






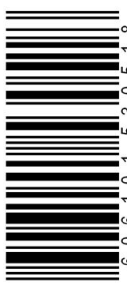




<p>TEST REPORT IEC 62208 Empty enclosures for low-voltage switchgear and controlgear assemblies – General requirements</p>	
Report Number	T211-0099/18
Date of issue	2018-03-02
Total number of pages.....	33
Applicant's name	Tehnoplast d.o.o.
Address	Zdravka Jekića 119, RS-22305 Stari Banovci, Serbia
Test specification:	
Standard	IEC 62208:2011 (Second Edition)
Test procedure	Type test
Non-standard test method	N/A
Test Report Form No.	IEC62208B
Test Report Form(s) Originator	OVE
Master TRF.....	Dated 2013-01
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Test item description	Surface and flush mounted installation boxes
Trade Mark	HYPRO
Manufacturer.....	Tehnoplast d.o.o., Zdravka Jekića 119, RS-22305 Stari Banovci, Serbia
Model/Type reference	Surface mount: N8-C, N12C, N18-C, N24-C, N36-C, N48-C, N2x18-C, N3x18C Flush mount: U8-C, U12-C, U18-C, U24-C, U36-C, U2x18-C; U3x18-C
Ratings	400 V a.c.; IP40; Class II; IK07 (See General product information)

Testing procedure and testing location:		
<input checked="" type="checkbox"/>	CB Testing Laboratory:	SIQ Ljubljana SIQ Ljubljana is accredited by Slovenian Accreditation with accreditation number LP-009 in the field of testing
Testing location/ address		Tržaška cesta 2, SI-1000 Ljubljana, Slovenia
<input type="checkbox"/>	Associated CB Testing Laboratory:	
Testing location/ address		
Tested by (name + signature)		Tibor Kokelj
Approved by (name + signature)		Gregor Schoss
		
<input type="checkbox"/>	Testing procedure: TMP	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: WMT	
Testing location/ address		
Tested by (name + signature)		
Witnessed by (name + signature)		
Approved by (name + signature)		
<input type="checkbox"/>	Testing procedure: SMT	
Testing location/ address		
Tested by (name + signature)		
Approved by (name + signature)		
Supervised by (name + signature) ..		

<p>List of Attachments (including a total number of pages in each attachment):</p> <ul style="list-style-type: none"> - Attachment No.1: Technical documentation (3 pages) - Attachment No.2: Photos (12 pages) 	
<p>Summary of testing:</p>	
<p>Tests performed (name of test and test clause): All applicable tests were performed</p>	<p>Testing location: SIQ Ljubljana Mašera-Spasičeva ulica 10 SI-1000 Ljubljana Slovenia</p>
<p>Summary of compliance with National Differences List of countries addressed: /</p> <p><input checked="" type="checkbox"/> The product fulfils the requirements of IEC 62208:2011 (Second Edition). <input checked="" type="checkbox"/> The product fulfils the requirements of EN 62208:2011</p>	

Copy of marking plate

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

 <p>Enclosure for automatic fuses</p> <p>N2x18C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>N3x18C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>N8C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 	
 <p>Enclosure for automatic fuses</p> <p>N12C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>N18C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>N24C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 	
 <p>Enclosure for automatic fuses</p> <p>N36C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>N48C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>U2x18C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 	
 <p>Enclosure for automatic fuses</p> <p>U3x18C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>U8C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 		 <p>Enclosure for automatic fuses</p> <p>U12C</p> <p>Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia</p> <p>According to: IEC 62208 Product data: IP40, In-63A, 400V~</p> <p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p> 	

 www.tehno-plast.com Enclosure for automatic fuses U18C Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia According to: IEC 62208 Product data: IP40, In-63A, 400V~ <input type="checkbox"/>	 6 0 6 1 0 1 7 6 4 3 0	 www.tehno-plast.com Enclosure for automatic fuses U24C Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia According to: IEC 62208 Product data: IP40, In-63A, 400V~ <input type="checkbox"/>	 6 0 6 1 0 1 5 3 0 1 7 4	 www.tehno-plast.com Enclosure for automatic fuses U36C Producer: TEHNOPLAST d.o.o. Address: Zdravka Jekića 119 22305 Stari Banovci Serbia According to: IEC 62208 Product data: IP40, In-63A, 400V~ <input type="checkbox"/>	 6 0 6 1 0 1 5 3 0 1 3 6
<p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p>		<p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p>		<p>NOTE: Product can be installed only by certified electrician according to given manual instruction</p>	
					

Test item particulars	Classification
Type of material	insulating / metallic / combination of insulating and metallic
Method of fixing	floor standing / <u>wall mounting</u> (N8-C, N12C, N18-C, N24-C, N36-C, N48-C, N2x18-C, N3x18C) / <u>flush mounting</u> (U8-C, U12-C, U18-C, U24-C, U36-C, U2x18-C, U3x18C) / pole mounting
Intended location	Outdoor / <u>Indoor</u>
Degree of protection	IP40 / IK07
Rated insulation voltage (if applicable)	400 V
Possible test case verdicts:	
- test case does not apply to the test object.....	: N/A
- test object does meet the requirement	: P (Pass)
- test object does not meet the requirement.....	: F (Fail)
Testing	
Date of receipt of test item	: 2017-08-25
Date (s) of performance of tests	: (2017-11-15) – (2018-01-11)
General remarks:	
<p>The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory. "(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p>	
<p>Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60068-2-2:	
<p>The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided</p>	
<p style="text-align: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable</p>	
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)	: 1. Tehnoplast d.o.o., Zdravka Jekića 119, RS-22305 Stari Banovci, Serbia

General product information:

Designation description:

(U or N) (XX) C (W) (IT)

U mark for FLUSH MOUNTING enclosures

N mark for SURFACE MOUNTING enclosures

XX mark for number of modules that can be installed into enclosure

C mark for product series

W mark for WHITE DOOR, made of same material as standard door, but white color.

Product without this mark means that product is with standard packing.

IT mark for enclosures without DIN rails, but made with perforated metal panel for mounting of IT and/or multimedia equipment.

Product without this mark means that it is standard product for automatic fuses

For example, N24CWIT - shows that product is SURFACE MOUNTING, originals used for 24 modules (two row size), with WHITE DOOR and for IT equipment.

Type	Size: width x height x depth (mm)
U8C	201 x 212 x 102
U12C	273 x 212 x 112
U24C	273 x 336 x 112
U36C	273 x 460 x 112
U18C	373 x 212 x 112
U2x18C	373 x 336 x 112
U3x18c	373 x 502 x 112
N8C	215 x 236 x 112
N12C	287 x 236 x 112
N24C	396 x 236 x 112
N36C	287 x 361 x 112
N48C	396 x 361 x 112
N18C	287 x 526 x 112
N2x18C	287 x 652 x 112
N3x18C	396 x 526 x 112

Declared static load and Pde:

Type	Static load per DIN rail	Pde
U8C	1040 g	16 W
U12C	1560 g	25 W
U24C	1560 g	30 W
U36C	1560 g	30 W
U18C	2340 g	25 W
U2x18C	2340 g	30 W
U3x18c	2340 g	35 W
N8C	1040 g	16 W
N12C	1560 g	25 W
N24C	1560 g	30 W
N36C	1560 g	30 W
N48C	1560 g	35 W
N18C	2340 g	25 W
N2x18C	2340 g	30 W
N3x18C	2340 g	35 W

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
6	INFORMATION TO BE GIVEN REGARDING THE ENCLOSURE		P
6.2	Marking		P
	The enclosure shall be marked as follows:		P
	- Name, trade mark or identification mark of the enclosure manufacturer.	TEHNOPLAST	P
	- Type designation or identification number of the enclosure.	Type marking	P
	The marking shall be durable and easily legible and may be inside the enclosure.		P
	Compliance is checked according to the test of 9.3 and by inspection.		P
	The marking for recycling of plastic parts follows ISO 11469.		N/A
6.3	Documentation		P
6.3.1	General		P
	The manufacturer's documentation includes:		P
	- relevant constructional and mechanical characteristics		P
	- enclosure classification (see Clause 4)		P
	- instruction necessary for the correct handling, assembling, mounting and service conditions of the enclosure		P
6.3.2	- dimension	See documentation	P
6.3.3	- mounting arrangements	DIN rails for mounting of equipment. Self-evident.	P
6.3.4	- permissible loads	In technical documentation	P
6.3.5	- lifting devices, if necessary		N/A
6.3.6	- provisions for protection against electric shock	Plastic enclosures	N/A
	- applicable service conditions (see Clause 7);		N/A
	- location and size of protected space		N/A
	- data of thermal power dissipation capability;		P
	- rated insulation voltage of enclosures constructed of an insulating material	400 V	P
	- degree of protection (IK code, see 8.7)	IK07	P
	- degree of protection (IP code, see 8.8)	IP40	P
7	SERVICE CONDITIONS		P
7.1	Manufacturer has specified the locations for which the enclosure is intended	Indoor	P
7.2	Normal service conditions		P

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
7.2.1	Ambient air temperature		P
7.2.1.1	- for indoor locations (max. +40°C, average over 24 h ≤ 35°C; lower limit : -5°C)	Declared: -25°C to +60°C	P
7.2.1.2	- for outdoor locations (max. +40°C, average over 24 h ≤ 35°C; lower limit : -25°C)		N/A
7.2.2	Humidity conditions		P
7.2.2.1	- for indoor locations (≤ 50% RH at max. +40°C or for example 90% RH at +20°C)	In technical documentation	P
7.2.2.2	- for outdoor locations (up to 100% RH at max. +25°C)		N/A
7.3	Special service conditions, if applicable		N/A
7.4	Conditions during transport and storage, if applicable		N/A
8	DESIGN AND CONSTRUCTION		P
8.1	General		P
	The enclosure constructed of materials capable of withstanding the mechanical, electrical and thermal stresses, as specified in clause 9, as well as the effects of humidity which are likely to be encountered in normal use.		P
	Protection against corrosion checked by the test of 9.13	Plastic enclosures	N/A
	For enclosures or parts of enclosures made of insulating materials, thermal stability, resistance to heat, fire and weathering shall be verified according to tests of 9.9 and 9.12	See clause 9.9	P
8.2	Static loads		P
	Compliance of the permissible load that the enclosure and its doors are able to carry is checked according to the test of 9.4	See clause 9.4	P
8.3	Lifting and transport support		N/A
	Where required, enclosures are provided with appropriate lifting devices or transport means (according to the test of 9.5)		N/A
8.4	Access to the interior of the enclosure		P
	Doors or removable covers allow adequate access to the protected space. Access may be restricted by the use of a key or tool	Doors. No restricted access	P
	Cable gland plates and covers which are removable from the outside require the use of a tool.	No such things	N/A
8.5	Protective circuit		N/A
	Metallic enclosures shall ensure the electric continuity		N/A
	- by conductive structural parts of the enclosure	Plastic enclosures	N/A

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
	- by separate protective conductor to earth		N/A
	After remove of a removable part protective circuit of the remainder shall not be interrupted		N/A
	For lids, doors, removable covers and the like, the usual metal screwed connections and metal hinges may ensure continuity of the protective circuit provided no electrical equipment is attached to them		N/A
	Where these are intended for mounting electrical equipment, additional means shall be provided to ensure the continuity of the protective circuit.		N/A
	Compliance is checked according to the test of 9.11		N/A
	The enclosure manufacturer shall provide means to facilitate the connection of the external protective conductor by the final assembly manufacturer. The location and the designed I ² t withstand capacity under fault conditions of such means shall be indicated in the enclosures manufacturers' documentation.		N/A
8.6	Dielectric strength		P
	Enclosure constructed of an insulating material fulfill the dielectric test of 9.10	See clause 9.10	P
8.7	Degree of protection (IK-Code)		P
	Degree of protection according to IEC 62262	IK07	P
	Compliance is checked according to the test of 9.7	See clause 9.7	P
8.10	Degree of protection (IP-Code)		P
	Degree of protection according to IEC 60529	IP40	P
	Compliance is checked according to the test of 9.8	See clause 9.8	P
9	TYPE TESTS		P
9.2	General conditions of tests		P
	The enclosures under test are mounted and installed as in normal use according to the enclosure manufacturer's instructions		P
	Unless otherwise specified, the tests shall be carried out at an ambient temperature of between +10 °C and +40 °C	25°C	P
	Number of samples and order of test per sample according to Table 1	See Table 1	P
9.3	Marking		P
	Markings made by moulding, pressing or similar and labels with a laminated plastic covering are not submitted to this test		P
	Test: 15 s rubbing with water and then 15 s rubbing with petroleum spirit		P
	After the test markings easily legible	Markings still legible	P

IEC 62208				
Clause	Requirement + Test	Result - Remark		Verdict
9.4	Static loads			P
	The enclosure fitted with all its required components to support the permissible load is loaded with a weight of 1,25 times the permissible load as declared by the manufacturer	Enclosure: N18-C; U18-C; N2x18-C; N3x18C, U2x18C, U3x18C: 2,93 kg per DIN rail N8-C; U8-C: 1,3 kg per DIN rail Others: 1,95 kg per DIN rail		P
	The loads are arranged on the mounting plate or switchgear and controlgear supports and on the door evenly distributed as specified by the enclosure manufacturer	Mounting only on DIN rail		P
	Loads retained for 1h in the closed position			P
	Enclosure constructed of insulating material and metallic enclosures with parts (hinges, locks, etc.) of insulating material tested at 70°C	Tested at 70°C		P
	Closed door opened 5 times through 90°			P
	Resting in open position: 1 min.			P
	For enclosures constructed of insulating material and metallic enclosures with parts (hinges, locks, etc.) of insulating material, this part of the test may be carried out at ambient temperature external to the heating cabinet			P
	After the test enclosure shows no cracks or permanent distortions			P
	During the test no deflections which could impair any of its characteristics			P
9.5	Lifting			N/A
	Enclosure loaded as in 9.4 with its door closed, lifted with the specified lifting means and in the manner defined by the manufacturer	Enclosure: kg		N/A
	3 times: from standstill position in a vertical plane, returning to standstill position			N/A
	From standstill position to a height of ≥ 1 m for 30 min, without any movement			N/A
	3 times: from standstill position to a height of ≥ 1 m and moved $10 \pm 0,5$ m horizontally; then set down. One cycle: 1 min \pm 5 s at uniform speed			N/A
	After the test enclosure shows no cracks or permanent distortions			N/A
	During the test no deflections which could impair any of its characteristics			N/A
9.6	Axial loads of metal inserts			N/A
	Axial load according to table 2 applied for 10s	Size: M	Load: N	N/A

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
	After the test:		N/A
	- the insert is in its original position		N/A
	- no sign of movement		N/A
	- no cracks and splits in the material		N/A
9.7	Degree of protection against external mechanical impacts (IK code)		P
	- according to IEC 62282 by means of a test hammer suitable for the dimensions of the enclosure, the enclosure is fixed on a rigid support as for normal use		P
	The impact energy shall be applied:	IK07 / Impact Energy = 2 J	P
	- 3 times to each exposed surfaces in normal use whose largest dimensions is not above 1m		P
	- 5 times to each exposed surfaces in normal use whose largest dimensions is greater than 1m		N/A
	Impacts applied with even distributed over the faces of the enclosure		P
	After the test:		P
	- enclosure continue to provide the IP code and dielectric strength		P
	- removable covers are removed and reinstalled		N/A
	- doors opened and closed		P
9.8	Degree of protection (IP-Code)		P
9.8.1	Degree of protection against access to hazardous parts and against the ingress of solid foreign objects indicated by first characteristic numeral		P
9.8.1.1	Protection against access to hazardous parts		P
	Subclauses 12.1 and 12.2 of IEC 60529 apply	IP 40	P
	Access probe shall not enter the protected space		P
9.8.1.2	Degree of protection against the ingress of solid foreign objects		
	For enclosures IP2X, IP3X, IP4X, 13.2 and 13.3 of IEC 60529 apply.		P
	For IP 5X enclosures, 13.4, category 2 (without vacuum pump) and 13.5 (without vacuum pump) of IEC 60529 apply. Ingress of talcum powder into protected space is verified as described		N/A
	For enclosures IP6X, 13.6 of IEC 60529 apply. No talcum powder shall be observable inside the enclosure at the end of the test		N/A
9.8.2	Degree of protection against ingress of water as indicated by the second characteristic numeral		N/A
	Test according to clauses 14.1 and 14.2 of IEC 60529	IP40	N/A

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
	After the test, water has not ingressed into the protected space		N/A
9.8.3	Degree of protection against hazardous parts as indicated by additional letter.		N/A
	Test according to clause 15 of IEC 60529	No additional letter	N/A
	The access probe does not touch the surface of the protected space.		N/A
9.9	Properties of insulating materials		P
9.9.1	Thermal stability		P
	Test according to IEC 60068-2-2 Test Bb, temperature 70°C, with natural air circulation, for a duration of 168 h		P
	After the treatment:		P
	Enclosures are kept at ambient temperature and relative humidity between 45% and 55% for 4 days (96h)		P
	- enclosure shows no crack without additional magnifications	No cracks	P
	- material became not sticky or greasy	Material not sticky/greasy	P
	The forefinger wrapped in a dry piece of rough cloth is pressed with a force of 5N against the enclosure.		P
	No traces of the cloth remain to the enclosure and the material of the enclosure doesn't stick to the cloth.	No traces of cloth remain	P
9.9.2	Resistance to normal heat		N/A
	The suitability of the insulating materials to resist effects of heat shall be verified either by reference to the insulation temperature index (determined e.g. by the methods of IEC 60216 series), or by compliance to IEC 60085	IEC	N/A
9.9.3	Resistance to abnormal heat and to fire		P
	Test in accordance with the principles of IEC 60695-2-10 and the details of IEC 60695-2-11.		P
	Tested as described in clause 4 of IEC 60695-2-11		P
	Apparatus used as described in clause 5 of IEC 60695-2-11		P
	Preconditioning of the samples:		P
	Storage at 15-35°C / RH 35-45 % for 24h	24 h; 25°C; 37 %	P
	Thermocouple of test apparatus calibrated in accordance with clause 6 of IEC 60695-2-10		P
	During test:		
	- clause 8 of IEC 60695-2-10 followed		P

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
	- clause 10 of IEC 60695-2-11 followed		P
	Temperature of the tip of the glow wire:		P
	- for parts retaining current-carrying parts in position: $960 \pm 15^{\circ}\text{C}$	Terminals	P
	Time at which sample ignited:	$t_i = 1 \text{ s}$	P
	Time when sample extinguished:	$t_e = 10 \text{ s}$	P
	- for parts intended to be installed in hollow Walls: $850 \pm 15^{\circ}\text{C}$		N/A
	Time at which sample ignited:	$t_i = \text{ s}$	N/A
	Time when sample extinguished:	$t_e = \dots\text{s}$	N/A
	All other parts: $650 \pm 15^{\circ}\text{C}$	Front side plastics, Rear side plastics; Door plastics	P
	Time at which sample ignited:	$t_i = 0 \text{ s}$	P
	Time when sample extinguished:	$t_e = 0 \text{ s}$	P
	No visible flame, no sustained glowing or flames and glowing extinguish within $(30 \pm 1)\text{s}$	Terminals: Started burning immediately. Stop burning 10 s after GW removal. Front side plastics, Rear side plastics; Door plastics: No fire	P
	No burning of the tissue paper, no scorching of the pinewood board	Terminals: No drops Front side plastics, Rear side plastics; Door plastics: No drops	P
9.10	Verification of dielectric strength		P
9.10.1	General		P
	This test applies to enclosures where insulating material is used, even in combination with non-insulating materials		P
9.10.2	Preconditioning		P
	Enclosures are placed in a humidity cabinet (relative humidity between 91% and 95%) and an air temperature of $(40 \pm 2)^{\circ}\text{C}$ for 2 days (48h)	93,5 % RH; 40°C	P
9.10.3	Enclosures without metal elements inside the protective space		N/A
	An r.m.s voltage according to 10.9.4 of IEC 61439-1 is applied for 1 min between 2 metal foils, one in contact with the external surface and the other inside the enclosure at the limit of the protected space		N/A
	Applied voltage:	$U = \text{ V}$	N/A
9.10.4	Enclosure having metal elements in the protected space		P

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
	All internal metallic parts are connected to a bar, a voltage according to 10.9.4 of IEC 61439-1 is applied for 1 min. between a metal foil in contact with the external surface and the bar.	Internal DIN rail and terminals connected together - external part of enclosure wrapped in ALU foil	P
	Applied voltage:	U = (1890 x 1,5) V	P
9.10.5	Results to be obtained		P
	- samples show no damage impairing their further use		P
	- no flashover or breakdown occurs during the test		P
9.11	Continuity of the productive circuit		N/A
	Exposed conductive parts of the enclosure connected to the protective circuit		N/A
	Resistance not exceeding 0,1 Ω	Measured: Ω	N/A
9.12	Resistance to ultra-violet (UV) radiation		N/A
	This test applies only to enclosures and external parts of enclosures intended to be installed outdoors and which are constructed of insulating materials or metals that are entirely coated by synthetic material. Representative samples of such parts shall be subjected to the following test		N/A
	UV test according to ISO 4892-2 method A, cycle 1 with a total test period of 500 h	Not for outdoor installation	N/A
	For enclosures constructed of insulating materials compliance is checked by verification		N/A
	- flexural strength (according to ISO 178) of insulating materials have 70% min. retention		N/A
	- charpy impact (according to ISO / EN ISO 179) of insulating materials have 70% min. retention		N/A
	After the test samples are subjected to the glow wire test of 9.9.3		N/A
	For compliance, enclosures constructed of metals entirely coated by synthetic material, the adherence of the insulating material shall have a minimum retention of category 3 according to ISO 2409 (a cross-cut area greater than 15 %, but not greater than 35 % is affected)		N/A
	Samples show no cracks or deterioration		N/A
9.13	Resistance to corrosion		N/A
9.13.1	General		N/A
	Metallic enclosures and external metallic parts of insulating and combined enclosures are tested to verify that they ensure protection against corrosion		N/A
	In all cases hinges, locks and fastenings have to be tested		N/A
9.13.2	Test procedure		N/A

IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
9.13.2.1	Severity test A		N/A
	This test is applicable to:		N/A
	- metallic indoor enclosures		N/A
	- external metallic parts of indoor enclosures		N/A
	- internal metallic parts of indoor and outdoor enclosures upon which intended mechanical operation may depend		N/A
	The test consists of:		N/A
	- 6 cycles of 24 h each to damp heat cycling test according to IEC 60068-2-30 (Test Db) at $(40 \pm 3)^\circ\text{C}$ and relative humidity of 95 %		N/A
	- 2 cycles of 24 h each to salt mist test according to IEC 60068-2-11; (Test Ka: Salt mist), at a temperature of $(35 \pm 2)^\circ\text{C}$		N/A
9.13.2.2	Severity test B		N/A
	This test is applicable to:		N/A
	- metallic outdoor enclosures		N/A
	- external metallic parts of outdoor enclosures		N/A
	The test comprises two identical 12 day periods		N/A
	Each 12 day period comprises:		N/A
	- 5 cycles of 24 h each to damp heat cycling test according to IEC 60068-2-30 (Test Db) at $(40 \pm 3)^\circ\text{C}$ and relative humidity of 95 %		N/A
	- 7 cycles of 24 h each to salt mist test according to IEC 60068-2-11; (Test Ka: Salt mist), at a temperature of $(35 \pm 2)^\circ\text{C}$		N/A
9.13.3	Results to be obtained		N/A
	After the test, the enclosure or samples shall be washed in running tap water for 5 min, rinsed in distilled or demineralized water then shaken or subjected to air blast to remove water droplets. The specimen under test shall then be stored under normal service conditions for 2 h		N/A
	Compliance is checked by visual inspection to determine that:		N/A
	- there is no evidence of iron oxide, cracking or other deterioration more than that allowed by ISO 4628-3 for a degree of rusting Ri1		N/A
	- the mechanical integrity is not impaired		N/A
	- seals are not damaged		N/A
	- doors, hinges, locks, and fastenings work without abnormal effort		N/A
9.14	Thermal power dissipation capability		P

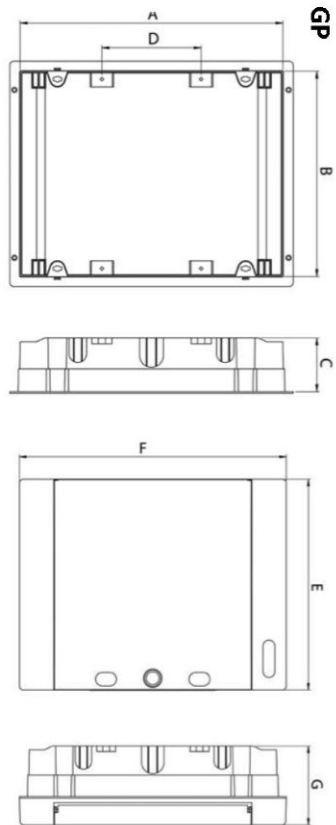
IEC 62208			
Clause	Requirement + Test	Result - Remark	Verdict
	The thermal power dissipation data provided by the manufacturer (see 6.3.1) is determined by following test:		P
	- either in accordance with 10.10.4.2.2 of IEC 61439-1:2011		N/A
	- or by a calculation method, e.g. according to IEC/TR 60890	N8-C: Declared: 16 W; Measured: > 16 W N12-C: Declared: 25 W; Measured: > 25 W N18-C: Declared: 25 W; Measured: > 25 W N24-C: Declared: 30 W; Measured: > 30 W N36-C: Declared: 30 W; Measured: > 30 W N48-C: Declared: 35 W; Measured: > 35 W N2x18-C: Declared: 30 W; Measured: > 30 W N3x18-C: Declared: 35 W; Measured: > 35 W U8-C: Declared: 16 W; Measured: > 16 W U12-C: Declared: 25 W; Measured: > 25 W U18-C: Declared: 25 W; Measured: > 25 W U24-C: Declared: 30 W; Measured: > 30 W U36-C: Declared: 30 W; Measured: > 30 W U2x18-C: Declared: 30 W; Measured: > 30 W U3x18-C: Declared: 35 W; Measured: > 35 W	P

Table 1 Number of samples to be tested and order of test per sample					
Subclause:	Test	Sample 1 Order / verdict	Sample 2 Order / verdict	Sample 3 Order / verdict	Representative sample (see 9.12) Verdict
9.4	Static loads	1 / P			
9.5	Lifting	2 / N/A			

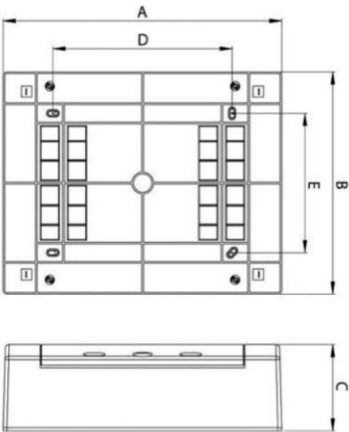
IEC 62208

Clause	Requirement + Test	Result - Remark			Verdict
9.6	Axial loads of metal inserts	3 / N/A			
9.7	Degree of protection against external mechanical impacts (IK code)	4 / P			
9.8	Degree of protection against access to hazardous parts and against ingress of solid objects and/or water (IP code)	5 / P			
9.9.1	Thermal stability		1 / P		
9.9.2	Resistance to heat		2 / P		
9.9.3	Resistance to abnormal heat and fire		3 / P		
9.10	Dielectric strength	6 / P			
9.11	Continuity of the protective circuit	7 / N/A		3 / N/A	
9.12	Resistance to ultra-violet (UV) radiation				^a / N/A
9.13	Resistance to corrosion			2 / N/A	
9.14	Thermal power dissipation capability			1 ^b / P	
9.3	Marking	8 / P			
^a	Tests carried out on representative sample only				
^b	Only appliance if verified by test				

Attachment No. 1 (Technical documentation)



DIN RAIL MOUNTING	A	B	C	D	E	F	G	Pde	Static load
U8C / U8CW	212 mm	201 mm	68 mm	-	211 mm	232 mm	99 mm	> 16 W	1040 g
U12C / U12CW	212 mm	273 mm	68 mm	-	283 mm	232 mm	106 mm	> 25 W	1560 g
U24C / U24CW	336 mm	273 mm	68 mm	125 mm	283 mm	357 mm	106 mm	> 30 W	1560 g
U36C / U36CW	460 mm	273 mm	68 mm	125 mm	482 mm	482 mm	106 mm	> 25 W	2340 g
U18C / U18CW	212 mm	373 mm	68 mm	-	392 mm	232 mm	106 mm	> 30 W	2340 g
U24C / U24CW	336 mm	373 mm	68 mm	125 mm	392 mm	357 mm	106 mm	> 30 W	2340 g
U36C / U36CW	502 mm	373 mm	68 mm	125 mm	522 mm	522 mm	106 mm	> 35 W	2340 g



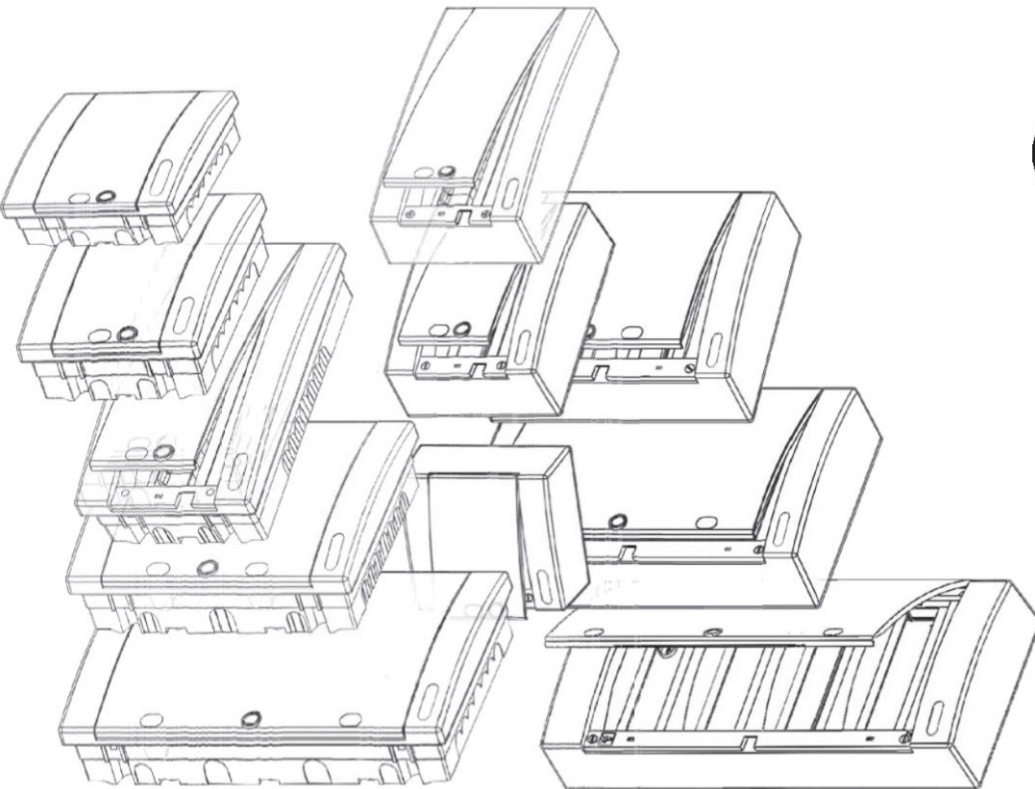
DIN RAIL MOUNTING	A	B	C	D	E	Pde	Static load
N8C / N8CW	236 mm	215 mm	102 mm	107 mm	120 mm	> 16 W	1040 g
N12C / N12CW	236 mm	287 mm	112 mm	107 mm	180 mm	> 25 W	1560 g
N24C / N24CW	236 mm	396 mm	112 mm	107 mm	289 mm	> 30 W	1560 g
N36C / N36CW	361 mm	287 mm	112 mm	232 mm	180 mm	> 30 W	1560 g
N48C / N48CW	361 mm	396 mm	112 mm	232 mm	289 mm	> 35 W	1560 g
N18C / N18CW	526 mm	287 mm	112 mm	357 mm	180 mm	> 25 W	2340 g
N24C / N24CW	526 mm	287 mm	112 mm	482 mm	180 mm	> 30 W	2340 g
N36C / N36CW	526 mm	396 mm	112 mm	357 mm	289 mm	> 35 W	2340 g

For indoor locations (5-50% RH at max. +40°C or for example 90% RH at +20°C)
 Temperature range: -25°C ... +50 °C, Rating Voltage: AC 400 V, According to: IEC 50670, IK 07

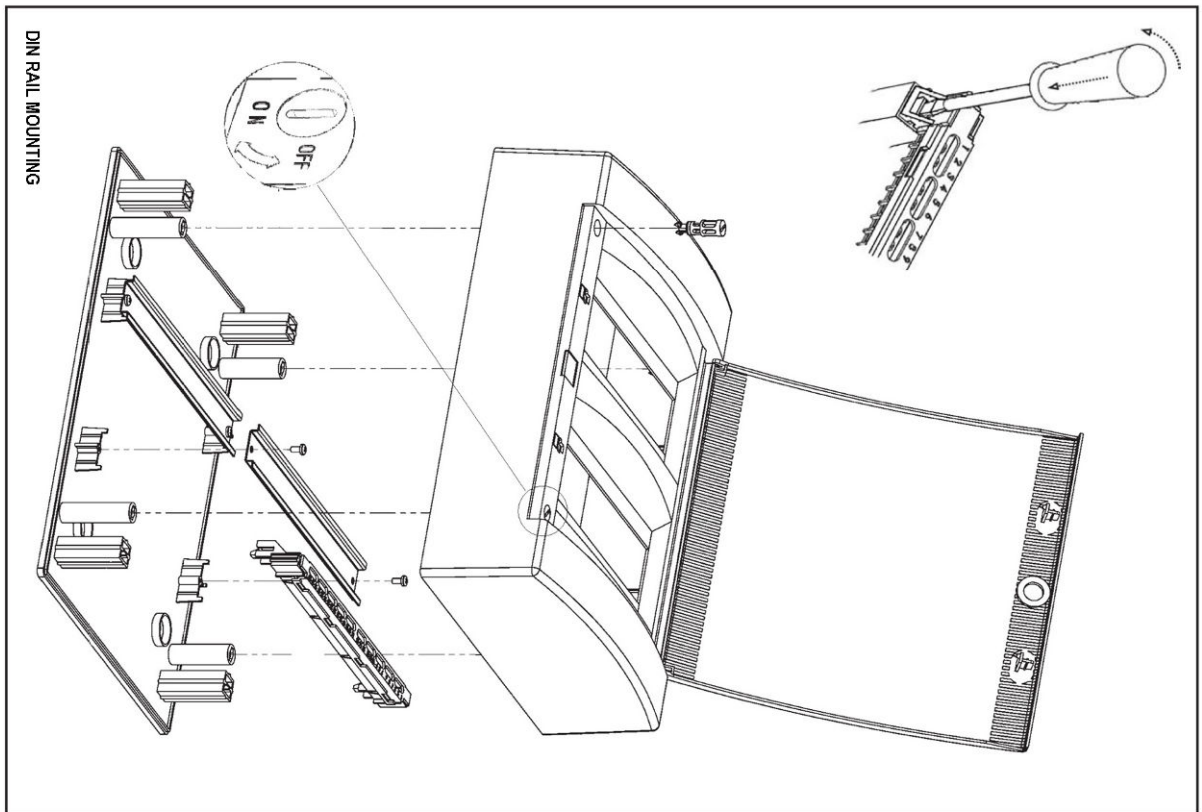
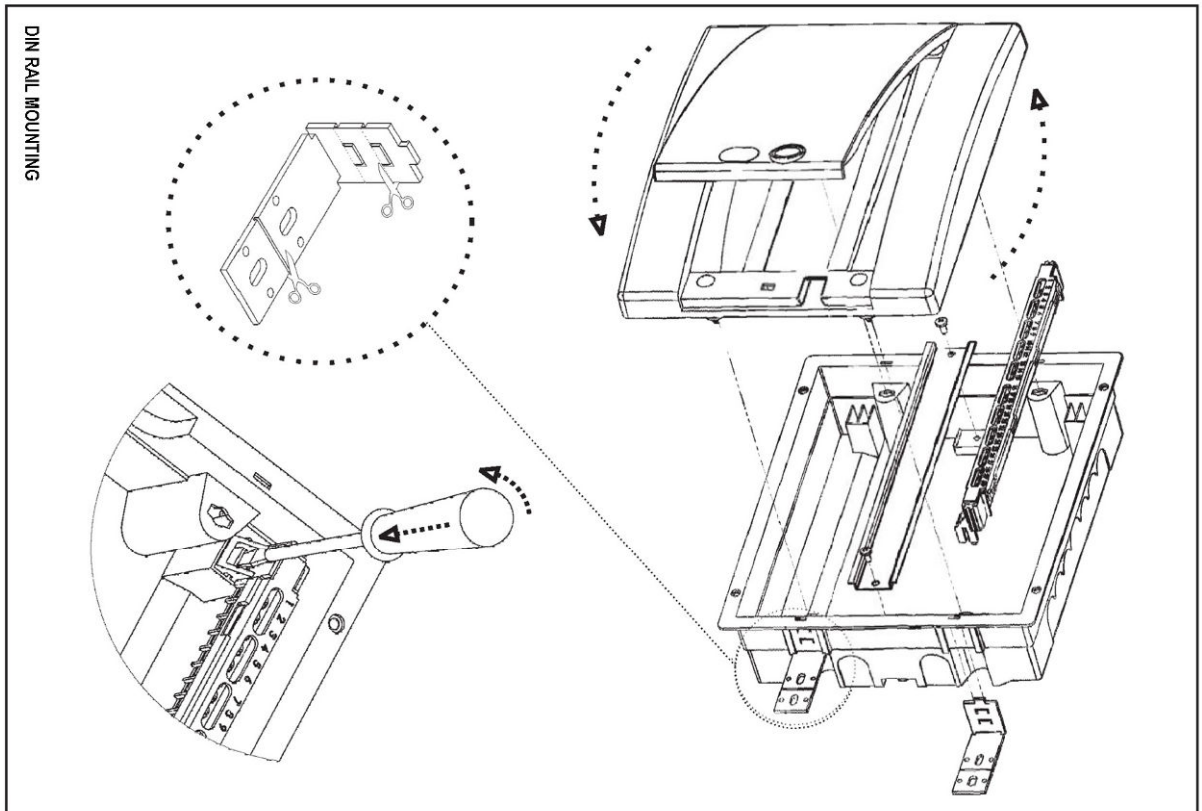


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Attachment No. 2 (Photos)

