

TECHNICAL SELECTION

Software version: ELCA World v. 1.7.2.0

Database version: 1.8.2.0

Print data:02/09/2022 15:16

TECHNICAL SELECTION

s-MEXT-G02-M1 DX F01 U 006 S

FULL INVERTER air conditioning split-system for IT Cooling.



R HFC R-410A

SCROLL

| | | | |
|----------------------|------------------------------|---|--|
| Model | s-MEXT-G02-M1 DX F01 U 006 S | | |
| Version | U | | |
| 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 | 2235 |
| 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 | 6.56 |
| Sensible cooling capacity gross | kW | 6.56 |
| Net cooling capacity | kW | 6.26 |
| Net sensible cooling capacity | kW | 6.26 |
| SHR | | 1.00 |
| EER total | kW/kW | 4.46 |
| Leaving air temperature | °C | 18.6 |
| Leaving air relative humidity | % | 78 |
| Effective heat exchange area | | - |

FANS

| | | |
|-----------------------------|---------|----------|
| Fans type | | EC BASIC |
| Quantity | N° | 1 |
| Air flow | m³/h | 2235 |
| Fans power input | kW | 0.30 |
| SPF (Specific Power Factor) | W / l/s | 0.49 |

ACCESSORIES

FILTERS

| | |
|-----------------------|---------------------------|
| Accessory filter type | COARSE 60% (ISO EN 16890) |
|-----------------------|---------------------------|

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 |

The performance shown are obtained from theoretical calculations and tolerances will apply. Rpt.version:1.0.7.0

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 | | 73 | 71 | 71 | 72 | 67 | 62 | 61 | 57 | 73 |
| Total sound Pressure | | 57 | 55 | 55 | 56 | 51 | 46 | 45 | 41 | 57 |
| 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 | 2.73 |
| Max absorbed current (FLA) | A | 12.2 |
| Max inrush current (SA) | A | 2.00 |
| Power input (OI) | kW | 0.30 |

2.2 OUTDOOR UNIT

GENERAL DATA

| | | |
|----------|----|-------------|
| Code | | PUY-A24NHA7 |
| Quantity | N° | 1 |

FANS

| | | |
|------------------|------|------|
| Fans Type | | |
| Quantity | N° | 1 |
| Fans power input | kW | 0.09 |
| Air flow for fan | m³/h | 3300 |

COMPRESSORS

| | | |
|------------------------------|----|--------|
| Compressor type | | SCROLL |
| Compressors nr. | N° | 1 |
| Compressors power absorption | kW | 1.08 |

The performance shown are obtained from theoretical calculations and tolerances will apply. Rpt.version:1.0.7.0

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 | | - | - | - | - | - | - | - | - | - |
| Total sound Pressure | | - | - | - | - | - | - | - | - | - |
| 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 | 950 |
| Dimension B | mm | 360 |
| Dimension H | mm | 943 |
| Weight | kg | 68 |

ELECTRICAL DATA (refer to outdoor unit)

| | | |
|-------------------------------------|---------|--------------|
| Power supply | V/ph/Hz | 208-230/1/60 |
| Max electrical power absorbed (FLI) | kW | 1.67 |
| Max absorbed current (FLA) | A | 19.0 |
| Max inrush current (SA) | A | 11.0 |
| Power input (OI) | kW | 1.17 |

