

304L / 316L stainless-steel wall-mounting enclosures

Introduction



Technical characteristics

These enclosures have been specially designed for the chemical, oil and food and beverage industries, among others, which are particularly demanding in terms of hygiene and resistance to corrosion.

- Two types of materials, with Scotch-Brite® brushed finish, are available:
 - AISI 304L,
 - AISI 316L.
- Two wall-mounting enclosure versions are available:
 - With plain door,
 - With glazed door, Securit® glass, 4 mm thick.
- Protection rating of IP 66 for all single enclosures with single door and glazed door, IP 55 for the double door enclosures, according to IEC 60529.
- Resistance to external mechanical impacts:
 - IK 10 for the solid-door enclosures,
 - IK 08 for the glazed-door enclosures.
- Thickness: 1.5 mm.
- Single-piece body (cross-shaped structure). Gutter-shaped front profile.
- 4 rear studs for fixing the material.
- 2 cut-out vertical profiles on the door (from a height of 600 mm), with drill holes with a diameter of 4.25 mm and a pitch of 25 mm for installing accessories.
- Door strengthening frame (from a height of 1000 mm), cross-section of 20 mm × 15 mm, with drill holes with a diameter of 5 mm and a pitch of 25 mm.
- Standard lock with 3-mm double-bar lock (chrome-plated zamak).
- 2 locking points for heights of more than 500 mm or three points for two-door enclosures.
- Stainless-steel hinges screwed to the body of the enclosure. They make it easier to remove and invert the door. Opening angle: 120°.
- Polyurethane gasket.
- M6 × 16 screws on the door and on the body, allowing equipotential connection between the earth connections (on request).
- 4 holes for fixing to the wall directly or with the help of mounting lugs (on request), blocked by sealing plugs.

Certifications

- IEC 62208 / UL 508A / CAN/CSA 22.

Wall-mounting enclosure ATEX

Technical features

The Spacial ATEX range of stainless-steel enclosures is certified by the LOM with no. LOM 08ATEX3028U (component certificate).

The enclosures have the following marks:

Ⓔ II 2 GD Ex e II Ex tD A21 IP66 according to ATEX directive 94/9/EC and standards EN 60079-0 (2004), EN 60079-7 (2006), EN 61241-0 (2005) and EN 61241-1 (2004).

- M6 × 16 screws on the door and on the body, allowing equipotential connection.
- The wall-fixing lugs are compulsory; they are blocked by sealing plugs. The 4 fixing holes are blocked by 4 crimped blind nuts.
- One crimped M6 blind nut for an external earth connection (braid not supplied).
- Authorised ambient temperature limits:
 - 25 °C ≤ Ta ≤ +60 °C



The accessories of the Spacial S3X enclosure can be installed in the Spacial S3XEX enclosure. However, plastic accessories should not be used, due to the risk of a static charge.

Stainless-steel wall-mounting enclosure selection guide



External dimensions (mm)			No. of doors	304L stainless steel		316L stainless steel	304L stainless-steel canopy**
H	W	D		Plain door	Glazed door*	Plain door	
300	200	150	1	NSYS3X3215	-	NSYS3X3215H	NSYTX2015
300	250	150	1	NSYS3X302515	-	NSYS3X302515H	NSYTX2515
300	300	150	1	NSYS3X3315	-	NSYS3X3315H	NSYTX3015
400	300	150	1	NSYS3X4315	-	NSYS3X4315H	NSYTX3015
400	300	200	1	NSYS3X4320	NSYS3X4320T	NSYS3X4320H	NSYTX3020
400	400	200	1	NSYS3X4420	-	NSYS3X4420H	NSYTX4020
400	600	200	1	NSYS3X4620	-	NSYS3X4620H	NSYTX6020
500	400	200	1	NSYS3X5420	NSYS3X5420T	NSYS3X5420H	NSYTX4020
600	400	200	1	NSYS3X6420	NSYS3X6420T	NSYS3X6420H	NSYTX4020
600	600	250	1	NSYS3X6625	-	NSYS3X6625H	NSYTX6025
700	500	250	1	NSYS3X7525	NSYS3X7525T	NSYS3X7525H	NSYTX5025
800	600	250	1	NSYS3X8625	NSYS3X8625T	NSYS3X8625H	NSYTX6025
800	800	300	1	NSYS3X8830	-	NSYS3X8830H	NSYTX8030
1000	800	300	1	NSYS3X10830	NSYS3X10830T	NSYS3X10830H	NSYTX8030
1000	1000	300	2	NSYS3X101030	-	NSYS3X101030H	NSYTX10030
1200	800	300	1	NSYS3X12830	-	NSYS3X12830H	NSYTX8030
1200	1000	300	2	NSYS3X121030	-	NSYS3X121030H	NSYTX10030

*The glazed door has no reinforcement.

**Installation not recommended on ATEX wall-mounting enclosures.



Wall-fixing lugs

- Set of four 304 or 316L stainless-steel wall-fixing lugs.
- Mounting of the wall-fixing lugs in horizontal or vertical position.
- Fixing from the outside.
- Maximum load: horizontal 180 kg and vertical 350 kg.

Stainless-steel type	Reference
304	NSYPFCX
316L	NSYPFC2X



Description	Material	Reference
Standard 3-mm double-bar lock	chrome-plated zamak	NSYSTDNCSX
Round 3-mm double-bar lock (spare)	chrome-plated zamak	NSYSTDCSX
Round 3-mm double-bar lock	100 % stainless steel	NSYSTDCXH
8-mm triangular insert	100 % stainless steel	NSYTT8CSX
7-mm square insert	100 % stainless steel	NSYTC7CSX
6-mm square insert	100 % stainless steel	NSYTC6CSX
1242E button lock	Chrome-plated	NSYCL1242ECSX
405 button lock	Polyamide	NSYCL405CSX



For mounting plates and other accessories please refer to our current wall-mounting offer (S3D or CRN).

Stainless-steel monobloc floor-standing enclosures

Introduction



Technical features

These enclosures have been specially designed for the chemical, oil and food and beverage industries, among others, which are particularly demanding in terms of hygiene and resistance to corrosion.

- Stainless-steel sheet floor-standing enclosure, 1.5 mm thick, folded and welded.
 - Two types of materials, with Scotch-Brite® brushed finish, are available:
 - 304L stainless steel,
 - 316L stainless steel.
 - Micro-beaded and painted finishes (on request).
 - Protection rating: IP 55 according to IEC 60529.
 - 1 Nema door, type 1, 2, 3, 3R, 4, 4X, 5, 12, 12K, 13.
 - 2 Nema doors, type 1, 2, 12K.
 - Resistance to external mechanical impacts: IK 10 according to IEC 62262.
 - Plain front door. Opening to left or right to 120° with reinforcement frame. Installed on 3 stainless-steel hinges. 3-point closure with handle made from painted zamak, 5-mm double bar. Acceptable load of 50 kg.
 - Delivered with 4 mounting plate-supporting brackets.
 - Single-piece cable-gland plate delivered.
 - 316L stainless-steel plinths, optional heights of 100 and 200 mm.
 - Optional stainless-steel canopies.
 - Optional eyebolts.
- Maximum load: 830 kg when slinging at 60°.

Certifications

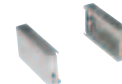
- IEC 62208.
- UL 508.
- CAN/CSA 22.



Configured



Specific



External dimensions (mm)			Number of front doors	304L / 316L* stainless-steel floor-standing enclosure reference	Brushed 316L stainless-steel plinth height 100 mm (1)		Canopy
Height	Width	Depth			Front + corner	Side	
1400	1000	300	2	NSYSMX141030	NSYSPXF10100H	NSYSPXS3100H	NSYSCX10030
1600	800	400	1	NSYSMX16840	NSYSPXF8100H	NSYSPXS4100H	NSYSCX8040
1800	600	400	1	NSYSMX18640	NSYSPXF6100H	NSYSPXS4100H	NSYSCX6040
1800	800	400	1	NSYSMX18840*	NSYSPXF8100H	NSYSPXS4100H	NSYSCX8040
1800	1200	400	2	NSYSMX181240*	NSYSPXF12100H	NSYSPXS4100H	NSYSCX12040
1800	1600	400	2	NSYSMX181640*	NSYSPXF16100H	NSYSPXS4100H	NSYSCX16040
2000	800	500	1	NSYSMX20850	NSYSPXF8100H	NSYSPXS5100H	NSYSCX8050
2000	1000	400	2	NSYSMX201040*	NSYSPXF10100H	NSYSPXS4100H	NSYSCX10040
2000	1200	500	2	NSYSMX201250*	NSYSPXF12100H	NSYSPXS5100H	NSYSCX12050
2000	1600	600	2	NSYSMX201660*	NSYSPXF16100H	NSYSPXS6100H	NSYSCX16060

* For the stainless steel version 316L, add the letter H at the end of the reference. Example: NSYSMSX18840H.

(1) See section on stainless-steel composition accessories.

Composition accessories



Eyebolts

Reference
NSYSMEB



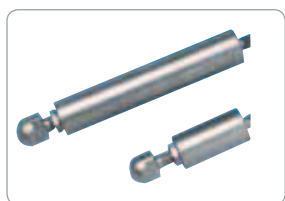
Closure option

Description	Pack.	Reference
Spare handle	1	NSYMCSX
5-mm double-bar insert	1	NSYTDB5ME
6-mm square insert	1	NSYTC6ME
7-mm square insert	1	NSYTC7ME
8-mm square insert	1	NSYTC8ME
6.5-mm triangular insert	1	NSYTT6ME
8-mm triangular insert	1	NSYTT8ME
Padlocking device	1	NSYBCME



Wall-fixing lugs for SMX

Reference
NSYFCMX



Hygienic feet

Height (mm)	Reference
100	NSYPHX100
200	NSYPHX200

Thermal management system

Thermal conditioning of electric and electronic switchboards: a need



What is thermal control?

Technological evolution

The miniaturisation of components, the generalisation of electronics and the appearance of new electronically powered products have made temperature management into a growing need which must necessarily be considered when designing electrical and/or electronic switchboards.

What are the advantages of efficient thermal management?

Thermal management of electrical switchboards is a major factor for industrial maintenance.

Many risks are incurred by not having a suitable thermal solution, which can affect the service life of the components and the performance of the facilities to the extent of causing a halt in production.

The service life of the components also depends on the temperature and humidity conditions inside the enclosure. The ideal values range from +25 to +35 °C for the temperature and 40 to 60 % for the relative humidity (RH).

Cooling, heating, controlling

For the same reasons as the IP/IK protection ratings, equipment installed in enclosures requires suitable thermal protection.

Various solutions to these problems have been put forward. They will be chosen according to environmental conditions, the type of components in the electrical switchboard, etc.

In certain cases, it is sufficient to oversize the enclosure, use fans or air-air exchangers, etc. In other cases, where the ambient temperature is higher, it becomes necessary to install air-water exchangers or cooling units.

A solution for each need

We provide a complete Thermal offer to secure your installations.

Cooling	<ol style="list-style-type: none"> 1. Forced ventilation systems 2. Air-air exchangers 3. Air-water exchangers 4. Cooling units
Heating	<ol style="list-style-type: none"> 5. Resistance heaters
Controlling	<ol style="list-style-type: none"> 6. Thermal control accessories
Calculating	<ol style="list-style-type: none"> 7. New ProClima 5.0 software

Choose the solution

A thermal solution for every environment



Ventilation systems with filters

Specially recommended for installations in which:

- The ambient temperature is lower than the desired temperature inside the enclosure.
- A high protection rating is required: IP 54 or IP 55.
- The surrounding environment is relatively clean, allowing air to enter the enclosure.

Large range of solutions

- 42 possible combinations.
- Colours: RAL 7035 as standard, with the option of changing to RAL 7032 (with replacement grille **NSYCAG●●●LPC**).
- 38 to 850 m³/h.
- According to 5 input voltages:
AC: 400/440 V, 230 V, 115 V (50/60 Hz),
DC: 48 V and 24 V.
- Broad range of accessories (filters, IP 55 & EMC covers, anti-vandalism kit).



Air-air exchangers

Specially recommended for installations in which:

- The ambient temperature is lower than the desired temperature inside the enclosure.
- A high protection rating is required: IP 54 or IP 55.
- The outside environment is highly polluted.

Large range of solutions

- 4 models.
- Two installation versions: top-mounting model and side-mounting model.
- Cooling power from 15 to 70 W/°K .
- According to the input voltage: 230 V (50/60 Hz).



Air-water exchangers

Specially recommended for installations in which:

- The ambient temperature is higher than the desired temperature inside the enclosure.
- The outside environment is corrosive, the internal and external air circuits are independent.
- The outside environment is highly polluted, the temperature is controlled by cold water without requiring the use of an external air circuit.
- It is necessary to extract the heat produced by the industrial site.

Large range of solutions

- 3 models.
- Two installation versions: top-mounting model and side-mounting model.
- Cooling power of 2,100 W and 3,150 W.
- According to the input voltage: 230 V (50/60 Hz).

Choose the solution

A thermal solution for every environment



Cooling units

They control the temperature inside the enclosure in order to guarantee the correct operation of the components, regardless of the outside temperature, by separating the internal and external air circuits and reducing the humidity of the enclosure.

A very broad range of solutions

- 32 models.
- Two versions: top-mounting model and side-mounting model.
- Cooling power from 240 to 4,000 W.
- Two control versions: electronic and mechanical.
- According to the input voltage: 230 V (50/60 Hz);
3 × 400/440 V (50/60 Hz); 115 V (50/60 Hz).
- Three installation types: surface, flush and partial flush (SLIM version).
- RAL 7035 and stainless steel.



Resistance heaters

With a double objective:

- To prevent the formation of condensation inside the enclosure.
- To reheat the electrical switchboard when the temperature is too low for the components to operate correctly.

Large range of solutions

- 30 models.
- Insulated or aluminium versions.
- Versions with natural convection or fan.
- Cooling power from 10 to 1,200 W.
- According to the input voltage: 12 V to 450 V AC/DC.



Thermal control

Thermostats maintain the temperature inside the enclosure and send a signal when certain defined values are exceeded:

- Maximum value (cooling action).
- Minimum value (reheating action).

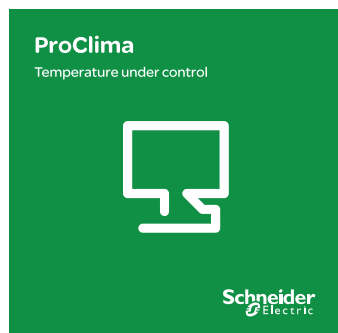
Range of solutions

- 11 models.
- Temperature control: adjustable thermostats; single or double.
- Relative humidity control: adjustable or fixed hygrometers.
- Temperature and relative humidity control: adjustable hygrotherm.

Calculation assistance: ProClima

We offer our customers and users a software application to help them select thermal accessories.

The programme draws up a heat balance and defines the best ventilation or cooling solution for the inside of the enclosure.



Ventilation system

Selection guide

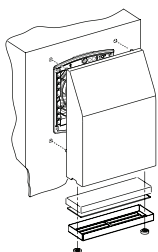
Ventilation systems with filters



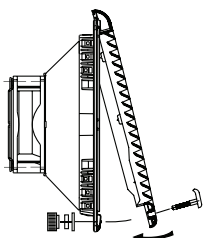
	Fan flow rate (m ³ /h)			Voltage	Dimensions (mm)		Reference		
	Free with filter	With 1 outlet grille	With 2 outlet grilles		Total (external)	Cut-out	Fan with filter	Outlet grille	Colour kit
	50 Hz	50 Hz	50 Hz				RAL 7035		RAL 7032
IP 54	38	25	33	230 V	137 × 117	92 × 92	NSYCVF38M230PF	NSYCAG92LPF	NSYCAG92LPC
	38	27	35	115 V			NSYCVF38M115PF		
	58	39	47	24 V CC			NSYCVF38M24DPF		
	44	34	41	48 V CC			NSYCVF38M48DPF		
IP 54	85	63	71	230 V	170 × 150	125 × 125	NSYCVF85M230PF	NSYCAG125LPF	NSYCAG125LPC
	79	65	73	115 V			NSYCVF85M115PF		
	80	57	77	24 V CC			NSYCVF85M24DPF		
	79	59	68	48 V CC			NSYCVF85M48DPF		
IP 54	165	153	161	230 V	268 × 248	223 × 223	NSYCVF165M230PF	NSYCAG223LPF	NSYCAG223LPC
	164	153	161	115 V			NSYCVF165M115PF		
	188	171	179	24 V CC			NSYCVF165M24DPF		
	193	171	179	48 V CC			NSYCVF165M48DPF		
	302	260	268	230 V			NSYCVF300M230PF		
	302	263	271	115 V			NSYCVF300M115PF		
	262	221	229	24 V CC			NSYCVF300M24DPF		
	247	210	218	48 V CC			NSYCVF300M48DPF		
IP 54	562	473	481	230 V	336 × 316	291 × 291	NSYCVF560M230PF	NSYCAG291LPF	NSYCAG291LPC
	582	485	494	115 V			NSYCVF560M115PF		
	838	718	728	230 V			NSYCVF850M230PF		
	983	843	854	115 V			NSYCVF850M115PF		
	931	798	809	400/440 V			NSYCVF850M400PF		
IP 20	65			115 V	124 × 124	Ø 108	NSYCVF65M115PF (1)	NSYCAG108LP (1)	
				230 V			NSYCVF65M230PF (1)		
IP 33		54		230 V	120 × 120	94 × 96	NSYCVF54M230MM2	(2)	

- (1) Black colour.
(2) Integrated in the kit.

Sealing cover IP 55 and EMC



Dimensions (mm)		Cover reference		EMC Cover reference
External	Cut-out	Aluzinc RAL 7035	Stainless steel 304	Aluzinc RAL 7035
240 × 180 × 60	125 × 125	NSYCAP125LZF	NSYCAP125LXF	NSYCAP125LE
350 × 305 × 80	223 × 223	NSYCAP223LZF	NSYCAP223LXF	NSYCAP223LE
350 × 305 × 80	223 × 223	NSYCAP223LZF	NSYCAP223LXF	NSYCAP223LE
430 × 373 × 105	291 × 291	NSYCAP291LZF	NSYCAP291LXF	NSYCAP291LE
430 × 373 × 105	291 × 291	NSYCAP291LZF	NSYCAP291LXF	NSYCAP291LE



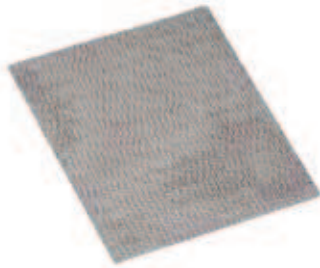
Anti-vandalism kit

- Prevents the grille from being opened from the outside.
- The unlocking thumbwheel is accessed from the inside of the wall-mounting enclosure.
- RAL 7011 colour (same material as the grille: ASA PC).

Minor packaging	Reference
2	NSYCAAPV

Ventilation systems

Natural airing



Anti-insect filters for metal louvre plate, square

- Installation is made between the enclosure and the metal louvre.
- Material: Stainless steel 304L Ø 0.32 mm wire mesh, of 1.07 mm, thickness 0.6 mm.
- Increases protection rating to IP 33.
- Weight: 0.8 kg/m².
- Supply: one anti-insect filter.

Louvre plate reference	External dimensions (mm)	Filter reference
NSYCAG104X95LM	98 × 115	NSYCAF104X95X
NSYCAG130X110LM	133 × 158	NSYCAF130X110X
NSYCAG170X190LM	197 × 215	NSYCAF170X190X

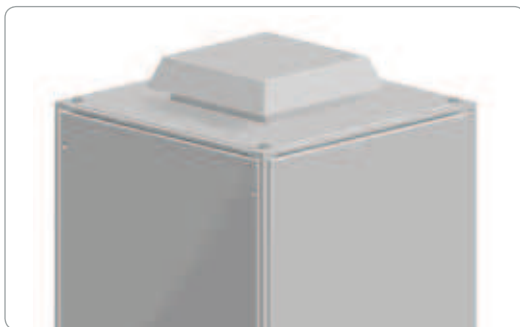


Plastic ventilation louvres

- Four models available according to IP rating, in vertical position.
- Supply: 2 plastic ventilation louvres.

cut-out Ø	IP	Reference
45.5 mm	22	NSYCAG45LP
35 mm	30/44 (1)	NSYCAG35LP
38 mm	45	NSYCAG38LP
33 mm	44	NSYCAG33LP
19 mm	45	NSYCAG19LP

(1) According to installation in the Thalassa enclosure.



Hood for natural airing, IP 54

- Natural airing device for coupling to the top of metal floor-standing enclosures.
- Solution for combining with the ventilation slots.
- Fixing to the top by means of caged nuts and special screws.
- Material: steel.
- Finish: painted with epoxy-polyester resin, textured RAL 7035 grey.
- Protection rating: IP 54.
- Weight: 4.6 kg.
- Supply: one hood for natural airing and fixing elements.

Reference

NSYCAC228RMF



Top hood with top fan IP 54

- Fan with hood, for floor-standing enclosures.
- Device delivered with fixings and connection terminal block.
- Electric power: 85 W.
- A flow rate of 350 m³/h is obtained with an outlet grille ref. NSYCAG291LPF, (cut-out 291 × 291 mm).
- Noise level: 64 dB (A).
- Installation and removal from the outside.

Flow rate* (m ³ /h)	Voltage (V)	Weight (kg)	Reference
570	115	5.8	NSYCVF570M115MF
575	230	5.8	NSYCVF575M230MF

* Flow rate measured without counter-pressure.

Cooling unit

SLIM electronic control



SLIM for perfect integration



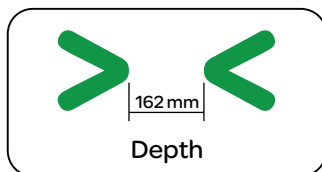
1 bloc:

- 4 power levels
- 3 voltage levels

1 cover:

- Flush
- Partial-flush
- Surface

66 models, from 1,100 to 2,700 W, 115 to 460 V, flush mounting, partial-flush mounting or surface mounting, with or without electronic display, IP 55, UL compliant.



Minimum depth

All the models of the SLIM range have a depth of 162 mm to maximise the volume inside the enclosure.

Modular system

- There are 66 possible combinations with only 17 catalogue references.
- Three different installation types are possible with the same air-conditioning unit (surface, partial flush and flush).

Power ranges

1,100 W, 1,500 W, 2,200 W and 2,700 W.

Versions

- RAL 7035 and stainless steel.
- Option to provide other colours on demand.

Internal IP 55

The SLIM range is supplied as standard with an expanded polyurethane gasket, ensuring optimum sealing with IP 55 throughout the enclosure.



Cooling unit

Selection guide



SLIM electronic control models (modular)

- Flush mounting.
- Partial-flush mounting.
- Surface mounting.

	Power	1,100 W	1,500 W	2,200 W	2,700 W
Cooling unit block	230 V	NSYCUB1100W230S	NSYCUB1500W230S	NSYCUB2200W230S	NSYCUB2700W230S
	400-460 V (50-60 Hz)	NSYCUB1100W400S	NSYCUB1500W400S	NSYCUB2200W400S	NSYCUB2700W400S
	115 V	NSYCUB1100W115S	NSYCUB1500W115S	NSYCUB2200W115S	
Covers	Side-mounting type	Reference			
RAL 7035	Surface-mounting	NSYCUCL			
	Partial flush-mounting	NSYCUCH			
	Flush-mounting	NSYCUCF			
Stainless-steel	Surface-mounting	NSYCUCLX			
	Partial flush-mounting	NSYCUCHX			
	Flush-mounting	NSYCUCFX			



Modular version: Always order one SLIM cooling unit reference plus one cover reference.

Side-mounting models



External dimensions (mm)	Cooling power EN 14511 L35 - L35 (50 Hz)	Input voltage Vol-Hz	Control	Reference
450 × 350 × 140	240 W (819 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU240W230VL
620 × 300 × 170	370 W (1263 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU370W230VL
800 × 350 × 195	760 W (2594 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU760W230VL
900 × 400 × 195	1,050 W (3584 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU1050W230VL
1,010 × 400 × 240	1,100 W (3755 Btu/h)	230 V - 50/60 Hz	Electronic controller	NSYCUE1100W230L
1,010 × 400 × 240	1,400 W (4780 Btu/h)	230 V - 50/60 Hz	Electronic controller	NSYCUE1400W230L
1,010 × 400 × 240	1,400 W (4780 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Electronic controller	NSYCUE1400W400L
1,000 × 400 × 220	1,650 W (5631 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU1650W230VL
1,000 × 400 × 220	1,800 W (6143 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Thermostat	NSYCU1800W400VL
1,010 × 400 × 240	1,800 W (6145 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Electronic controller	NSYCUE1800W400L
1,406 × 502 × 300	2,500 W (8533 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Thermostat	NSYCU2500W400VL
1,406 × 502 × 300	4,000 W (13652 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Thermostat	NSYCU4000W400VL

Top-mounting models



External dimensions (mm)	Cooling power EN 14511 L35 - L35 (50 Hz)	Input voltage Vol-Hz	Control	Reference
340 × 600 × 350	760 W (2594 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU760W230VR
400 × 700 × 400	1,050 W (3584 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU1050W230VR
415 × 750 × 412	1,400 W (4780 Btu/h)	230 V - 50/60 Hz	Electronic controller	NSYCUE1400W230R
400 × 700 × 400	1,460 W (4983 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU1460W230VR
430 × 700 × 400	1,650 W (5631 Btu/h)	230 V - 50/60 Hz	Thermostat	NSYCU1650W230VR
415 × 750 × 412	1,800 W (6145 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Electronic controller	NSYCUE1800W400R
430 × 700 × 400	2,000 W (6826 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Thermostat	NSYCU2000W400VR
470 × 800 × 450	2,450 W (8362 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Thermostat	NSYCU2450W400VR
470 × 800 × 450	3,100 W (10580 Btu/h)	3 × 400 V 50 Hz / 440 V 60 Hz	Thermostat	NSYCU3100W400VR

Air-water exchanger

Side and top-mounting models



General characteristics

- Main components: thermostatic adjustment system, exchange cassette, fans for the internal circuit of the enclosure, safety device against possible leaks.
- The desired temperature inside the enclosure can be adjusted over a range of +25...+50 °C.
- The alarm which detects an interruption in the water circuit is activated by closing a switch. This can be used to activate a light or a siren, connected to the input of an automation device. The water supply is automatically cut.
- System for evacuating condensation water to the outside.
- RAL 7035 grey.

Conditions of use

- Air-water exchangers can be used even when the outside temperature is higher than the desired temperature inside the enclosure.
- The enclosure must be sealed to prevent the entry of external air: at least IP 54.

	Reference		
	NSYCEW2100W230VR (top)	NSYCEW2100W230VL (side)	NSYCEW3150W230VL (side)
Cooling characteristics			
Specific power A 35 W 10-200 l/h	2,100 W	2,100 W	3,150 W
Maximum water pressure	1 MPa	1 MPa	1 MPa
Air flow of the external circuit	250 m ³ /h	350 m ³ /h	820 m ³ /h
Adjustment	Yes	Yes	Yes
Type	Thermostatic	Thermostatic	Thermostatic
Temperature setting range	+25...+50 °C	+25...+50 °C	+8...+50 °C
Nature of the fluid	Water	Water	Water
Electric characteristics			
Input voltage	230 V - 50/60 Hz	230 V - 50/60 Hz	230 V - 50/60 Hz
Starting/rated current	1/0.5 A	1/0.5 A	1.3/1.7 A
Electrical energy absorbed	90 W	90 W	295 W/385 W
Type of switching alarm	Inverter contact	Inverter contact	Inverter contact
Physical characteristics			
External dimensions A x B x C (mm)	310 × 600 × 365	830 × 360 × 113	950 × 400 × 190
IP-DIN 40050	IP 54	IP 54	IP 55
Weight of unit	26 kg	19 kg	21 kg
Noise level	64 dB (A)	62 dB (A)	54 dB (A)

Air-air exchanger

Side and Top-mounting models

General characteristics

- Main components: thermostatic adjustment system, exchange cassette, circulation fans for internal and external circuits.
- The desired temperature inside the enclosure can be adjusted over a range of +25 ... +50 °C.
- The internal and external air circuits are completely separated (IP 54). Two fans guarantee air circulation in each of these circuits. The one on the internal circuit (which circulates the air inside the enclosure) is permanently on to avoid the appearance of hot spots in the electric circuits or components.
- The devices are delivered with a cut-out template, an instruction sheet and a sealing gasket to be placed between the exchanger and the enclosure.
- RAL 7035 grey.
- Voltages on demand with 400 V AC, three phase or single phase.

Conditions of use

- The exchangers can only be used if the outside temperature is at least 5 °C lower than the desired temperature inside the enclosure.
- The enclosure must be sealed to prevent the entry of external air: at least IP 54.



Reference				
	NSYCEA15W230VL	NSYCEA35W230VL	NSYCEA35W230VLE	NSYCEA70W230VL
Cooling characteristics				
Specific power (1)	15 W/°K	35 W/°K	35 W/°K	70 W/°K
Air flow of the external circuit	200 m ³ /h	450 m ³ /h	450 m ³ /h	450 m ³ /h
Air flow of the internal circuit	200 m ³ /h	450 m ³ /h	450 m ³ /h	450 m ³ /h
Exchange surface	1.23 m ²	1.5 m ²	1.5 m ²	6.6 m ²
Adjustment	Yes	Yes	No	Yes
Type	Thermostatic	Thermostatic	Thermostatic	Thermostatic
Temperature setting range	+25...+50 °C	+25...+50 °C	-	+25...+50 °C
Nature of the fluid	Air	Air	Air	Air
Electric characteristics				
Input voltage	230 V - 50/60 Hz	230 V - 50/60 Hz	230 V - 50/60 Hz	230 V - 50/60 Hz
Starting/rated current	2.1/0.7 A	2.1/0.7 A	2.1/0.7 A	2.1/0.7 A
Electrical energy absorbed	150 W	150 W	150 W	150 W
Physical characteristics				
External dimensions A × B × C (mm)	700 × 270 × 144	780 × 325 × 144	780 × 325 × 144	1,480 × 450 × 144
Internal IP / external IP	IP 54/IP 22	IP 54/IP 22	IP 54/IP 22	IP 54/IP 22
Weight of unit	12 kg	15 kg	15 kg	35 kg
Noise level	64 dB	64 dB	64 dB	64 dB

(1) The power in watts is obtained by multiplying the specific power by the difference between inside temperature and outside temperature.
Example: for exchanger ref. NSYCEA35W230VL with Δ °C = 10°, the system power is $35 \times 10 = 350$ W.

Resistance heaters

Selection guide



Insulated resistance heater with fan

Power (W)	Voltage (V)	Connection type Terminal block	Reference
177	230 AC	•	NSYCR170W230VVC



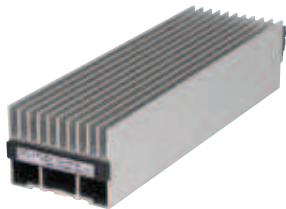
Thermofans

Power (W)	Voltage (V)	Connection type Terminal block	Reference
350	230 AC	•	NSYCR350W230VTVC
400/550	120 AC	•	NSYCRP1W120VTVC
400/550	230 AC	•	NSYCRP1W230VTVC

NSYCR350W230VTVC

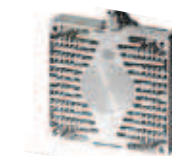
Resistance heaters

Power (W)	Voltage (V)	Connection type		Reference
		Terminal block	Cable	
10	12-24 DC		•	NSYCR10WU1
10	110-250 AC		•	NSYCR10WU2
20	12-24 DC		•	NSYCR20WU1
20	110-250 AC		•	NSYCR20WU2
20	270-420 AC	•		NSYCR20WU3
55	12-24 DC	•		NSYCR55WU1
55	110-250 AC	•		NSYCR55WU2
55	270-420 AC	•		NSYCR55WU3
90	12-24 DC	•		NSYCR100WU1
90	110-250 AC	•		NSYCR100WU2
90	270-420 AC	•		NSYCR100WU3
150	12-24 DC	•		NSYCR150WU1
150	110-250 AC	•		NSYCR150WU2
150	270-420 AC	•		NSYCR150WU3



Resistance heaters with fan

Power (W)	Voltage (V)	Connection type Terminal block	Reference
250	115 AC	•	NSYCR250W115VV
250	230 AC	•	NSYCR250W230VV
400	115 AC	•	NSYCR400W115VV
400	230 AC	•	NSYCR400W230VV
200	115 AC	•	NSYCRS200W115V
200	230 AC	•	NSYCRS200W230V



NSYCRS200W230V

Insulated resistance heaters

Power (W)	Voltage (V)	Connection type Terminal block	Reference
10	12-24 DC	•	NSYCR10WU1C
10	110-250 AC	•	NSYCR10WU2C
21	12-24 DC	•	NSYCR20WU1C
21	110-250 AC	•	NSYCR20WU2C
55	12-24 DC	•	NSYCR55WU1C
55	110-250 AC	•	NSYCR55WU2C
55	270-420 AC	•	NSYCR55WU3C
100	12-24 DC	•	NSYCR100WU1C
100	110-250 AC	•	NSYCR100WU2C
100	270-420 AC	•	NSYCR100WU3C
147	12-24 DC	•	NSYCR150WU1C
147	110-250 AC	•	NSYCR150WU2C



Thermal control

Selection guide mechanical version

Control temperature

Control a resistance heater or an alarm



NC thermostat

Setting range	Display	Contact	Application	Control element	Interrupting capacity (resistive load)	Reference
0...+60 °C	°C	O	Heat	Bimetal	30 W DC 120 V AC; 15 A 250 V AC; 10 A	NSYCCOTHC
+32...+140 °F	°F					NSYCCOTHCF

Control a fan or an alarm



NO thermostat

Setting range	Display	Contact	Application	Control element	Interrupting capacity (resistive load)	Reference
0...+60 °C	°C	NO	Ventilate	Bimetal	30 W DC 120 V AC; 15 A 250 V AC; 10 A	NSYCCOTHO
+32...+140 °F	°F					NSYCCOTHOF

Control a resistance heater and a fan



Double thermostat

Setting range	Display	Contact	Application	Control element	Interrupting capacity (resistive load)	Reference
0...+60 °C	°C	NC + NO	Heat / Ventilate	Bimetal	30 W DC 120 V AC; 15 A 250 V AC; 10 A	NSYCCOTHD
+32...+140 °F	°F					NSYCCOTHDF

Control a resistance heater or a fan



Thermostat with inverse contact

Setting range	Display	Contact	Application	Control element	Interrupting capacity (resistive load)	Reference
0...+60 °C	°C	Inverse	Heat or ventilate	Bimetal	Closing: 30 W DC 250 V AC; 5 A Opening: 30 W DC 250 V AC; 10 A	NSYCCOTHI
+32...+140 °F	°F					NSYCCOTHIF

Thermal control

Selection guide electronic version



Control temperature

Control a resistance heater or a fan



Electronic thermostat

Setting range	Display	Power input	Application	Control element	No. of relays	Interrupting capacity (resistive load)	Reference
+5 °C...+50 °C	°C or °F	9-30 V AC/DC	Heat or ventilate	Electronic	2	8 (5) A 230 V AC 5 A 30 V DC	NSYCCOTH30VID
		110-127 V AC					NSYCCOTH120VID
		220-240 V AC					NSYCCOTH230VID

7 different operating modes.
Option of installing an external sensor.

Control temperature and relative humidity



Electronic hygrotherm

Setting range	Display	Power input	Application	Control element	No. of relays	Interrupting capacity (resistive load)	Reference
+5 °C...+50 °C	°C or °F	9-30 V AC/DC	Heat or ventilate	Electronic	2	8 (5) A 230 V AC 5 A 30 V DC	NSYCCOHYT30VID
		110-127 V AC					NSYCCOHYT120VID
		220-240 V AC					NSYCCOHYT230VID

3 different operating modes.
Option of installing one or two external sensors.

Control relative humidity



Electronic hygrostat

Setting range	Display	Power input	Application	Control element	No. of relays	Interrupting capacity (resistive load)	Reference
20%...80%	% RH	110-240 V AC	Heat or ventilate	Electronic	2	8 (5) A 230 V AC 5 A 30 V DC	NSYCCOHY230VID

2 different operating modes.

PTC external temperature sensor (double insulation)

- Length: 3 metres.
- Several types of fixings (on DIN rail, on Spacial SF profile, on VDI cross-rail, on mounting plate).
- Sensor operation or reading range: -30 °C...+80 °C.
- Protection rating: IP 67.

Reference

NSYCCAST



Temperature sensor

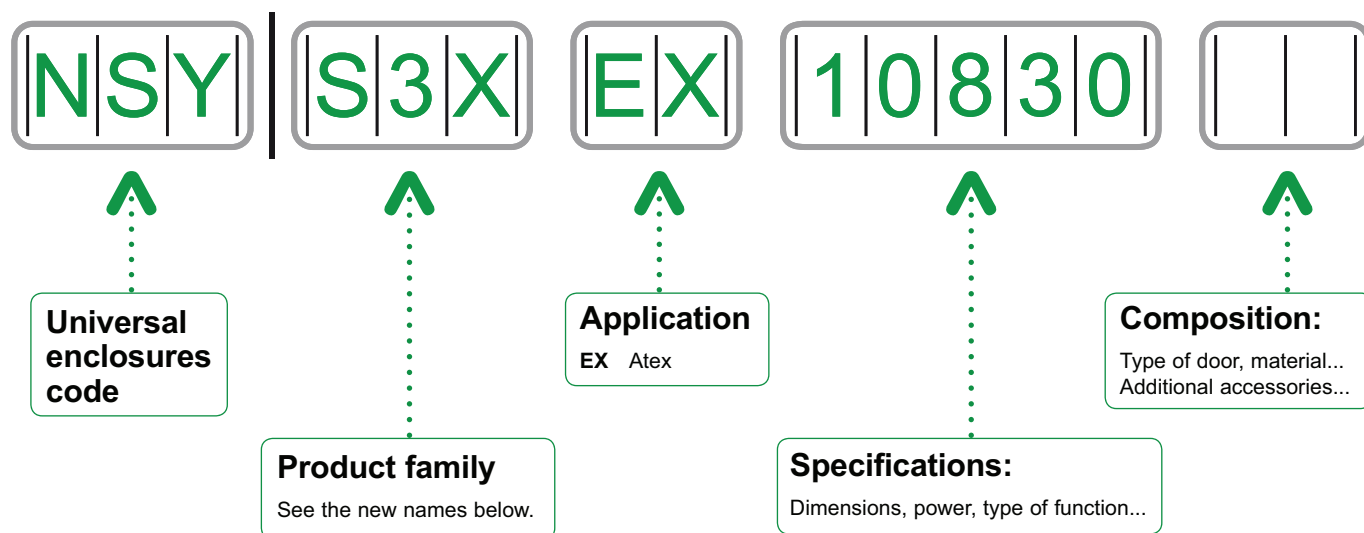
Thermostat installation tips:

The thermostat should be installed at the top of the enclosure (the hottest place). See the various operating modes of each thermostat to choose the one that best meets your needs.

Hygrostat installation tips:

The hygrostat should be installed at the bottom of the enclosure. 60% RH is the optimum value in the enclosure.

Understand our references



New product family names:

> ClimaSys:

- ClimaSys CV** Ventilation system
- ClimaSys CA** Natural Airing
- ClimaSys CU** Cooling Units
- ClimaSys CE** Exchangers
- ClimaSys CR** Resistance heaters
- ClimaSys CC** Thermal control

> Spacial metal enclosures:

- Spacial SF** Suitable
- Spacial SM** Compact
- Spacial SD** Control desk
- Spacial S3X** Stainless steel wall-mounting
- Spacial SMX** Stainless steel monobloc
- Spacial SFX** Stainless steel suitable
- Spacial SDX** Stainless steel control desk

> Thalassa industrial boxes:

- Thalassa TBP** Industrial boxes in polycarbonate (UL)
- Thalassa TBS** Industrial boxes in ABS