108 - EAE Busbar Systems - Technical Characteristics

E-Line KAM/KAP

KAM/KAP			KAM 02	KAM 03	KAP 04	KAP 06
Rated Current		A	**25**	**32**	**40**	**63**
Standards			IEC 60439	1-2		
Insulation Voltage		V	630	630	690	690
Frequency		Hz	50/60			
Protection Degree			IP 55			
Short Circuit (Peak)		kA	5	6	7.5	9
Short Circuit (1sn.)		kA rms	2.27	2.72	3.4	4
Resistance	R_{20}	mΩ/m	5.31	4.67	1.70	1.45
Reactance	X_L	mΩ/m	1.37	1.11	0.69	0.14
Impedance	Z	mΩ/m	5.49	4.80	1.84	1.45
Fault Resistance	R_0	mΩ/m	8.58	7.60	3.48	3.22
Fault Reactance	X_0	mΩ/m	1.53	1.22	0.90	0.49
Fault Impedance	Z_0	mΩ/m	8.69	7.69	3.59	3.26
Joule Losses At In		W/m	3.23	4.66	2.68	5.68
L1, L2, L3 N (Cross Section)		mm²	3.20	4.00	6.00	12.50
PE (Housing)		mm²	18.30	18.30	18.30	18.30
PE (Conductor)		mm²	3.20	4.00	6.00	6.00
Weight (4 Conductors)		kg/m	1.13	1.17	1.33	1.42
Weight (5 Conductors)		kg/m	1.17	1.19	1.41	1.48

E-Line KO-II

E-Line KO-II			Copper Conductor (KOC-II)				
Busbar Code			**2**	**3**	**4**	**6**	**8**
Rated Current	In	A	250	315	400	600	800
Standards			IEC	60439-2:	2000		
Rated Insulation Voltage	Ui	V	1000				
Rated Operational Voltage	Ue	V	1000				
Rated Frequency	f	Hz	50 / 60				
Protection Degree	IP		40 / 55				
Rated Peak Withstand Current	Ip	kA_{rms}	36	36.000	52,5	73,5	73,5
Rated Short-time Withstand Current (1sec)	Icw	kA	18	18	25	35	35
Rated Peak Withstand Current (N)	Ip	kA	21,6	21,6	30	44,1	44,1
Rated Short-time Withstand Current (N)	Icw	kA	10,8	10,8	15	21	21
Rated Peak Withstand Current (PE)	Ip	kA	21,6	21,6	30	44,1	44,1
Rated Short-time Withstand Current (PE)	Icw	kA	10,8	10,8	15	21	21
R_{20} 20ºC	R_{20}	mΩ/m	0,150	0,012	0,100	0,060	0,040
Direct Current Resistance	R	mΩ/m	0,164	0,141	0,127	0,066	0,059
Impedance	Z	mΩ/m	0,238	0,209	0,193	0,134	0,102
Losses at Rated Current	$3I^2R_1$	W/m	33,75	48,82	69,12	84,24	130,56
Resistance at Steady State Temperature	R_1	mΩ/m	0,180	0,164	0,144	0,078	0,068
Reactance (Rated Current & 50 Hz)	X_1	mΩ/m	0,173	0,154	0,145	0,117	0,083
Impedance at Steady State Temperature	Z_1	mΩ/m	0,254	0,235	0,207	0,144	0,110
L1, L2, L3, N		mm²	120	150	180	300	450
PE (for 5 Conductors)		mm²	120	150	180	300	450
PE (for 4½ Conductors)		mm²	60	75	90	150	225
Housing Cross Section (Steel Sheet)		mm²	583	593	603	643	693
Conductor Size		mmxmm	6x20	6x25	6x30	6x50	6x75
Weight - 4 Conductors		kg/m	10,0	11,0	12,5	16,0	18,0
Weight - 5 Conductors		kg/m	11,0	12,5	14,0	19,0	21,0
Fire Load (3 Plug-in Points)		kW/m	6,46	6,46	6,57	6,66	6,66

E-Line KX

Rated Current	In	A	800	1000	1250	1350	1600	2000	2500	2000	2500	3150	3600	3900	4250	5000	6300
Busbar Code			**8**	**10**	**12**	**14**	**16**	**20**	**25**	**22**	**26**	**32**	**36**	**39**	**43**	**50**	**63**
Standards	TS EN / DIN EN / BS EN / IEC 60439-2																
Rated Insulation Voltage	Ui	V	1000														
Rated Operational Voltage	Ue	V	1000														
Rated Frequency	f	Hz	50 / 60														
Protection Degree	IP		55														
Housing Material	2.5mm Extruded aluminium with epoxy polyester coating finish to RAL 7038																
Short-circuit (1 sec)	Icw	kA rms	40	50	60	60	60	60	60	70	100	120	120	120	120	120	120
Short-circuit (peak)	Ip	kA	84	105	132	132	132	132	132	154	220	264	264	264	264	264	264
Short-circuit Value of Neutral Conductor (1 sec)	Icw	kA	24	30	36	36	36	36	36	42	60	72	72	72	72	72	72
Short-circuit Value of Neutral Conductor (peak)	Ip	kA	50,4	63	75,6	75,6	75,6	75,6	75,6	88,2	132	158,4	158,4	158,4	158,4	158,4	158,4
Short-circuit Value of Protective Circuit (1 sec)	Icw	kA	24	30	36	36	36	36	36	42	60	72	72	72	72	72	72
Short-circuit Value of Protective Circuit (peak)	Ip	kA	50,4	63	75,6	75,6	75,6	75,6	75,6	88,2	132	158,4	158,4	158,4	158,4	158,4	158,4
R_{20}20ºC (Calculation)	R	mΩ/m	0,075	0,055	0,043	0,038	0,027	0,021	0,015	0,027	0,019	0,014	0,012	0,011	0,009	0,008	0,005
Impedance	Z	mΩ/m	0,088	0,066	0,052	0,046	0,035	0,027	0,019	0,033	0,023	0,017	0,016	0,014	0,012	0,010	0,007
Resistance (at Rated Current, at Steady State Op. Temp)	R	mΩ/m	0,101	0,072	0,058	0,051	0,037	0,028	0,019	0,037	0,025	0,019	0,017	0,015	0,013	0,010	0,007
Reactance (at Rated Current)	X	mΩ/m	0,030	0,030	0,027	0,026	0,019	0,015	0,011	0,015	0,013	0,010	0,006	0,015	0,006	0,006	0,005
Impedance (at Rated Current)	Z	mΩ/m	0,105	0,078	0,064	0,057	0,041	0,032	0,022	0,040	0,028	0,021	0,018	0,021	0,014	0,012	0,008
L1, L2, L3, N		mm²	240	330	420	480	660	840	1200	660	960	1320	1500	1680	1920	2400	3600
PE (for 5 conductors)		mm²	240	330	420	480	660	840	1200	660	960	1320	1500	1680	1920	2400	3600
PE (for 4 ½ conductors)		mm²	120	165	210	240	330	420	600	330	480	660	750	840	960	1200	1800
Housing Cross Section (Aluminium)		mm²	1686	1788	1842	1894	2050	2206	2518	3340	3600	3912	4068	4224	4411	4848	7128
Conductor Size		mmxmm	6x40	6x55	6x70	6x80	6x110	6x140	6x200	2(6x55)	2(6x80)	2(6x110)	2(6x125)	2(6x140)	2(6x160)	2(6x200)	3(6x200)
Weight - 4 Conductors		kg/m	14,4	18,3	22	24,5	32,1	39,6	54,7	39,5	48,5	63,5	71,1	78,6	88,6	108,8	162,8
Weight - 5 Conductors		kg/m	16,8	21,5	26,1	29,2	38,5	47,9	66,5	42,4	57,9	76,5	85,8	95,2	107,5	132,4	198,2
[1]Fault Loop Resistance (R_0 PH-N)	R_0	mΩ/m	0,182	0,133	0,107	0,096	0,070	0,055	0,040	0,081	0,059	0,044	0,039	0,033	0,024	0,020	0,015
[1]Fault Loop Reaktance (X PH-N)	X	mΩ/m	0,080	0,066	0,065	0,052	0,042	0,019	0,029	0,006	0,005	0,005	0,005	0,025	0,016	0,014	0,009
[1]Fault Loop Impedance (Z_0 PH-N)	Z_0	mΩ/m	0,200	0,150	0,126	0,110	0,082	0,068	0,050	0,082	0,059	0,044	0,039	0,043	0,029	0,025	0,018
[1]Fault Loop Resistance (R_0 PH-PE)	R_0	mΩ/m	0,144	0,115	0,103	0,098	0,082	0,069	0,057	0,082	0,072	0,060	0,053	0,048	0,039	0,035	0,025
[1]Fault Loop Reactance (X PH-PE)	X	mΩ/m	0,072	0,067	0,046	0,050	0,038	0,037	0,030	0,006	0,007	0,007	0,007	0,025	0,016	0,014	0,011
[1]Fault Loop Impedance (Z_0 PH-PE)	Z_0	mΩ/m	0,162	0,133	0,113	0,109	0,091	0,078	0,064	0,072	0,060	0,054	0,054	0,054	0,042	0,038	0,028

[1]Measurements and calculations of fault-loop circuit is done according to EN 60439-2 appendix N2b.
** Values in the technical table are maintained from the type test certificates*

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