

REFRIGERATION COMPRESSOR CONTROLLER FP-MC-R11BT

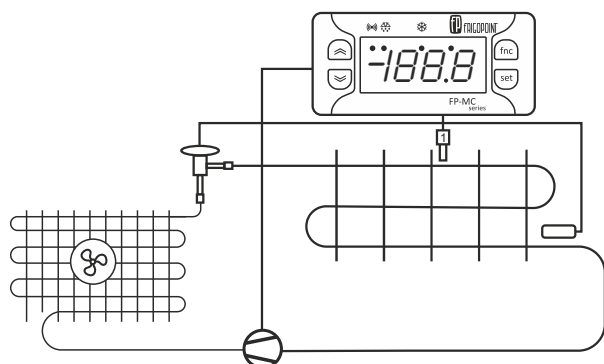
Operation instruction

SAFETY INSTRUCTION

- Carefully read the following instruction. Ignoring this instruction may lead to failure of controller and to personnel injuries.
- Operation of controller should be done by qualified personnel which has all the necessary knowledge and skills.
- Please follow the sequence of connections, power polarity and safety rules.
- Follow instruction for connection and controller configuration. Ignoring instruction for connection and controller configuration may lead to it's failure.
- Follow requirements for temperature and humidity of working environment.

GENERAL DATA

Refrigeration compressor controller designed for management of compressor by 1 analog temperature probe.



DATA

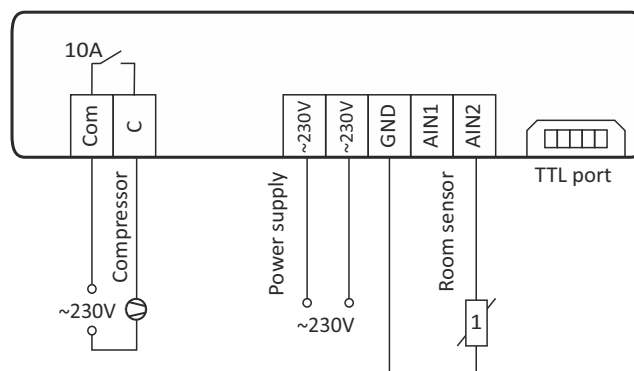
Power supply	~230V ±10%; 50/60 Hz
Power consumption	max. 2VA
Dimensions	Mounting 71x29 mm Panel 77x35.5 mm Full 77x35.5x64.5 mm
Protection class	IP65 front panel, IP 20 case
Temperature sensor	FP-TSN; range-50..110 °C FP-TSP; range-55..140 °C
Relay out	Inductive loads (AC15) 250V/4A Resistive load (AC1) 250B/10A
Connections	Screw terminals 2.5 mm ² distance 5 mm

INASTALLATION

Controller is installed into panel with a notch 71x29mm. Fixation of controller is made with a help of clamps supplied together with controller.

ELLECTRICAL CONNECTIONS

Connections are made according to the layout shown further in this instruction as well as on controller. In order to avoid effect of electromagnetic field of power signals on analog signals coming from probes make sure that minimum distance between power



and probe wires is 30 mm. Analog inputs of controller are made for connecting probes of appropriate types only.

INSTALLATION OF PROBES

AIN2 (1) – coldroom temperature probe – place at the center of evaporator.



















INTERFACE

To access menu push “set”. If there is no “alarm” you would see “set” on display. To move between folders of menu or to change parameters push “up” and “down”, to exit folder push “fnc”. Menu consists of the following folders:

Pb1 – indication of probe 1, Set – setting working point, Al – current alarms.

PROGRAMMING

To access programming menu push and hold “set” for 5 seconds, you would see CP on display. If you use password for entering programming menu which can be set in PA1 part of menu, please enter it. To move between folders of menu or to change parameters push “up” and “down”, to exit folder push “fnc”, to enter folder or to change parameters push “set”. For manual defrost push and hold “up” for 5 seconds.

		Compressor on			Defrost off
		Switch on delay., protect, block.			Alarm
		Compressor off.			Alarm
		Defrost on			No alarm
		Manual defrost			

COPY CARD

Copying parameters is available with a help of copy card. To activate function of copy card push “set” on appropriate function, if function is activated “y” will appear on display, if deactivated “n” will appear on display. To upload parameters card should be put into switched off controller, after controller should be switched on. If parameters uploaded successfully “dLy” will appear on display, if not “DLn” will appear on display.

ALARMS

E1 – failure of probe 1

AH1 – Maximum temperature alarm

AL1 – Minimum temperature alarm

FP-MC-R11BT does not have sound alarm.

Name	Description	Unit	Factory	Min	Max
REGULATION					
dF	Differential of regulation	°C/°F	2.0	0.1	30.0
HSE	Maximum volume of setpoint	°C/°F	99.0	LSE	302
LSE	Minimum volume of setpoint	°C/°F	-50.0	-55.0	HSE
OnT	Duration of work of compressor when probe alarm is on. 0nT=0 Compressor constant on	min	0	0	250
OffT	Duration of stop compressor when probe alarm is on. 0FT=0 Compressor constant off	min	1	0	250
dOn	First switch on delay	S	0	0	250
dOff	After switch off delay	min	0	0	250
dBi	Minimum time of stop	min	0	0	250
0d0	Activisation of exits delay	min	0	0	250
DEFROST					
dIt	Interval between defrost cycles		6	0	250
dCt	Calculation of interval between defrost cycles, 0-Compressor operating time, 1-real time, 2-compressor stops		1	0	2
dDH	First defrost shift	min	0	0	59
dEt	Duration of defrost	min	30	0	250
dPD	Defrost enquiry when switching on		n	0=n	1=y
ALARMS					
AFd	Alarm differential	°C/°F	2.0	1.0	50.0
HRL	Maximum volume of temperature	°C/°F	50	LRL	150.0
LRL	Minimum volume of temperature	°C/°F	-50.0	-50.0	HRL
PRD	Delay period of fixing alarm after power is on	hours	0	0	10
dPD	Delay period of fixing alarm after defrost	min	0	0	999
INTERFACE					
LDC	Keyboard block 0 - no, 1 - block (active only key. «set»)		n	0=n	1=y
PAI	Password		0	0	250
ndt	Decimal point		y	0=n	1=y
CAI	Sensor calibration	°C/°F	0	-120	120
ddl	Indication in defrost 0 - room temp, 1 - temp. before defrost, 2 - DEF		1	0	2
d-ro	Temperature units		0	0=°C	1=°F
CONFIG					
HDD	Temperature sensor type		1	0=PTC	1=NTC
rEL	Controller version				
tRb	Reserved (read only)				
COPY CARD					
UL	Unloading on card		/		
dL	Loading on card		/		
Fr	Default settings		/		