

TECHNICAL SELECTION

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TECHNICAL SELECTION

s-MEXT-G02-M1 DX F01 O 013 S

FULL INVERTER air conditioning split-system for IT Cooling.



R HFC R-410A

SCROLL

Model	s-MEXT-G02-M1 DX F01 O 013 S
Version	O
Frame	F01
Primary circuit type	DIRECT EXPANSION AIR COOLED
No. Circuits	N° 1
Refrigerant	R410A

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1.1 Unit Description

The full-inverter air conditioning split-system for small Data Centre, UPS rooms, Batteries rooms, Distribution rooms and all areas of the Data Center needing IT Cooling.

The "state of the art" in components granting high reliability and close control in temperature following the trend of the thermal load thanks to the BLDC inverter compressor.

The constructive solutions and the internal lay-out allow high application flexibility and the frontal access to the main components for inspection and routine maintenance.

The extreme flexibility allows top installation that adapts perfectly to every requirement of the plant with 2 types of air supply for the indoor unit.

The system has been designed for a quick and easy setting up.

The installation requires only electrical and refrigerant connections.

Suitable for matching to Mr Slim R410A and Mr Slim R32.

A set of accessories allows to control the room temperature even in heating by electric heaters and, if necessary, also the humidity control by a modulating steam humidifier.

1.2 Versions

OVER

Upflow air supply

UNDER

Downflow air supply

1.3 Plus (only descr)

Base and frame in galvanized steel, painted with epoxy powders. Panels in galvanized steel sheet with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, insulated with polyurethane foam protective film; fire resistance HF1 – UL94. Colour RAL 7016 hammered.

Finned pack evaporating coil with internally corrugated copper tubes and high efficiency aluminium fins. Finned pack with hydrophilic treatment that assure the condensate water drop, high thermal conductivity and does not favour the growth of micro-organisms.

Centrifugal fans with backward curved blades with wing profile, single inlet without scroll housings (Plug-fans) with impeller in aluminium or in composite material exempt from rust formation. Directly driven brushless type synchronous EC motor with integrated electronic commutated system. Fans speed control with proportional signal 0-10V.

Electrical panel in compliance with EN60204-1 including the interface card (PAC-IF) for connection to condensing outdoor unit Mr. Slim.

Microprocessor system to control and monitor the cooling capacity supply and the alarm status. Operating and safety logic for systems with R410A or R32 refrigerant

1.4 Controls

EVOLUTION

Microprocessor control system with graphic display for control and monitor of operating and alarms status. The system includes: built-in clock for alarms date and time displaying and storing, built-in memory for the storing of the intervened events, main components hour-meter, non-volatile "Flash" memory for data storage in case of power supply faulty. Menu with protection password. LAN network. Provision for connectivity cards housing.



2.1 INDOOR UNIT

MAIN CIRCUIT

DESIGN CONDITIONS

Dry bulb temperature	°C	27.0
Relative humidity	%	47
Altitude	m	0
Air flow	m³/h	2606
ESP External Static Pressure	Pa	20
Outdoor air temperature	°C	35.0
Pipes length	m	5.0
Coil working pressure		-

PERFORMANCE AT DESIGN CONDITIONS

Total cooling capacity gross	kW	11.7
Sensible cooling capacity gross	kW	10.3
Net cooling capacity	kW	11.3
Net sensible cooling capacity	kW	9.91
SHR		0.88
EER total	kW/kW	3.19
Leaving air temperature	°C	15.6
Leaving air relative humidity	%	89
Effective heat exchange area		-

FANS

Fans type		EC BASIC
Quantity	N°	1
Air flow	m³/h	2606
Fans power input	kW	0.43
SPF (Specific Power Factor)	W / l/s	0.59

ACCESSORIES

FILTERS

Accessory filter type	COARSE 60% (ISO EN 16890)
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HUMIDIFIER

Humidifier type		Humidifier 3 kg/h
Quantity	N°	1
Capacity	kg/h	3.0
Electrical power abs.	kW	2.25
Max absorbed current (FLA)	A	9.80
Power supply	V/ph/Hz	230/1/60

ELECTRICAL HEATER

Heater description	Basic heater 2.6 kW	
Quantity	N°	1
Steps	N°	2
Electrical power abs.	kW	2.60
Max absorbed current (FLA)	A	11.4
Power supply	V/ph/Hz	230/1/60

NOISE DATA

Spectrum	Hz	63	125	250	500	1000	2000	4000	8000	Tot
		dB	dB	dB	dB	dB	dB	dB	dB	dB(A)
Sound Power		70	73	77	76	70	68	66	56	77
Total sound Pressure		54	57	61	60	54	52	50	40	61
Distance	m	1								

Note

Note

Average sound pressure level, at 1 m distance, unit in a free field on a reflective surface according to ISO3744. Non-binding value obtained from the sound power level.

WEIGHT & DIMENSIONS

A	mm	600
B	mm	500
H	mm	1980
Weight	kg	123

ELECTRICAL DATA (refer to indoor unit)

Power supply	V/ph/Hz	208-230/1/60
Max Electrical power absorbed (FLI)	kW	5.35
Max absorbed current (FLA)	A	24.5
Max inrush current (SA)	A	2.80
Power input (OI)	kW	0.43

2.2 OUTDOOR UNIT

GENERAL DATA

Code	PUY-A42NHA7	
Quantity	N°	1

FANS

Fans Type

Quantity	N°	2
Fans power input	kW	0.15
Air flow for fan	m³/h	6600

COMPRESSORS

Compressor type SCROLL

Compressors nr.	N°	1
Compressors power absorption	kW	3.09

NOISE DATA

Spectrum	Hz	63	125	250	500	1000	2000	4000	8000	Tot
		dB	dB	dB	dB	dB	dB	dB	dB	dB(A)
Sound Power		-	-	-	-	-	-	-	-	67
Total sound Pressure		-	-	-	-	-	-	-	-	52
Distance	m					1				

Note

Note

Average sound pressure level, at 1 m distance, unit in a free field on a reflective surface according to ISO3744. Non-binding value obtained from the sound power level.

WEIGHT & DIMENSIONS

Dimension A	mm	1050
Dimension B	mm	360
Dimension H	mm	1338
Weight	kg	96

ELECTRICAL DATA (refer to outdoor unit)

Power supply	V/ph/Hz	208-230/1/60
Max electrical power absorbed (FLI)	kW	3.59
Max absorbed current (FLA)	A	25.0
Max inrush current (SA)	A	13.0
Power input (OI)	kW	3.24

