Xtra Compact (XCP-S)

straight elements

64280100P

XCP-S Line:
Reference standard: IEC 61439-6. Reference temperature: 35 °C. Protection degree: IP55. Thickness of metal sheet: 1.5 mm. N° of conductors: 3, 4 or 5. Painted: RAL 7035. Halogen Free. The insulation between bars is ensured by a double sheet made with polyester film class B(130°C), class F (155°C) thermal resistance available on request. All plastic components have a V1 self-extinguishing degree (as per UL94); they are fire retardant and comply with the glow-wire test according to standards.

Item — **Straight elements for transport**

Al	Cu	In (A)	A (mm)
64280100P	**-**	630	3000
64280101P	**67280100P**	800	
64280102P	**67280101P**	1000	
64280104P	**67280103P**	1250	
64280106P	**67280105P**	1600	
64280107P	**67280106P**	2000	
64390104P	**67390104P**	2500	
64390106P	**67390105P**	3200	
64390107P	**67390106P**	4000	
64390108P	**67390108P**	5000	
-	**67390109P**	6300	
64280110P	**-**	630	500-1000
64280111P	**67280110P**	800	
64280112P	**67280111P**	1000	
64280114P	**67280113P**	1250	
64280116P	**67280115P**	1600	
64280117P	**67280116P**	2000	
64390114P	**67390114P**	2500	
64390116P	**67390115P**	3200	
64390117P	**67390116P**	4000	
64390118P	**67390118P**	5000	
-	**67390119P**	6300	
64280170P	**-**	630	1001-1500
64280171P	**67280170P**	800	
64280172P	**67280171P**	1000	
64280174P	**67280173P**	1250	
64280176P	**67280175P**	1600	
64280177P	**67280176P**	2000	
64390174P	**67390174P**	2500	
64390176P	**67390175P**	3200	
64390177P	**67390176P**	4000	
64390178P	**67390178P**	5000	
-	**67390179P**	6300	
64280120P	**-**	630	1501-2000
64280121P	**67280120P**	800	
64280122P	**67280121P**	1000	
64280124P	**67280123P**	1250	
64280126P	**67280125P**	1600	
64280127P	**67280126P**	2000	
64390124P	**67390124P**	2500	
64390126P	**67390125P**	3200	
64390127P	**67390126P**	4000	
64390128P	**67390128P**	5000	
-	**67390129P**	6300	
64280180P	**-**	630	2001-2500
64280181P	**67280180P**	800	
64280182P	**67280181P**	1000	
64280184P	**67280183P**	1250	
64280186P	**67280185P**	1600	
64280187P	**67280186P**	2000	
64390184P	**67390184P**	2500	
64390186P	**67390185P**	3200	
64390187P	**67390186P**	4000	
64390188P	**67390188P**	5000	
-	**67390189P**	6300	

Single bar:
630A-2000A (Al)
800A-2000A (Cu)

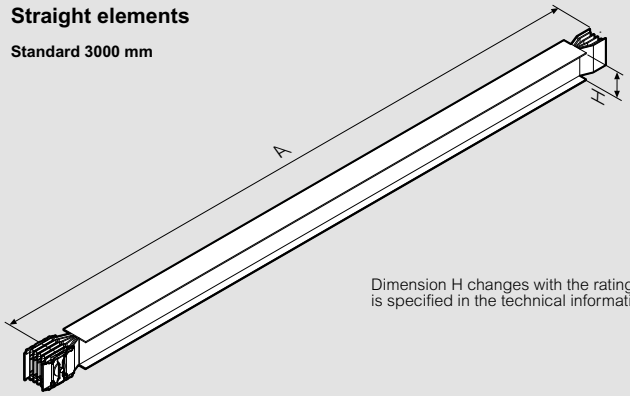
Double bar:
2500A-4000A (Al)
2500A-5000A (Cu)

Triple bar:
5000A (Al)
6300A (Cu)

Dimensions

Straight elements

Standard 3000 mm

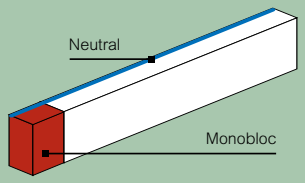


Dimension H changes with the ratings and is specified in the technical information

MIN AND MAX DIMENSIONS OF SINGLE AND DOUBLE BAR	
Aluminium (Al)	630A – 5000A
Copper (Cu)	800A – 6300A
(L) min/MAX [mm]	500/3000

Straight elements are available on reques only for transport of energy:
Al: 5000A
Cu: 6300A

Notes
The product versions in this catalogue will be simplified as shown opposite, highlighting the part with the monobloc installed in red and the neutral side in blue.
In this catalogue, the measurements shown refer to the element centre distance



The range is also available in different versions on request:
(5 conductors with dedicated PE conductor, double neutral and more others...)

Item — **Straight elements for transport**

Al	Cu	In (A)	A (mm)
64280150P	**-**	630	2501-2999
64280151P	**67280150P**	800	
64280152P	**67280151P**	1000	
64280154P	**67280153P**	1250	
64280156P	**67280155P**	1600	
64280157P	**67280156P**	2000	
64390154P	**67390154P**	2500	
64390156P	**67390155P**	3200	
64390157P	**67390156P**	4000	
64390158P	**67390158P**	5000	
-	**67390159P**	6300	

Xtra Compact (XCP-S)

technical data (continued)

XCP-S CU (5 Conductors - clean earth)

3P+N+PE+FE		SINGLE BAR					DOUBLE BAR				TRIPLE BAR
Rated current	**In [A]**	**800**	**1000**	**1250**	**1600**	**2000**	**2500**	**3200**	**4000**	**5000**	**6300**
Overall dimension of the busbars	L x H [mm]	120 x 130	120 x 130	120 x 130	120 x 170	120 x 200	120 x 300	120 x 380	120 x 440	120 x 480	120 x 590
Rated operational voltage	Ue [V]	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated insulation voltage	Ui [V]	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Frequency	f [Hz]	50	50	50	50	50	50	50	50	50	50
Rated short-time current (1 s)	I_{CW} [kA]$_{rms}$	25	36	42	42	50	65	80	100	120	150
Peak current	I_{pk} [kA]	53	76	88	88	105	143	176	220	264	330
Allowable specific energy for three-phase fault	I^2t [MA^{2}s]	625	1296	1764	1764	2500	4225	6400	10000	14400	22500
Rated short-time current of the neutral bar (1 s)	I_{CW} [kA]$_{rms}$	15	22	25	25	30	39	48	60	72	90
Peak current of the neutral bar	I_{pk} [kA]	30	46	53	53	63	82	101	132	158	198
Rated short-time current of the protective circuit (1 s)	I_{CW} [kA]$_{rms}$	15	22	25	25	30	39	48	60	72	90
Peak current of the protective circuit	I_{pk} [kA]	30	46	53	53	63	82	101	132	158	198
Phase resistance at 20°C	R_{20} [mΩ/m]	0,077	0,058	0,045	0,034	0,024	0,021	0,017	0,012	0,008	0,0062
Phase reactance (50hz)	X [mΩ/m]	0,023	0,017	0,017	0,015	0,014	0,011	0,007	0,006	0,006	0,0050
Phase impedance	Z [mΩ/m]	0,080	0,061	0,048	0,037	0,028	0,024	0,018	0,014	0,010	0,0079
Phase resistance at thermal conditions	R [mΩ/m]	0,100	0,081	0,061	0,045	0,034	0,029	0,024	0,017	0,011	0,0085
Phase impedance at thermal conditions	Z [mΩ/m]	0,103	0,082	0,063	0,048	0,036	0,031	0,025	0,018	0,012	0,0099
Neutral resistance	R_{20} [mΩ/m]	0,077	0,058	0,045	0,034	0,024	0,021	0,017	0,012	0,008	0,0062
Functional Earth resistance (FE)	R_{20} [mΩ/m]	0,077	0,058	0,045	0,034	0,024	0,021	0,017	0,012	0,008	0,0062
Functional Earth reactance (FE)	X [mΩ/m]	0,023	0,017	0,017	0,015	0,014	0,011	0,007	0,006	0,006	0,0050
Resistance of the protective bar (PE 1)	R_{PE} [mΩ/m]	0,133	0,133	0,133	0,120	0,111	0,090	0,079	0,072	0,068	0,0412
Resistance of the protective bar (PE 2)	R_{PE} [mΩ/m]	0,049	0,049	0,049	0,038	0,032	0,025	0,021	0,017	0,016	0,0125
Resistance of the protective bar (PE 3)	R_{PE} [mΩ/m]	0,084	0,084	0,084	0,064	0,054	0,042	0,035	0,029	0,026	0,0213
Reactance of the protective bar	X_{PE} [mΩ/m]	0,054	0,054	0,054	0,044	0,044	0,032	0,022	0,017	0,016	0,0140
Resistance of the fault loop (PE 1)	R_o [mΩ/m]	0,126	0,099	0,078	0,060	0,045	0,038	0,031	0,023	0,015	0,0115
Resistance of the fault loop (PE 2)	R_o [mΩ/m]	0,107	0,085	0,068	0,052	0,038	0,032	0,026	0,019	0,013	0,0103
Resistance of the fault loop (PE 3)	R_o [mΩ/m]	0,117	0,093	0,074	0,056	0,041	0,035	0,028	0,021	0,014	0,0109
Reactance of the fault loop (50hz)	X_o [mΩ/m]	0,077	0,071	0,071	0,059	0,058	0,043	0,029	0,023	0,022	0,0190
Impedance of the fault loop (PE 1)	Z_o [mΩ/m]	0,147	0,122	0,106	0,084	0,073	0,058	0,042	0,032	0,026	0,0222
Impedance of the fault loop (PE 2)	Z_o [mΩ/m]	0,132	0,111	0,098	0,079	0,070	0,054	0,039	0,030	0,025	0,0216
Impedance of the fault loop (PE 3)	Z_o [mΩ/m]	0,140	0,117	0,102	0,081	0,071	0,056	0,041	0,031	0,026	0,0219
Zero-sequence short-circuit average resistance phase - N	R_o [mΩ/m]	0,103	0,078	0,060	0,045	0,033	0,028	0,023	0,016	0,010	0,0082
Zero-sequence short-circuit average reactance phase - N	X_o [mΩ/m]	0,031	0,023	0,023	0,020	0,019	0,015	0,009	0,008	0,008	0,0067
Zero-sequence short-circuit average impedance phase - N	Z_o [mΩ/m]	0,107	0,081	0,064	0,050	0,038	0,032	0,025	0,018	0,013	0,0106
Zero-sequence short-circuit average resistance phase - PE	R_o [mΩ/m]	0,103	0,078	0,060	0,045	0,033	0,028	0,023	0,016	0,010	0,0082
Zero-sequence short-circuit average reactance phase - PE	X_o [mΩ/m]	0,031	0,023	0,023	0,020	0,019	0,015	0,009	0,008	0,008	0,0067
Zero-sequence short-circuit average impedance phase - PE	Z_o [mΩ/m]	0,107	0,081	0,064	0,050	0,038	0,032	0,025	0,018	0,013	0,0106
Voltage drop with distribuited load ΔV [V/(m*A)]10^{-6}	cosφ = 0,70	75,1	59,5	47,2	36,7	29,0	24,5	19,2	14,1	10,3	8,3
	cosφ = 0,75	78,4	62,2	49,1	37,9	29,9	25,3	19,9	14,6	10,5	8,4
	cosφ = 0,80	81,5	64,8	50,8	39,1	30,6	25,9	20,6	15,0	10,7	8,5
	cosφ = 0,85	84,4	67,2	52,3	40,1	31,1	26,5	21,2	15,4	10,7	8,6
	cosφ = 0,90	86,9	69,3	53,6	40,9	31,5	26,9	21,7	15,6	10,7	8,5
	cosφ = 0,95	88,8	71,0	54,4	41,2	31,4	27,0	22,0	15,7	10,6	8,4
	cosφ = 1,00	86,9	69,9	52,4	39,1	29,1	25,3	21,2	14,8	9,4	7,4
Weight (PE 1)	p [kg/m]	23,7	27,1	31,0	38,9	49,9	59,9	74,1	96,0	138,1	193,1
Weight (PE 2)	p [kg/m]	27,1	30,4	34,4	43,3	55,1	66,5	82,1	105,5	148,6	206,2
Weight (PE 3)	p [kg/m]	24,8	28,1	32,1	40,3	51,6	62,0	76,7	99,1	141,6	197,4
Fire load	[kWh/m]	5,6	6,9	6,9	10,0	10,3	13,1	20,0	23,8	26,3	27,3
Degree of protection	IP	55/65*	55/65*	55/65*	55/65*	55/65*	55/65*	55/65*	55/65*	55/65*	55/65*
Insulation material thermal resistance class		B/F**	B/F**	B/F**	B/F**	B/F**	B/F**	B/F**	B/F**	B/F**	B/F**
Losses for the Joule effect at nominal current	P [W/m]	193	242	284	347	403	547	752	823	816	1015
Ambient temperature min/ MAX (daily average)	[°C]	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50	-5/+50

* IP65 for feeder lines is available by request
** Class F available under request

For temperatures over 35°C it will be necessary to derate the busbar and for ambient temperatures under -5°C contact the technical support.

The data on this page refer to the 50 Hz frequency. For 60 Hz, please contact Legrand.

PE 1
Standard version

PE 2
Extra earth - COPPER XCP Cu 3L+N+50%PE (tinned copper conductors available on request)

PE 3
Extra earth - ALUMINUM