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 MD board.

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

Trademark	Schneider Electric
Board type	MD Board
Chassis type	N/A
Ratings	IP56

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-1020-0346-02 issued on 02/02/2021 (PZC-873) – Sev B 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	IP56	Report #19300832 001 issued on 14/05/2013 (PZC-793)	MD 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
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

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8.101	Form of Separation	N/A	N/A	Responsibility of assembly manufacturers

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.

ANNEX A: List of part numbers

References	Description
MD224CM1	MD ISOBAR 24P C60 IP56 160A
MD236DM1	MD ISOBAR 36P C60 IP56 160A
MD248DM1	MD ISOBAR 48P C60 IP56 160A
MD254EM1	MD ISOBAR 54P C60 IP56 160A
MD272EM1	MD ISOBAR 72P C60 IP56 160A
MD224CM2	MD ISOBAR 24P C60 IP56 250A
MD236DM2	MD ISOBAR 36P C60 IP56 250A
MD248DM2	MD ISOBAR 48P C60 IP56 250A
MD254EM2	MD ISOBAR 54P C60 IP56 250A
MD272EM2	MD ISOBAR 72P C60 IP56 250A
MD224CM1X15	MD ISOBAR 24P C60 IP56 160A ORANGE
MD236DM1X15	MD ISOBAR 36P C60 IP56 160A ORANGE
MD248DM1X15	MD ISOBAR 48P C60 IP56 160A ORANGE
MD254EM1X15	MD ISOBAR 54P C60 IP56 160A ORANGE
MD272EM1X15	MD ISOBAR 72P C60 IP56 160A ORANGE
MD224CM2X15	MD ISOBAR 24P C60 IP56 250A ORANGE
MD236DM2X15	MD ISOBAR 36P C60 IP56 250A ORANGE
MD248DM2X15	MD ISOBAR 48P C60 IP56 250A ORANGE
MD254EM2X15	MD ISOBAR 54P C60 IP56 250A ORANGE
MD272EM2X15	MD ISOBAR 72P C60 IP56 250A ORANGE
MD224C30	SWBD MD 24P C60 IP56 NO M/SW
MD236D30	SWBD MD 36P C60 IP56 NO M/SW
MD248D30	SWBD MD 48P C60 IP56 NO M/SW
MD260E30	SWBD MD 60P C60 IP56 NO M/SW
MD272E30	MG MD 72P C60 IP56 NO M/SW
MD224C31	SWBD MD 24P C60 IP56 160A
MD236D31	SWBD MD 36P C60 IP56 160A
MD248D31	SWBD MD 48P C60 IP56 160A
MD260E31	SWBD MD 60P C60 IP56 160A
MD272E31	SWBD MD 72P C60 IP56 160A
MD224C32	SWBD MD 24P C60 IP56 250A
MD236D32	SWBD MD 36P C60 IP56 250A
MD248D32	SWBD MD 48P C60 IP56 250A
MD260E32	SWBD MD 60P C60 IP56 250A

MD272E32	SWBD MD 72P C60 IP56 250A
MD284F32	MD 84P C60 IP56 250A
MD224C30X15	MD 24P C60 IP56 NO M/SW ORANGE
MD236D30X15	MG MD 36P C60 IP56 NO M/SW ORA
MD248D30X15	MD 48P C60 IP56 NO M SW ORANGE X15
MD260E30X15	MD 60P C60 IP56 NO M SW ORANGE X15
MD272E30X15	MD 72P C60 IP56 NO M SW ORANGE X15
MD224C31X15	MG MD 24P C60 IP56 160A ORANGE
MD236D31X15	MG MD 36P C60 IP56 160A ORANGE
MD248D31X15	MD 60P C60 IP56 160A ORANGE
MD260E31X15	MG MD 60P C60 IP56 160A ORANGE
MD272E31X15	SWBD MD 72P C60 IP56 160A
MD224C32X15	SPECIAL BASED ON MD224C32
MD236D32X15	SWBD MD 36P C60 IP56 250A
MD248D32X15	SPECIAL BASED ON MD248D32
MD260E32X15	SWBD MD 60P C60 IP56 250A
MD272E32X15	SWBD MD 72P C60 IP56 250A
MD284F32X15	MD 84P C60 IP56 250A ORANGE X15 ORANGE