1000	1000
Insulation voltage	Ui	[V]	1000	1000	1000	1000	1000	1000	1000	1000
Frequency	f	[Hz]	50-60	50-60	50-60	50-60	50-60	50-60	50-60	50-60
Cross section phases	SF	[mm ²]	100	200	300	400	600	700	1000	1200
Cross section neutral	SN	[mm ²]	100	200	300	400	600	700	1000	1200
Cross section of protective conductor (housing)	SPE	[mm ²]	1083	1083	1083	1083	1232	1232	1780	1780
Cross section of hearth bar (5th bar)	SPE	[mm ²]	120	120	120	120	210	210	360	360
Rated short circuit time current (1s)	Icw	[kA]	27	42	54	54	55	56	58	60
Peak current	Ipk	[kA]	26	56	72	77	80	81	112	126
Rated short circuits time of neutral bar (1s)	Icw	[kA]	8,5	17	22	22	22	32	38,6	40
Peak current of neutral bar	Ipk	[kA]	17	34	46	46	46	70	77	84
Rated short circuit time of protective circuit (1s)	Icw	[kA]	8,5	17	22	22	22	40	40	40
Peak current of protective circuit	Ipk	[kA]	17	34	46	46	46	84	84	84
Phase resistance (T=20°C)	R20	[mΩ/m]	0,170	0,087	0,052	0,043	0,028	0,024	0,0175	0,0145
Phase reactance	X	[mΩ/m]	0,090	0,064	0,063	0,062	0,059	0,059	0,0428	0,0428
Phase impedance (T=20°C)	Z20	[mΩ/m]	0,192	0,108	0,082	0,075	0,065	0,064	0,0462	0,045
Neutral resistance	RN	[mΩ/m]	0,170	0,087	0,052	0,043	0,028	0,024	0,0175	0,0145
Neutral reactance	XN	[mΩ/m]	0,090	0,064	0,063	0,062	0,059	0,059	0,0428	0,0428
Neutral impedance	ZN	[mΩ/m]	0,192	0,108	0,082	0,075	0,065	0,064	0,0462	0,045
Protective conductor resistance	RPE	[mΩ/m]	0,032	0,032	0,032	0,032	0,028	0,028	0,0169	0,0169
Protective conductor reactance	XPE	[mΩ/m]	0,102	0,102	0,102	0,102	0,087	0,087	0,006	0,006
Protective conductor impedance	ZPE	[mΩ/m]	0,107	0,107	0,107	0,107	0,091	0,091	0,018	0,018
Resistance of the fault loop	R0	[mΩ/m]	0,202	0,119	0,084	0,075	0,059	0,056	0,034	0,031
Reactance of the fault loop	X0	[mΩ/m]	0,192	0,166	0,165	0,164	0,152	0,146	0,049	0,049
Impedance of the fault loop	Z0	[mΩ/m]	0,272	0,204	0,185	0,180	0,162	0,156	0,060	0,058
Degree of protection IP	IP		50/55	50/55	50/55	50/55	50/55	50/55	50/55	50/55
Losses for the Joule effect at nominal current	Pj	[W/m]	36,9	48,3	71,4	96,0	145,3	215,0	243,0	314,6
Calorific power		[kJ/m]	2974	2974	2974	2974	3353	3353	3411	3411

Voltage drop with end load [Δv]

	[A]	250	400	630	800	1250	1600	2000	2500
Cosφ = 0,7	[mV/m]	43,7	40,3	47,5	54,8	74,8	85,3	77,5	91,6
Cosφ = 0,8	[mV/m]	45,8	41,2	46,9	53,4	70,3	79,8	72,5	84,7
Cosφ = 0,9	[mV/m]	46,8	41,1	44,5	49,8	62,2	70,3	63,9	73,1
Cosφ = 1,0	[mV/m]	42,6	34,9	32,8	34,5	35,1	38,5	35,1	36,3

Voltage drop with concentrated end line load [ΔV]

$$\Delta V = \sqrt{3} I_n (R_{\theta 1} \cos \varphi + x \sin \varphi) \text{ [mV/m]}$$

Schedule of ratings for the ambient temperature on average 24 h

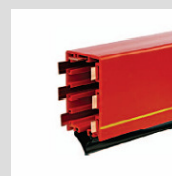
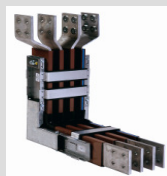
	18°C	25°C	30°C	35°C	43°C	50°C	55°C
K	1,18	1,14	1,10	1,06	1	0,8	0,64

BUSBAR RANGE



	■ ELS	■ EPD	■ EDA	■ EDR
Nominal current	25 – 40 A	63 – 160 A	160 - 1600 A	250 – 2500 A
Type	Lighting	Distribution	Distribution	Distribution
Operational voltage	230/400 V	500 V	690 V	690 V
Insulation Voltage	750 V	750 V	750 V	750 V
Conductors material	CU	AL/CU	AL	CU
Conductors number	2 - 4 - 6 - 8	4 - 5	4 - 5	4 - 5
Neutral cross section	100%	100%	100%	100%
PE cross section	> 100%	> 100%	> 100%	> 100%
Housing material	AL	AL	AL	AL
Plug in points	YES	YES	YES	YES
Tap off boxes up to	16 A	63 A	400 A	400 A
Max peak Icw for 1s	2 kA (0,1s)	6 kA	37 kA	40 kA
Max peak Icw	4 kA	10 kA	80 kA	81 kA
IP protection degree	55	42/55	50/55	50/55

BUSBAR RANGE



	■ EPSOBAR	■ EMT	■ EPSOFLEX	■ EDA	■ EDR
Nominal current	800 – 6300 A	800 – 5000 A	800 – 6300 A	50 – 300 A	50 – 300 A
Type	Transport	M.V. transport	Flexibles	Trolley	Trolley
Operational voltage	1000 V	7,2/24 kV	1000 V	500 V	500 V
Insulation Voltage	1000 V	7,2/24 kV	1000 V	750 V	750 V
Conductors material	AL/CU	CU	AL/CU	CU	CU
Conductors number	4 - 5	3	4 - 5	3 - 4 - 5 - 6 - 7	3 - 4 - 5 - 6 - 7
Neutral cross section	50% - 100% - 200%	-	50% - 100% - 200%	50% - 100%	50% - 100%
PE cross section	Up to 100%	> 100%	Up to 100%	50% - 100%	50% - 100%
Housing material	FE/AL/INOX	AL/INOX	-	PVC	PVC
Plug in points	YES	No	No	YES	YES
Tap off boxes up to	2000 A	-	-	200 A	200 A
Max l _{cw} for 1s	240 kA	70 kA	240 kA	-	-
Max peak l _{cw}	500 kA	154 kA	500 kA	-	-
IP protection degree	40/42/66/68	40/55	-	23/44	23

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