

## DIMENSIONAL DATA

### OVERALL DIMENSIONS

The dimensions are expressed in millimetres and inches (third-scale drawing).

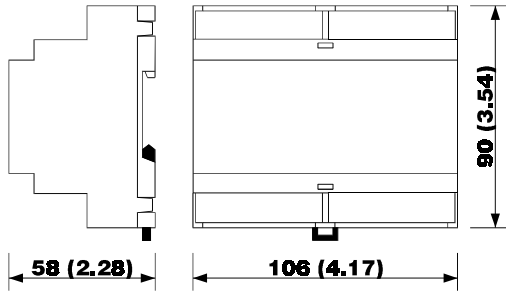


Fig. 3  
ds66me.wmf

## INSTALLATION

### WITH THE FIXING SYSTEM SUGGESTED BY THE BUILDER

On DIN EN 50022 standard rail according with DIN 43880 norms (third-scale drawing).

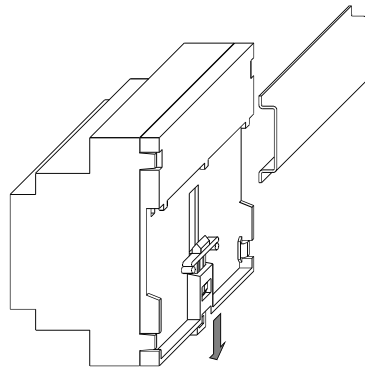


Fig. 4  
ms66m.wmf

## ELECTRICAL CONNECTION

### CONNECTIONS TO DERIVE

Instance of typical application.

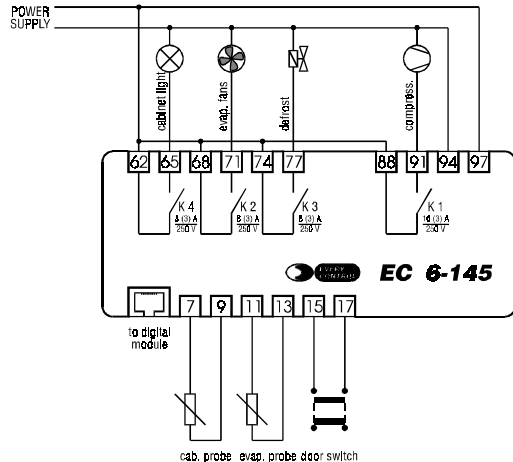


Fig. 5  
c6-145e.wmf

## BUILDER DATA

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# EC 6-145

## Power module for compressor, evaporator fans, defrost (for temperature-time) and cabinet light output management

### Operating instructions

Release 1/00 of April the tenth 2000

Code EC 6-145 DOC E001

File 6145e.p65

### IMPORTANT:

The use of this new instrument is easy; but for safety reasons, it is important read these instructions carefully before the installation or before the use and follow all additional informations.

It is very important keep these instructions with the instrument for future consultations.



Fig. 1  
f6-145.wmf

## GENERAL INFORMATIONS

### WHAT IS THE USE

EC 6-145 is a power module studied for refrigerating systems management through the compressor, evaporator fans, defrost (for temperature-time) and cabinet light output management; the instrument was studied to be used with a digital module.

There are four relay outputs of which one 16 (3) A @ 250 Vac relay for one 1½ HP @ 250 Vac compressor management and three 8 (3) A @ 250 Vac relays for evaporator fans, defrost system management and for cabinet light control; besides, the instrument is provided with one door switch digital input configurable to interact on the outputs activity.

EC 6-145 is available in the 106 x 90 mm (4.17 x 3.54 in., 6 DIN modules) case and it is studied for DIN standard rail installation.

## GETTING STARTED

### INSTALLATION

EC 6-145 was studied for DIN EN 50022 standard rail installation according with DIN 43880 norms (the overall dimensions are related in Fig. 3, the fixing system suggested by the builder is related in Fig. 4).

### ADDITIONAL INFORMATIONS

- verify if the using conditions (ambient temperature, humidity, etc.) are within the limits indicated by the builder (see the chapter TECHNICAL DATA)
- install the instrument in a location with a suitable ventilation, to avoid the internal overheating of the instrument
- do not install the instrument near surfaces that can to obstruct the air-grating (carpets, covers, etc.), heating sources (radiators, hot air ducts, etc.), locations subject to direct sunlight, rain, humidity, excessive dust, mechanical vibrations or bumps, devices with strong magnetos (microwave ovens, big speakers, etc.)
- according with the safety norms, the protection against possible contacts with electrical parts and parts protected with functional insulation only must be ensured through a correct installation procedure of the instrument; all parts that ensure the protection must be fixed so that they can not be removed if not with a tool.

### ELECTRICAL CONNECTION

EC 6-145 is provided with one telephone connector for wired cable EC CC 502, EC CC 503, EC CC 504, EC CC 505 or EC CC 510 (for the connection to the digital module), it is provided with reed terminals (faston) 6.3 x 0.5 mm (0.24 x 0.01 in., for the connection to the power supply and outputs) and 2.8 x 0.5 mm (0.11 x 0.01 in., for the connection to the inputs), located on the instrument frontal panel (the connections to derive are related in Fig. 5 and they are checkable on the polyester label stuck on the instrument case).

### ADDITIONAL INFORMATIONS

- if the instrument is brought from a cold to a warm location, the humidity may condense inside the instrument; wait about an hour before supply the instrument
- verify if the operating power supply voltage, electrical frequency and power of the instrument correspond to the local power supply (see the chapter TECHNICAL DATA)
- do not supply more instruments with the same transformer
- if the instrument is installed on a vehicle, its power supply must be derived directly from the battery of the vehicle
- give the instrument a protection able to limit the current absorbed in case of failure
- the instrument remains connected to the local power supply as long as the terminals 94 and 97 are derived to the local power supply, even if the instrument is apparently turned off
- if the instrument is supplied from low voltage use low voltage loads
- give the probes a protection able to insulate them against possible contacts with metal parts or use insulated probes
- give the outputs a protection able to protect them against short circuit and overload
- do not try to repair the instrument; for the repairs apply to highly qualified staff
- if you have any questions or problems concerning the instrument please consult

Every Control (see the chapter BUILDER DATA).

## USE

### PRELIMINARY INFORMATIONS

After derived the connections related in Fig. 5, the LED L1 turning ON.

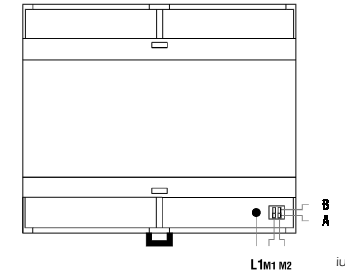


Fig. 2  
iu6145.wmf

The LED L1 is associated to the instrument status, it is turned ON during the status ON and it is turned OFF during the status OFF.

To manage the resources of the power module see the chapter USE of the Operating instructions of the connected digital module.

Activating the door switch digital input the instrument interacts on the outputs activity according what established with the microswitch M1 and M2.

### KIND OF CONTACT OF THE DOOR SWITCH DIGITAL INPUT SETTING

To set the door switch digital input for NC contact to position the microswitch M1 in position A.

To set the door switch digital input for NO contact to position the microswitch M1 in position B.

### INTERACTION ON THE OUTPUTS ACTIVITY SETTING

To set the door switch digital input to force the cabinet light output to the status ON during the door switch digital input activation to position the microswitch M2 in position A.

To set the door switch digital input to force the evaporator fans output to the status OFF and the cabinet light output to the status ON during the door switch digital input activation to position the microswitch M2 in position B.

## SIGNALS

### SIGNALS

If the LED L1 is turned ON it means that the instrument is in the status ON.

## TECHNICAL DATA

### TECHNICAL DATA

<b>Case:</b>	plastic grey (PP0), self-extinguishing.
<b>Size:</b>	106 x 90 x 58 mm (4.17 x 3.54 x 2.28 in., 6 DIN modules).
<b>Installation:</b>	on DIN EN 50022 standard rail installation according with DIN 43880 norms.
<b>Type of protection:</b>	IP 40.
<b>Connections:</b>	8/8 RJ telephone connector (to digital module) for wired cable EC CC 502, EC CC 503, EC CC 504, EC CC 505 or EC CC 510, reed terminals (faston) 6.3 x 0.5 mm (0.24 x 0.01 in., power supply and outputs) and 2.8 x 0.5 mm (0.11 x 0.01 in., inputs).
<b>Ambient temperature:</b>	from 0 to +60 °C (+32 to +140 °F, 10 ... 90 % of not condensing relative humidity).

**Power supply:** 230 Vac or 115 Vac or 24 Vac or 12-24 Vac/dc or 12 Vac/dc, 50/60 Hz, 5 VA.

**Insulation class:** II.

**Measure inputs:** 2 (cabinet and evaporator probe) for PTC/NTC probes.

**Digital inputs:** 1 door switch (5 V, 1 mA) configurable to interact on the outputs activity and for NO or NC contact.

**Display:** green LED diode Ø 3 mm (0.11 in.) instrument status indicator.

**Outputs:** four NO contact relays of which one 16 (3) A @ 250 Vac relay for one 1½ HP @ 250 Vac compressor management and three 8 (3) @ 250 Vac relays for evaporator fans, defrost system management and for cabinet light control.

## HOW TO ORDER

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### CODING SYSTEM

**Instrument name:** EC 6-145.

**Desired measure input:** P (for PTC/NTC probes).

**Desired power supply:** 220 (230 Vac)  
115 (115 Vac)  
A24 (24 Vac)  
024 (12-24 Vac/dc)  
012 (12 Vac/dc).