

Outdoor evolutive cabinet Modul'O HD



OUTDOOR CABINET RANGE

The outdoor evolutive cabinet Modul'O offers evolutivity and modularity. This evolutive street cabinet is...

- A street cabinet with Bioclimatic Concept... (page 3)
- A street cabinet with High Functional.. (page 4)
- A street cabinet with Smart patchcord management... (page 5)
- A street cabinet with Smart energy management... (page 6)
- All for many applications (page 2)



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ModulO HD in activated version



BASIC KIT CONTAINS

- (See on page 2)

CHARACTERISTICS

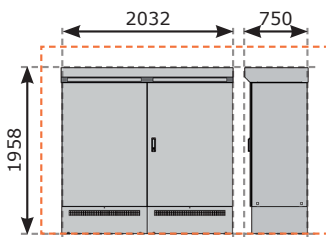
- Modular block with **double metal plate IP55**, and ring lift in order to ease the handling
- Functional block built with removable elements, delivered with roof and base
- Perfect accessibility in all points of the **Modul'O HD**
- Reversible front door for right or left open (in standard, lock on the left)
- Lateral panels easily removable from the inside (back panel removable in option)
- IK09 structure completely removable for elements exchange in case of accidental damage
- 3 versions available **31U, 62U and 28U**

MANUFACTURING, COMPONENTS

- All the block components, panel, roof, door and the body are made with processed steel
- The base is in stainless steel 304L
- All the parts are coated with high performance paint RAL 7035, in order to prevent all damages due to humidity or salt projection

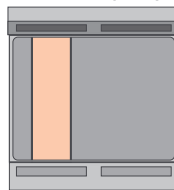
SPECIFICATIONS

- The handle can be positioned on left door, on request
- Your street cabinet can, on request, be delivered all pre-equipped according to your needs
- Other colors of the steet cabinet on request



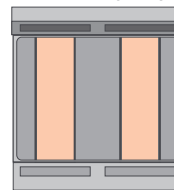
In orange, illustration of an area ≈50 cm to be preserved on the periphery of the cabinet for future development and various interventions (Area without masonry, building, vegetation or EDF board)

1 x 31U(19")



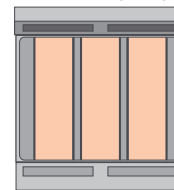
31U(19")

2 x 31U(19")



62U(19")

3 x 31U(19")



93U(19")



CAPACITY

31, 62 or 92U according to application (for more information on capacities, see on page 4)



APPLICATION

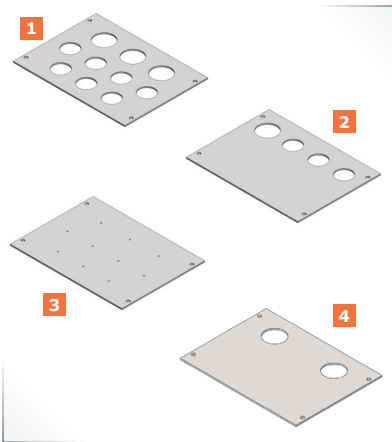
Perfect for your Telecom and FTTH applications in an outdoor environment



DIMENSIONS (mm)

H 1958 x W 2032 x D 750 (footprint : L 2018 x P 662) Weight : ≈350 kg (empty)

OUTDOOR CABINET RANGE



STANDARD STREET CABINET CONSISTS OF :

- 1 body block
- 1 left front door double skin (opening at 115°)
- 1 right front door double skin (opening at 115°) (security of doors by 5 points)
- 1 double skin body
- 2 removable double skin side panels
- 1 base 32cm high with 6 removable hatches (2 with mesh opening for ventilation)
- 1 removable roof with 2 openings for ventilation
- 1 2 pairs of front pillars 31U 19" (2 pairs of rear pillars, please consult us)
- 2 1 plate of 10 cable entries (with 3 PG21 and 7 PG16)
- 3 1 plate of 4 cable entries (with 1 PG21 and 3 PG16)
- 4 6 pre-pointed cable entry plates (making it possible to drill to the desired size)
- 2 removable repositionable parts for docking from 1 to 13 cables (depending on cable size)
- 2 removable and replaceable filters on the inside of the base

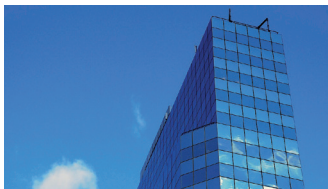
But also (depending on model):

- Energy Pack 48V 85Ah (4 x 12V batteries and support plate)
- 48VDC battery charger
- Centralized Technical Management Module
- Modular system inverter 48/230
- TGBT block
- ACT hyperventilation kit
- Heating PTC 1200W
- Your needs tailored, consult us !

Optional :

- Additional cable tie-down
- Set of horizontal uprights for vertical mounting (Ex: active materials ...)

Accessories descriptions and references on page 7



MANY APPLICATIONS

FTTH Applications

- PM : Mutualisation Point
- SRO : Optical Dispatcher
- NRO : Connection Node
- NRO-ZAE : NRO Economic Activity Area
- NRO-WF : NRO WiFiber

ADSL Applications

- NRA-ZO : Subscriber Connection Node in Shadow Zones
- NRA-MED : Subscriber Connection Node Riser

CCTV Applications

- NRV : Video Connection Node

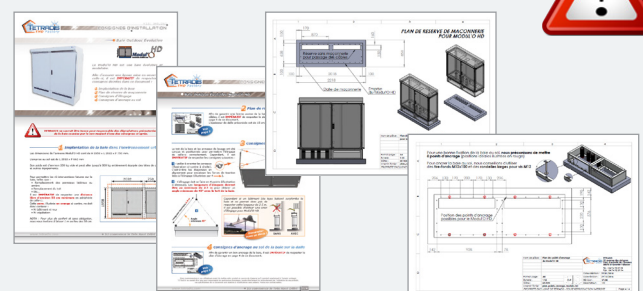
Road and Highway Applications

- SRO-CO : SRO Secure Cabinet Client / Operator
- A-RDD: Data Collection Cabinet: Traffic, Weather Station, PMV

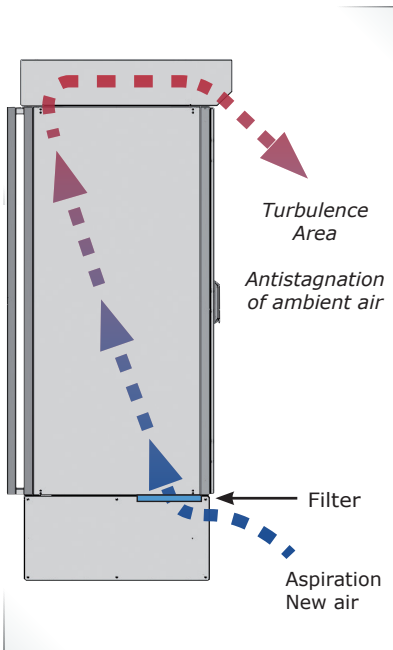
TO GARANTY A PROPER CABINET INSTALLATION, WE ENCOURAGE YOU TO RESPECT THE INSTRUCTIONS :

- Masonry Reserve Plan
- Sling instructions
- Guidelines / anchor point plan

These have been grouped together
In a single document,
Ask us about it !



OUTDOOR CABINET RANGE



Dynamics of airflow and ACT Hyperventilation

For more info, consult the datasheet !



THERMAL CONDUCTIVITY OF MATERIALS

Aluminium	12W/m ² K
Steel	5,5W/m²K

The use of steel as a main material therefore reduces by 2 the solar radiation induced inside the cabinet



ENERGY AND SOUND BALANCE

	<i>Modul'O HD + Hyperventil. ACT</i>	<i>Modul'O 28U + Hyperventilation</i>	<i>Modul'O 28U + Air conditioner</i>
Energy balance			
Dissipative power	2000W	2000W	2000W
Current consumption	0,20A (ECO) 0,40A (BOOSTER)	0,8A (ECO) 1,55A (BOOSTER)	---
Consummation	46W (ECO) 92W (BOOSTER)	184W (ECO) 356W (BOOSTER)	870W
Economy vs hyperventilation	x 3,86		
Economy vs air climatiser	x 9,45		
Sound balance			
ECO mode	41dB(A)	50dB(A)	---
BOOSTER mode	47dB(A)	54db(A)	65dBA

Some examples of comparison



50 dB (A)
Normal Voice Conversation



60 dB (A)
Car



70 dB (A)
Truck



90 dB (A)
Mower

OUTDOOR CABINET RANGE

A STREET CABINET WITH HIGH FUNCTIONNALS

... divided into 2 spaces 31U

PM 1000

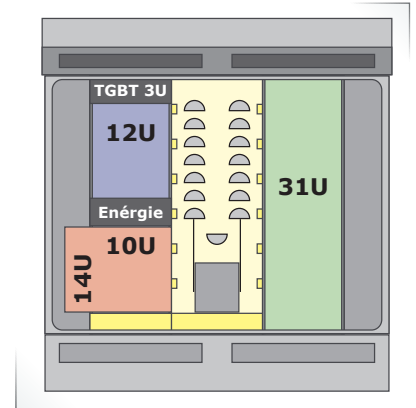
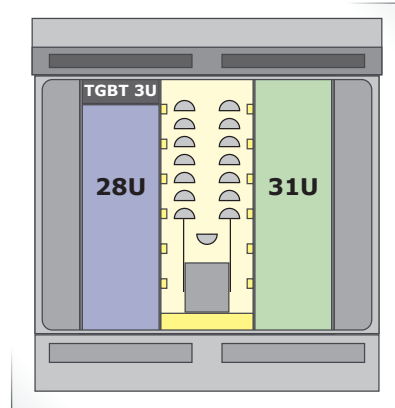
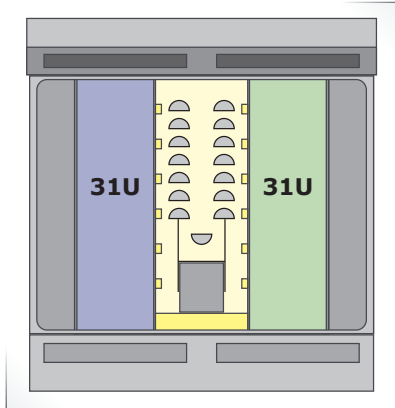
• 30U -> 15 TDC 96FO = **1440 FO** SC-APC

NRO (activé)

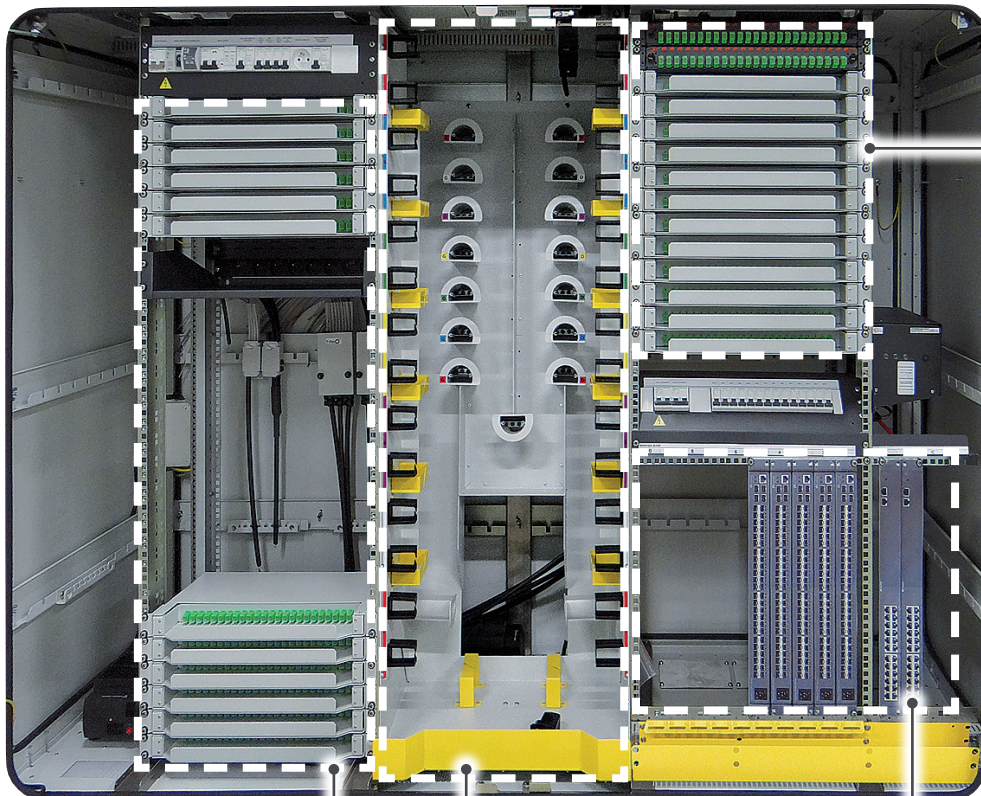
• 30U -> 15 TDC 96FO = **1440 FO** SC-APC

NRO/PM ou NRO-ZAE

• 18U -> 9 TDC 96FO = **864 FO** SC-APC



NRO-ZAE ILLUSTRATION



Subscribers back aera + TO Backbone
15U

Mutualisation aera for others Operators
28U

Coiling area with abrasion of patchcords overlongness

Active Compartment Operator of Operators
14U

Technical specifications

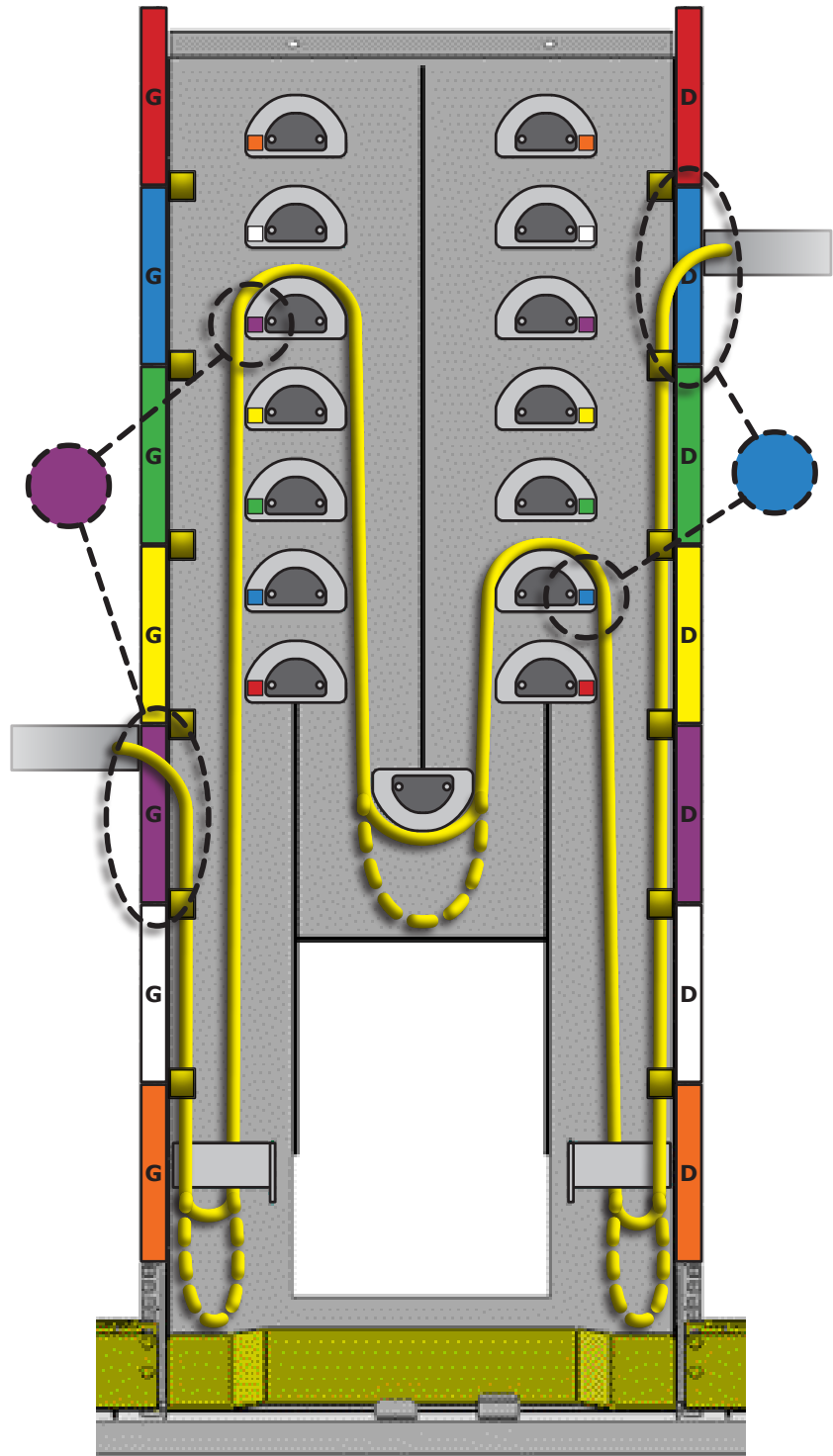
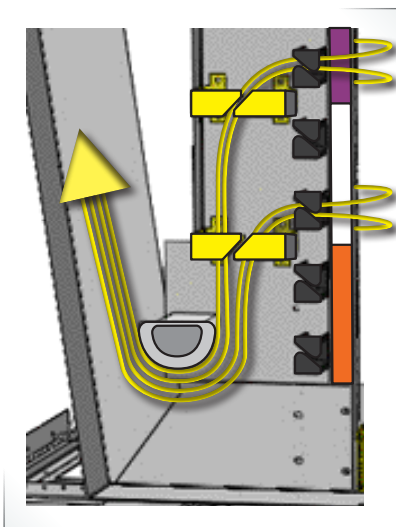
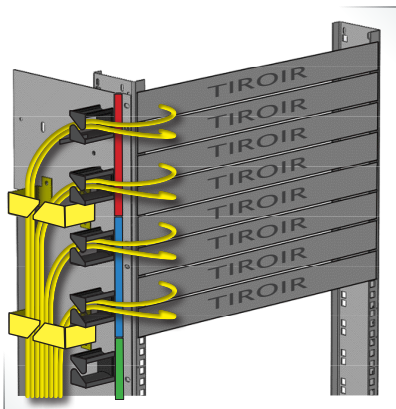
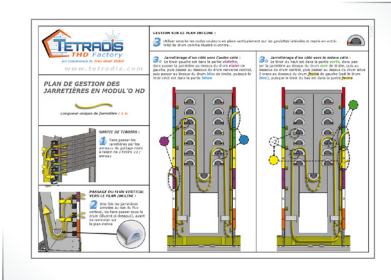
OUTDOOR CABINET RANGE

SMART PATCHCORD MANAGEMENT

Illustration of patch recording example...

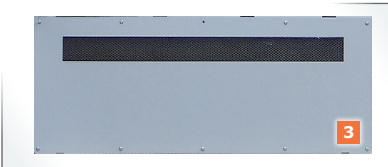
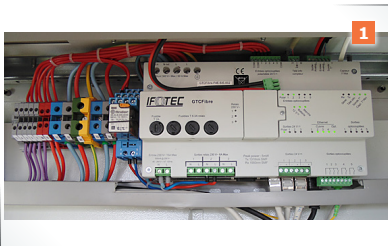
Find on the right inner door of each of the street cabinet the jumper routing plan (shown opposite).

The unique patchcord length is 5 m.



Technical specifications

OUTDOOR CABINET RANGE



SMART ENERGY MANAGEMENT

Below are the different optional equipment to request depending on your configuration ...

GTC - CENTRALIZED MANAGEMENT MODULE

- Fiber Optic Centralized Management System
- Serial Port Server
- Mains power and battery monitor
- Environmental measurement center
- Central unit for automation programming
- Power supply and load controller
- Power supply and low-voltage load controller
- CPE 1 optical port + 4 10 / 100Base-Tx network access ports

TGBT

- With automatic time-delayed reset
- Electrical protection
- Start to Services
- Start to Exploitation

BATTERIES LOCAL

- Dual location 4 x 85Ah gel batteries
- A total capacity of more than 170 Ah
- Or redundancy 85Ah n + 1
- Located in the base

MODULAR INVERTER SYSTEM 48/230

- Compact system with 19 «total depth 364 mm
- 1U inverter system with total output power up to 3000 VA
- Parallel operation in a redundant system
- Nominal output power of the inverter module 750 VA / 525 W
- Hot-swap inverter modules
- Two input sources (AC & DC)
- Reduced transfer time to 0
- AC / AC conversion with AC output separated from AC input
- High efficiency AC / AC conversion - up to 93%
- Possibility of building single or three-phase inverters

48 VDC CHARGER

- Integrated management system
- Up to 4000W of output power
- 10 protected outputs
- Easy integration into TNM systems
- Full frontal interface
- Compatible with ETSI ES 202 336
- Rackable in 19 «(optional ETSI)
- ETSI compatible depth (300 mm)
- Air flow from front to rear



More informations
available in datasheet
dedicated

Technical specifications

OUTDOOR CABINET RANGE

As standard, RAL7035 (Light gray)
Other colors (1), on request:
- RAL1015 smooth matt (light ivory)
- RAL1019 smooth matt (Gray beige)
- RAL6003 smooth matt (Olive green)
- RAL7039 smooth matt (Quartz gray)
- RAL8019 smooth matt (Gray brown)
- RAL8028 smooth matt (Earth brown)
(1): Minimum order. of 10 cabinet

ORDER CODES

Modul'O HD - 2x31U - PM - Double skin + 8 uprights + Central module with gutter management) RAL7035	RCAB-48-2002-7035
Modul'O HD - 2x31U - ACTIVE - (PM + your configuration)	Consult us
Side coupling kit for Modul'O HD	RCAB-48-210010
Central patchcord management module	RCAB-48-210020

For the products below, find more information on the dedicated technical sheet.



PRE-EQUIPED TGBT BLOCK

The TGBT is available in several configurations. Disposes according to the version of:

- EZ sheet steel housing 15 / 10th
- Automatic time-delayed reset
- Alarm reset
- Black anthracite sandblasted epoxy paint - 200SW 306 F
- Surge arrester
- Start to Services
- Circuit breaker
- Start to Operation

TGBT version 01 - Box prepared Class 2 - I / O Terminals + Earth	RCAB-48-220010
TGBT version 02 - Diagnostic and auxiliary GTC - prepared	RCAB-48-220020
TGBT version 10 - Base 19" - prepared 3U - Sect/Reenc/Elec. Protection	RCAB-48-220100
TGBT version 11 - Base 19" - prepared 3U - Sect	RCAB-48-220110
TGBT version 20 - Cplt to 1x prepared - Start Service 25A-30mA	RCAB-48-220200
TGBT version 30 - Cplt to 1x prepared - Start Exploit. 16A-30mA ASI	RCAB-48-220300
TGBT version 40 - Cplt to 1x prepared - Bypass + 10 Starts 48 VDC - 2A	RCAB-48-220400



48 VDC CHARGER

- Integrated management system
- 10 protected outputs
- Complete front end interface
- 19 «rackable (ETSI optional)
- Air flow from front to rear
- Up to 4000W output power
- Easy integration into TNM systems
- ETSI ES 202 336 compatible
- ETSI compliant depth (300 mm)

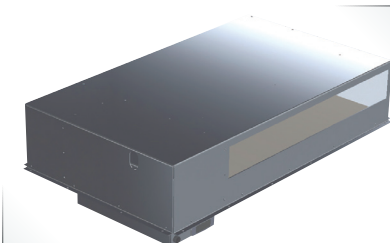
48VDC system SP160 equipped with 1 module 1000W + Comp@s	REAX-53-000100
48VDC Maille Batteries 85 Ah C100 in Gel + base support Modul'O HD	RCAB-48-220550



MODULAR SYSTEM INVERTER 48/230

- 1U 19" compact inverter system
- Nominal output power of the inverter module 750VA / 525W
- AC / AC Conversion with AC Output Separate from AC Input
- Hot-swap inverter modules
- Reduced Transfer Time to 0
- Total output power 3000 VA
- Two input sources (AC & DC)
- High efficiency AC / AC conversion - up to 93%

Inverter 19"-1U 750VA ext to 2250VA + protec meca & alim. cords E/S	REAX-54-000101
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ACT HYPERVENTILATION KIT

This hyperventilation ACT kit ensures a temperature inside the street cabinet of 5 ° C maximum above the outside ambient temperature.

- Made of aluminum sheet 20 / 10th
- Adaptive operation by electronic management: Modes; Standby / ECO / BOOSTER
- Reduction to 41 dB (A) of the sound emission in BOOSTER mode (full power)
- Automatic regulation of temperature ranges and speeds

ACT Hyperventilation - Turbine MASTER + Regul. for Modul'O HD + prC4	RCAB-48-230010
ACT Hyperventilation - Turbine SLAVE for Modul'O HD	RCAB-48-230020



HEATING PTC 1200W - FORCED AIR HEATER

- Heating element: cold conductor (PTC), self-limiting in temperature
- T° limiter: thermal protection in case of fan failure (auto reset)
- Axial fan: flow rate of air flow 160 m³ / h, free blowing
- Connection: 2 pole max. 2.5 mm², clamping screw max. 0.8 Nm with cable clamp
- Housing: black plastic, according to UL94-V-O
- Degree of protection IP20 / class II (double insulation)
- Dimensions: 168 x 145 x 120 mm
- Weight approx. 1.2 kg

Heating PTC 1200W for Modul'O HD - fix. background - C16 protected	RCAB-48-230110
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