

Design Verification Guidelines

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

Scope: **SAU400 Encapsulated Chassis** – see list of part numbers in Annex A

Trademark	Schneider Electric
Enclosure type	N/A
Chassis type	SAU400 Encapsulated chassis
Ratings	$U_e = 415V$ a.c. / 500V d.c.

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	Report #30V-19-0467-TRP-10550312-2 issued on 24/03/2020 (PZC-781)	Test performed on chassis mounting plate
10.2.3.1	Thermal Stability	N/A	N/A	Responsibility of assembly manufacturers
10.2.3.2	Resistance to abnormal heat and fire	Pass	Report #60405147 001 issued on 27/08/2020 (PZC-792) Report #50153987 001 issued on 27/06/2020 (PZC-790)	Test performed on chassis conductor supports, insulating material and T-off boots
10.2.4	Resistance to UV radiation	N/A	N/A	Responsibility of assembly manufacturers
10.2.5	Lifting	N/A	N/A	Responsibility of assembly manufacturers
10.2.6	Mechanical impact	N/A	N/A	Responsibility of assembly manufacturers
10.2.7	Marking	N/A	N/A	Responsibility of assembly manufacturers
10.3	Degree of protection of enclosures	N/A	N/A	Responsibility of assembly manufacturers
10.4	Clearances and Creepage	Pass Clearance - 6.75mm Creepage - 9.50mm	Report #NYL003 – SAU400 Chassis Range issued on 26/10/2020 (PZC-799)	SAU400 chassis (18mm and 27mm)
10.5.2	Effective continuity between the exposed conductive parts of assembly and protective circuit	N/A	N/A	Responsibility of assembly manufacturers

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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	$U_i = 500V$ a.c./d.c.	Report #AU21G8HP 001 issued on 15/04/2021 (PZC-946)	Test performed on SAU400 chassis 12 Pole with C120 and iC60 MCB.
10.9.3	Impulse withstand voltage	$U_{imp} = 6kV$	Report #AU21G8HP 001 issued on 15/04/2021 (PZC-946)	Test performed on SAU400 chassis 12 Pole with C120 and iC60 MCB
10.10	Temperature rise limits	$I_{nA} = 320A$ (INS400) Loading factor of outgoing circuit = 0.6 (Acti9 iC60 MCB up to 63A)	Report #60412250 006 issued on 16/12/2020 (PZC-825) Full assembly test	Assembly size (WxHxD): 580 x 1200 x 200 mm Enclosure type: ME IP66 Incoming circuit: INS400 w/ L400CK3 links to chassis Chassis: SAU400 42 Pole (18mm) Outgoing circuits: 10 x iC60H 3P 63A MCB
		$I_{nA} = 250A$ (INS250) Loading factor of outgoing circuit = 0.7 (Acti9 iC60 MCB and RCBO up to 45A)	Report #SCHN 01062023.1 issued on 1/06/2023 Full assembly test	Assembly size (WxHxD): 580 x 1500 x 200 mm Enclosure type: ME IP54 Vented (4 off 150x150mm vents) Incoming circuit: INS250 w/ 95mm² SDI cable link to chassis Chassis: SAU400 24 Pole (18mm) Outgoing circuits: 24 x iC60H 1P 45A RCBO
		$I_{nA} = 235A$ (INS250) Loading factor of outgoing circuit = 0.7 (Acti9 iC60 MCB and RCBO up to 45A)	Report #SCHN 01062023.2 issued on 1/06/2023 Full assembly test	Assembly size (WxHxD): 580 x 1500 x 200 mm Enclosure type: ME IP66 Incoming circuit: INS250 w/ 95mm² SDI cable link to chassis Chassis: SAU400 24 Pole (18mm) Outgoing circuits: 24 x iC60H 1P 45A RCBO
		$I_{nA} = 210A$ (NSX/CVS250) Loading factor of outgoing circuit = 0.7 (Acti9 iC60 MCB and RCBO up to 45A)	Report #SCHN 31052023.2 issued on 31/05/2023 Full assembly test	Assembly size (WxHxD): 580 x 1500 x 200 mm Enclosure type: ME IP66 Incoming circuit: CVS250 w/ 95mm² SDI cable link to chassis Chassis: SAU400 24 Pole (18mm) Outgoing circuits: 24 x iC60H 1P 45A RCBO

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10.11	Short circuit withstand strength	$I_{cw} = 25kA$ for 0.1s	Report #60412250 013 issued on 07/01/2021 (PZC-822)	Verification by comparison with SAU250 Encapsulated Chassis in accordance with 10.11.3 and Table 13.
10.12	EMC	N/A	N/A	Responsibility of assembly manufacturers
10.13	Mechanical operation	N/A	N/A	Responsibility of assembly manufacturers

Design Verification Guidelines to AS/NZS 61439.2:2016

Clause	Description	Performance	Test report	Reference design details
8.101	Form of Separation	2b and 4ah	Report #AU217GSI 001 issued on 02/08/2021 (PZC-1196)	Achievable with Schneider INS250 or NSX100-250 main incoming devices with appropriate line and load side terminal shrouds.

Subject to correct installation, maintenance and use conforming to their intended purposes in line 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.

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ANNEX A: List of part numbers

Reference	Description
SAU40012183	Chassis 3PH 400A 18mm 12P TBF
SAU40018183	Chassis 3PH 400A 18mm 18P TBF
SAU40024183	Chassis 3PH 400A 18mm 24P TBF
SAU40030183	Chassis 3PH 400A 18mm 30P TBF
SAU40036183	Chassis 3PH 400A 18mm 36P TBF
SAU40042183	Chassis 3PH 400A 18mm 42P TBF
SAU40048183	Chassis 3PH 400A 18mm 48P TBF
SAU40060183	Chassis 3PH 400A 18mm 60P TBF
SAU40072183	Chassis 3PH 400A 18mm 72P TBF
SAU40084183	Chassis 3PH 400A 18mm 84P TBF
SAU40096183	Chassis 3PH 400A 18mm 96P TBF
SAU400108183	Chassis 3PH 400A 18mm 108P TBF
SAU40012183DF	Chassis 3PH 400A 18mm 12P DF
SAU40018183DF	Chassis 3PH 400A 18mm 18P DF
SAU40024183DF	Chassis 3PH 400A 18mm 24P DF
SAU40030183DF	Chassis 3PH 400A 18mm 30P DF
SAU40036183DF	Chassis 3PH 400A 18mm 36P DF
SAU40042183DF	Chassis 3PH 400A 18mm 42P DF
SAU40048183DF	Chassis 3PH 400A 18mm 48P DF
SAU40060183DF	Chassis 3PH 400A 18mm 60P DF
SAU40072183DF	Chassis 3PH 400A 18mm 72P DF
SAU40084183DF	Chassis 3PH 400A 18mm 84P DF
SAU40096183DF	Chassis 3PH 400A 18mm 96P DF
SAU400108183DF	Chassis 3PH 400A 18mm 108P DF
SAU40012273	Chassis 3PH 400A 27mm 12P TBF
SAU40018273	Chassis 3PH 400A 27mm 18P TBF
SAU40024273	Chassis 3PH 400A 27mm 24P TBF
SAU40030273	Chassis 3PH 400A 27mm 30P TBF
SAU40036273	Chassis 3PH 400A 27mm 36P TBF
SAU40042273	Chassis 3PH 400A 27mm 42P TBF
SAU40048273	Chassis 3PH 400A 27mm 48P TBF
SAU40060273	Chassis 3PH 400A 27mm 60P TBF
SAU40072273	Chassis 3PH 400A 27mm 72P TBF
SAU40012273DF	Chassis 3PH 400A 27mm 12P DF
SAU40018273DF	Chassis 3PH 400A 27mm 18P DF
SAU40024273DF	Chassis 3PH 400A 27mm 24P DF

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SAU40030273DF	Chassis 3PH 400A 27mm 30P DF
SAU40036273DF	Chassis 3PH 400A 27mm 36P DF
SAU40042273DF	Chassis 3PH 400A 27mm 42P DF
SAU40048273DF	Chassis 3PH 400A 27mm 48P DF
SAU40060273DF	Chassis 3PH 400A 27mm 60P DF
SAU40072273DF	Chassis 3PH 400A 27mm 72P DF
SAU400H123	Chassis 3PH 400A HYB 18/27mm 12P TBF
SAU400H183	Chassis 3PH 400A HYB 18/27mm 18P TBF
SAU400H243	Chassis 3PH 400A HYB 18/27mm 24P TBF
SAU400H303	Chassis 3PH 400A HYB 18/27mm 30P TBF
SAU400H363	Chassis 3PH 400A HYB 18/27mm 36P TBF
SAU400H423	Chassis 3PH 400A HYB 18/27mm 42P TBF
SAU400H483	Chassis 3PH 400A HYB 18/27mm 48P TBF
SAU400H603	Chassis 3PH 400A HYB 18/27mm 60P TBF
SAU400H723	Chassis 3PH 400A HYB 18/27mm 72P TBF
SAU400H843	Chassis 3PH 400A HYB 18/27mm 84P TBF
SAU400H963	Chassis 3PH 400A HYB 18/27mm 96P TBF
SAU400H123DF	Chassis 3PH 400A HYB 18/27mm 12P DF
SAU400H183DF	Chassis 3PH 400A HYB 18/27mm 18P DF
SAU400H243DF	Chassis 3PH 400A HYB 18/27mm 24P DF
SAU400H303DF	Chassis 3PH 400A HYB 18/27mm 30P DF
SAU400H363DF	Chassis 3PH 400A HYB 18/27mm 36P DF
SAU400H423DF	Chassis 3PH 400A HYB 18/27mm 42P DF
SAU400H483DF	Chassis 3PH 400A HYB 18/27mm 48P DF
SAU400H603DF	Chassis 3PH 400A HYB 18/27mm 60P DF
SAU400H723DF	Chassis 3PH 400A HYB 18/27mm 72P DF
SAU400H843DF	Chassis 3PH 400A HYB 18/27mm 84P DF
SAU400H963DF	Chassis 3PH 400A HYB 18/27mm 96P DF

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