

Design Verification Guidelines

This document assist assembly manufacturers to carry out their design verification process in accordance with AS/NZS 61439 series when using Schneider Electric's MB board.

Scope: MB enclosure only – see list of part numbers in Annex A

Trademark	Schneider Electric
Board type	MB Board
Chassis type	N/A
Ratings	IP42

Design Verification Guidelines to AS/NZS 61439.1:2016

Clause	Description	Performance	Test report	Reference design details
10.2.2	Resistance to corrosion	Severity A & Severity B	Report #30V-19-0467-TRP-10550312-2 issued on 24/03/2020 (PZC-781) – Sev A Report #N-0420-0129 R2 issued on 13/01/2021 (PZC-780) – Sev B	Test performed on various enclosure sheet metals and metal parts
10.2.3.1	Thermal Stability	N/A	N/A	N/A. Enclosure not made of insulating materials.
10.2.3.2	Resistance to abnormal heat and fire	N/A	N/A	Responsibility of assembly manufacturers
10.2.3	Resistance to UV radiation	Pass	Report #21LSR012 issued on 09/04/2021 (PZC-967) Report #0812DULDuralloy_922 issued on 12/08/2021 (PZC-1211)	Test performed on Interpon 610 Bright White, Interpon 610 Storm Grey N42 and Orange X15
10.2.5	Lifting	Pass	Report #61439_PZC-891 issued on 12/03/2021 (PZC-891)	Test performed on MB board (2100mm height) loaded at 163kg
10.2.6	Mechanical impact	Not claimed	N/A	N/A
10.2.7	Marking	N/A	N/A	Responsibility of assembly manufacturers
10.3	Degree of protection of enclosures	IP42	Report #30E-21-0014-TRP-6826176-0 issued on 11/02/2021 (PZC-871)	MB type
10.4	Clearances and Creepage	N/A	N/A	Responsibility of assembly manufacturers
10.5.2	Effective continuity between the exposed conductive parts of assembly and protective circuit	N/A	N/A	Responsibility of assembly manufacturers
10.5.3	Short circuit withstand strength of the protective circuit	N/A	N/A	Responsibility of assembly manufacturers
10.6	Incorporation of switching devices and components	N/A	N/A	Responsibility of assembly manufacturers
10.7	Internal electrical circuits and connections	N/A	N/A	Responsibility of assembly manufacturers
10.8	Terminals for external conductors	N/A	N/A	Responsibility of assembly manufacturers
10.9.2	Power-frequency withstand voltage	N/A	N/A	Responsibility of assembly manufacturers

Rev.	Date	Initials	Comments
1.0	13/5/21	SL	Release
1.1	19/8/21	SL	UPDT CL10.2.3

10.9.3	Impulse withstand voltage	N/A	N/A	Responsibility of assembly manufacturers
10.10	Temperature rise limits	N/A	N/A	Responsibility of assembly manufacturers
10.11	Short circuit withstand strength	N/A	N/A	Responsibility of assembly manufacturers
10.12	EMC	N/A	N/A	Responsibility of assembly manufacturers
10.13	Mechanical operation	Pass	Report #61439_PZC-890 issued on 10/03/2021 (PZC-890)	Hinge specifications – made from zinc and stainless steel pin. Powder coated to enclosure colour. Lock specifications – polyamide body with zinc plated cam

Design Verification Guidelines to AS/NZS 61439.2:2016

8.101	Form of Separation	N/A	N/A	Responsibility of assembly manufacturers
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Subject to correct installation, maintenance and use conforming to their intended purposes inline with the supplier's instructions, according to applicable local regulations and standards where they are installed.

This document is not a substitute for assembly manufacturers' design verification for the final completed assembly.

Rev.	Date	Initials	Comments
1.0	13/5/21	SL	Release
1.1	19/8/21	SL	UPDT CL10.2.3

ANNEX A: List of part numbers

References	Description
MB224CM1	MB ISOBAR 24P C60 IP42 160A
MB236DM1	MB ISOBAR 36P C60 IP42 160A
MB248DM1	MB ISOBAR 48P C60 IP42 160A
MB254EM1	MB ISOBAR 54P C60 IP42 160A
MB272EM1	MB ISOBAR 72P C60 IP42 160A
MB224CM2	MB ISOBAR 24P C60 IP42 250A
MB236DM2	MB ISOBAR 36P C60 IP42 250A
MB248DM2	MB ISOBAR 48P C60 IP42 250A
MB254EM2	MB ISOBAR 54P C60 IP42 250A
MB272EM2	MB ISOBAR 72P C60 IP42 250A
MB224CM1X15	MB ISOBAR 24P C60 IP42 160A ORANGE
MB236DM1X15	MB ISOBAR 36P C60 IP42 160A ORANGE
MB248DM1X15	MB ISOBAR 48P C60 IP42 160A ORANGE
MB254EM1X15	MB ISOBAR 54P C60 IP42 160A ORANGE
MB272EM1X15	MB ISOBAR 72P C60 IP42 160A ORANGE
MB224CM2X15	MB ISOBAR 24P C60 IP42 250A ORANGE
MB236DM2X15	MB ISOBAR 36P C60 IP42 250A ORANGE
MB248DM2X15	MB ISOBAR 48P C60 IP42 250A ORANGE
MB254EM2X15	MB ISOBAR 54P C60 IP42 250A ORANGE
MB272EM2X15	MB ISOBAR 72P C60 IP42 250A ORANGE
MB218B30	SWBD MB 18P C60 IP42 N0 M/SW
MB224B30	SWBD MB 24P C60 IP42 N0 M/SW
MB236C30	SWBD MB 36P C60 IP42 N0 M/SW
MB248D30	SWBD MB 48P C60 IP42 NO M/SW
MB260E30	SWBD MB 60P C60 IP42 NO M/SW
MB272E30	SWBD MB 72P C60 IP42 NO M/SW
MB284E30	SWBD MB 84P C60 IP42 NO M/SW
MB224C31	PNLBD MB 24P FOR C60 W/160A MAIN
MB236D31	SWBD MB 36P C60 IP42 160A
MB248D31	SWBD MB 48P C60 IP42 160A
MB260E31	SWBD MB 60P C60 IP42 160A
MB272E31	SWBD MB 72P C60 IP42 160A
MB224C32	SWBD MB 24P C60 IP42 250A
MB236D32	SWBD MB 36P C60 IP42 250A
MB248D32	SWBD MB 48P C60 IP42 250A

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MB260E32	SWBD MB 60P C60 IP42 250A
MB272E32	SWBD MB 72P C60 IP42 250A
MB284F32	SWBD MB 84P C60 IP42 250A
MB296F32	SWBD MB 96P C60 IP42 250A
MB224C10	ENCLOSURE C120 IP42 24P
MB236D10	ENCLOSURE C120 IP42 36P
MB248E10	MG MB 48P NC100 IP42 NO M/SW
MB260E10	SWBD MB 60P NC100 IP42 NO M/SW
MB272F10	MG MB 72P NC100 IP42 NO M/SW
MB224D11	SWBD MB 24P NC100 IP42 160A
MB236D11	MG MB 36P NC100 IP42 160A
MB248E11	MG MB 48P NC100 IP42 160A
MB260F11	MG MB 60P NC100 IP42 160A
MB224D12	SWBD MB 24P NC100 IP42 250A
MB236D12	SWBD MB 36P NC100 IP42 250A
MB248E12	SWBD MB 48P NC100 IP42 250A
MB260F12	MG MB 60P NC100 IP42 250A
MB272F12	SWBD MB 72P NC100 IP42 250A
MB224BH0	SWBD MB 24P HYB IP42 NO M/SW
MB236CH0	SWBD MB 36P HYP IP42 NO M/SW
MB248DH0	SWBD MB 48P HYB IP42 NO M/SW
MB260EH0	SWBD MB 60P HYB IP42 NO M/SW
MB272EH0	MG MB 72P HYB IP42 NO M/SW
MB224CH1	SWBD MB 24P C60 IP42 160A
MB236DH1	MG MB 36P HYB IP42 160A
MB248DH1	SWBD MB 48P HYB IP42 160A
MB260EH1	MG MB 60P HYB IP42 160A
MB224CH2	SWBD MB 24P C60 IP42 250A
MB236DH2	SWBD MB 36P HYB IP42 250A
MB248DH2	SWBD MB 48P HYB IP42 250A
MB260EH2	SWBD MB 60P HYB IP42 250A
MB272FH2	SWBD MB 72P HYB IP42 250A
MB218B30X15	SWBD MB 18P C60 IP42 NO M/SW
MB224B30X15	SWBD MB 24P C60 IP42 NO M/SW ORANGE
MB236C30X15	SWBD MB 36P C60 IP42 NO M/SW ORANGE
MB248D30X15	SWBD MB 48P C60 IP42 NO M/SW
MB260E30X15	MB 60P C60 IP42 NO M/WS ORANGE
MB272E30X15	MB 72P C60 IP42 NO M SW ORANGE X15
MB284E30X15	SWBD MB 84P C60 IP42 NO M/SW
MB224C31X15	SWBD MB 24P C60 IP42 160A ORANGE
MB236D31X15	SWBD MB 36P C60 IP42 160A ORANGE

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MB248D31X15	SWBD MB 48P C60 IP42 160A ORANGE
MB260E31X15	SWBD MB 60P C60 IP42 160A ORANGE
MB272E31X15	SWBD MB 72P C60 IP42 160A
MB224C32X15	MB 24P C60 IP42 250A ORANGE X15 ORANGE
MB236D32X15	SWBD MB 36P C60 IP42 250A ORANGE
MB248D32X15	MB 48P C60 IP42 250A ORANGE
MB260E32X15	SWBD MB 60P C60 IP42 250A
MB272E32X15	SWBD MB 72P C60 IP42 250A
MB284F32X15	SWBD MB 84P C60 IP42 250A
MB296F32X15	SWBD MB 96P C60 IP42 250A
MB224C10X15	SWBD MB 24P NC100 IP42 NO M/SW
MB236D10X15	SPECIAL BASED ON MB236D31X15
MB248E10X15	MB 48P C120 IP42 NO M SW ORANG X15 ORANG
MB260E10X15	MB 60P C120 IP42 NO M SW X15 MB260E10X15
MB272F10X15	MB 72P C120 IP42 NO M SW X15 MB272F10X15
MB224D11X15	MB 24P C120 IP42 160A ORANGE X15 ORANGE
MB236D11X15	MB 36P C120 IP42 160A ORANGE X15 ORANGE
MB248E11X15	MB 48P C120 IP42 160A ORANGE X15 ORANGE
MB260F11X15	MB 60P C120 IP42 160A ORANGE MB260F11X15
MB224D12X15	MG MB 24P NC100 IP42 250AX15
MB236D12X15	MB 36P C120 IP42 250A ORANGE X15 ORANGE
MB248E12X15	MB 48P C120 IP42 250A ORANGE
MB260F12X15	MB 60P C120 IP42 250A ORANGE MB260F12X15
MB272F12X15	MB 72P C120 IP42 250A ORANGE MB272F12X15
MB224BHOX15	MB 24P HYB IP42 NO M SW ORANGE X15
MB236CHOX15	MB 36P HYB IP42 NO M SW ORANGE X15
MB248DHOX15	MB 48P HYB IP42 NO M SW ORANGE X15
MB260EHOX15	MB 60P HYB IP42 NO M SW X15 X15 ORANGE
MB272EHOX15	MB 72P HYB IP42 NO M SW X15 MB272EHOX15
MB224CH1X15	MB 24P HYB IP42 160A ORANGE X15 ORANGE
MB236DH1X15	MB 36P HYB IP42 160A ORANGE X15 ORANGE
MB248DH1X15	MB 48P HYB IP42 160A ORANGE X15 ORANGE
MB260EH1X15	MB 60P HYB IP42 160A X15 X15 ORANGE
MB224CH2X15	MB 24P HYB IP42 250A ORANGE X15 ORANGE
MB236DH2X15	MB 36P HYB IP42 250A ORANGE
MB248DH2X15	MB 48P HYB IP42 250A ORANGE
MB260EH2X15	SWBD MB 60P HYB IP42 250A
MB272FH2X15	MB 72P HYB IP42 250A ORANGE MB272FH2X15

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