MS double sided busbar
technical data

Complies to :
IEC 61439-6 (BS EN 61439-6)

Suitable for the following climates :
Constant humid climate (IEC 60068 2 – 11)
Cyclical humid climate (IEC 60068 2 – 30)

Short circuit protection for Zucchini product ranges (In≤100 A)
Zucchini busbar systems with a nominal current less or equal to 100 A (LB PLUS / MS 63 and 100 A) are correctly protected against short circuit effects through an MCB (Miniature Circuit Breaker) with a nominal current less or equal to the one of the busbar
This protection is assured up to MCB short circuit withstand

The busbar trunking systems LB PLUS / MS 63 and 100 A are flame retardant in compliance with IEC 60332-3

Rating (A)		**63**	**100**	**160**
Live conductors	No.	4	4	4
Casing overal dimension	A x B (mm)	39 x 97	39 x 97	39 x 97
Rated current	I_n (A)	63	100	160
Cross-section of conductors (3P + N)	S (mm^2)	26	26	39
Cross-section of protective conductor eq. Cu	S_{PE} (mm^2)	21	21	21
Operational voltage	U_e (V)	400	400	400
Insulation voltage	U_i (V)	750	750	750
Rated frequency	f (Hz)	50/60	50/60	50/60
Rated short-time current (0·1 s)	I_{cw} (kA)rms	3·5	5	5·5
Peak current	Ipk (kA)	5·25	10	10
Maximum thermal limit	I^2t (A^2s x 106)	1·225	2·500	3·025
Phase resistance	R_{20} (mΩ/m)	1·250	0·837	0·478
Phase reactance (50Hz)	X (mΩ/m)	0·366	0·247	0·247
Phase impedance	Z (mΩ/m)	1·302	0·873	0·538
Resistance of the protective bar	R_{PE} (mΩ/m)	0·857	0·857	0·857
Reactance of the protective bar (50Hz)	X_{PE} (mΩ/m)	0·102	0·102	0·102
Resistance of the fault loop	R_o (mΩ/m)	2·11	1·69	1·34
Reactance of the fault loop (50Hz)	X_o (mΩ/m)	0·468	0·349	0·349
Impedance of the fault loop	Z_o (mΩ/m)	2·16	1·73	1·38
$\Delta V_{1F} = \frac{1}{2}(2 R_{20}\cos\varphi + 2 X \operatorname{sen}\varphi)$	ΔV (V/m/A)10^{-3} cosφ = 0·70	1·102	0·806	0·547
	ΔV (V/m/A)10^{-3} cosφ = 0·75	1·148	0·842	0·546
	ΔV (V/m/A)10^{-3} cosφ = 0·80	1·191	0·875	0·579
Voltage drop with distributed load (k)	ΔV (V/m/A)10^{-3} cosφ = 0·85	1·231	0·906	0·591
	ΔV (V/m/A)10^{-3} cosφ = 0·90	1·264	0·933	0·600
$\Delta V_{3F} = \frac{\sqrt{3}}{2}(R_{20}\cos\varphi + X \operatorname{sen}\varphi)$	ΔV (V/m/A)10^{-3} cosφ = 0·95	1·288	0·954	0·602
	ΔV (V/m/A)10^{-3} cosφ = 1·00	1·251	0·934	0·563
Straight length weight	p (kg/m)	2·0	2·5	2·8
Fire load	(kWh/m)	1·64	1·64	1·64
Protection degree	IP	40/55	40/55	40/55
Losses for the Joule effect at full load	P (W/m)	17·21	32·34	49·93
Min./max. ambient temperature	† (°C)	-5/+50	-5/+50	-5/+50

Temperature rating schedule										
Mean room temperature (°C)	15	20	25	30	35	40	45	50	55	60
K1 factor	1·15	1·12	1·08	1·05	1·025	1	0·975	0·95	0·93	0·89

Multiplier coefficient of nominal rating for room temperature values different from 40°C