



**SPECIALISED
REFRIGERATION**

OPERATING & INSTRUCTIONS MANUAL S230 12V/DC (24V OPTION) REV.1

FULL GUAGE CONTROLLER MODEL: MT512E 2HP Vers.12

- (i) **12V/DC OPERATION**
(ii) **24V/DC OPTION WITH CHANGES TO ELECTRICAL COMPONENT CONNECTIONS**

- **NOTE:**
- **THESE INSTRUCTIONS APPLY TO THE S230 (12V/DC - 220V/AC) DUAL TEMPERATURE FREEZER**
- **WHEN 220V/AC SUPPLY IS USED, PLEASE ENSURE THAT THE 12V/DC CONECTION IS DISCONNECTED.**

IMPORTANT: REMEMBER TO COMPLETE THE WARRANTY CARD AND RETURN IT TO THE ADDRESS BELOW. FAILURE TO DO SO MAY LEAD TO DIFFICULTY IN PROCESSING WARRANTY CLAIMS.

MINUS 40 12VOLT REFRIGERATORS AND FREEZERS

<u>PRODUCT</u>	<u>STORAGE TIME</u>	<u>TEMPERATURE</u>
Uncooked meat,	1 - 2 days	8 to 10 °C
Milk, cheese,	3 - 4 days	5 to 8 °C
Vegetables, etc.	7 days +	9 to 5 °C
Frozen meat, Poultry	up to 7 days	-6 to -2 °C
Vegetables and	up to 14 days	-8 to -4 °C
Pre-prepared foods	not more than 30 days	-15 to -12 °C

⇒ **12 VOLT OPERATION**

- ✓ The battery used will of course require re-charging periodically.
- ✓ This can be done using a charger operating from the mains, by using a vehicles electrical system or by means of solar panels.
- ✓ For these units the recommended minimum battery capacity is 100 amp hours.
- ✓ This size battery will operate the unit continuously for approximately 17 hours without re-charging.
- ✓ This model Freezer (S230 Dual Temperature freezer), *can also operate on 24V/DC electrical current.*
- ✓ In order for this freezer to operate on 24V/DC, **changes need to be made to the electrical connections on the Digital Temperature Controller.**

PLEASE CONSULT WITH THE MANUFACTURER BEFORE MAKING THE CHANGES FROM 12V/DC TO 24V/DC.

- ✓ Currently, the electrical supply to the temperature controller is connected in the 12V/DC position.
- ✓ **When 24V/DC power is being used, the connections MUST BE REMOVED FROM THE 12V/DC CONNECTOR POSITION AND RECONNECTED TO THE 24V/DC POSITION AS INDICATED ON THE TEMPERATURE CONTROLLER**

<u>WIRE LENGTH UP TO:</u>	<u>*WIRE X-SECTION - AREA SQUARE MM</u>
2,5M	2,5
4,0M	4,0
6,0M	6,0
10,0M	10,0
16,0M	16,0

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⇒ FOR USE WITH SOLAR PANELS

The supplier of the solar power system should be consulted to determine whether additional batteries or photovoltaic panels are required.

Contact Minus 40 for details of Solar Panel kits selected specially for each refrigerator/freezer model.

PARAMETER TABLE & SETTINGS FOR FULL GUAGE CONTROLLER MODEL: MT512E 2HP Vers.12

Control Temperature Adjustments (SET POINT)

Press **SET** for 2 sec. until appears **SET**, and release it after that.

The adjusted operation temperature will appear. Use **UP** & **DOWN** arrow to change value and then press **SET** to record it.

1 SET POINT: 3.5°C

2)	PARAMETER TABLE	NTC	-
FUN	Description	Values	Unit
F01	Access code:123 (one hundred & twenty three)	-	-
F02	Set point	3.5	°C
F03	Indication Offset	0	°C
F04	Minimum set point allowed to the end user	-15	°C
F05	Maximum set point allowed to the end user	10	°C
F06	Control differential (hysteresis)	3	°C
F07	Operating mode	0	-
F08	Minimum output time on	60	Sec
F09	Minimum output time off	60	Sec
F10	Cooling time	0	Min
F11	Defrost Time (*)	NO	Min
F12	Initial state up on energizing the instrument	0	-
F13	Indication of the temperature locked during defrost (**)	NO	-
F14	Instrument energization delay	NO	-
F15	Additional time at the end of first cycle	NO	Min
F16	Situation of the compressor with the damaged sensor	0	°C
F17	Compressor time on in case of error	2	Min
F18	Compressor time off in case of error	2	Min
F19	Intensity of the digital filter (***)	NO	-
F20	Time for function lockdown	NO	-
F21	Control function lockdown	NO	-

Parameters configuration

- Access the function **F01** by pressing at the same time **DOWN** and **UP** for 2 sec. until appear **Fun** releasing then after that. Soon will appear **F01**. and then press **SET** (short touch).
- Use **DOWN** and **UP** to enter the access code (123), and then press **SET**
- Select the desired function and visualize the configured value
- Use **DOWN** and **UP** to change the value and then press **SET** to record the configured value and return to the functions menu.
- To reset the menu and return to normal operation (temperature indication), press **SET** until appear ---