

MPC-05



SAMLEX EUROPE[®] B.V.

Multi Purpose Converter – 5A

Owners Manual

Please read this manual before operating your converter

FEATURES

- Converter or charger.
- Power cannot travel from the output to the input through the MPC.
- Very low power consumption.
- Simple installation.

PURPOSE

The MPC-05 (MPC) is a dual-purpose switched converter.

1. Normal converter with a 13.8 V output voltage.
2. A two-step charger with a 24-hour forced charge.

INSTALLATION

Step action

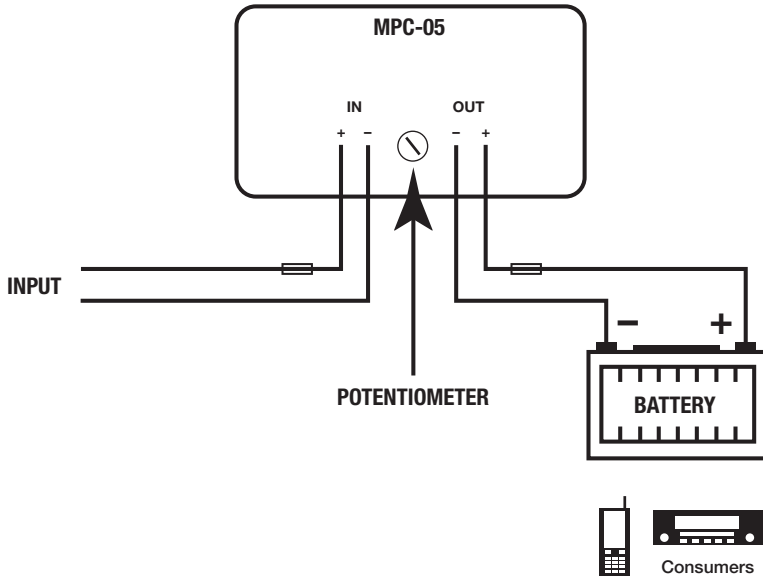
1. Connect the positive (+) of the load to the "Output (+)" of the MPC.
2. Connect the negative (-) of the load to the "Output (-)" of the MPC.
3. Connect the positive (+) of the power supply to the "Input (+)" of the MPC.
4. Connect the negative (-) of the power supply to the "Input (-)" of the MPC.



WARNING!

- The product must only be connected by skilled fitters / mechanics who are aware of the regulations for working with high battery voltages.
- Using inferior connection material and / or wiring that is too thin may damage the product.
- A short circuit between the positive and negative terminals of the battery may severely damage your system.
- Always use fuses of the correct value.

WIRING DIAGRAM



OPERATION

Converter

In setting #1, the MPC functions as a standard converter with a 13.8 V output voltage.

Charger

In settings #2 through #7, the MPC functions as a charger. The output voltage for these settings depends on the selected programme.

Boost

The *boost voltage* is between 14.1 V and 14.6 V and can be selected by the user by turning an internal potentiometer. A 60-minute timer will start if the voltage is 0.8 V below the *boost voltage* for one minute. After this time, the voltage will be reduced to the set *float voltage*.

Float

The *float voltage* is coupled to the selected *boost voltage* and is between 13.3 V and 13.8 V. There are two events which can cause the MPC to switch from *float* to *boost*.

1. If the voltage drops below 12.8 V for 5 seconds, the *boost mode* will be activated immediately.
2. If the MPC has been in *float mode* for 24 hours, the *boost mode* will be activated automatically.

General

The MPC has an overvoltage protection in both converter and charger mode.

LED indicator

MPC status	LED status	On duration (±)	Off duration (±)
Start	Flash (long on, short off)	0.9 sec.	0.1 sec.
Charger	Boost	On	
	Float	Slow flash	0.5 sec.
Off	Flash (short on, very long off)	0.1 sec.	4.9 sec.
Configuration mode	Rapid flash	0.2 sec.	0.2 sec.

CONFIGURING

The MPC can be set by turning the potentiometer located between the input and output connections.

When the potentiometer is turned fully to the left, setting #1 is selected and the MPC will function as as in converter with a 13.8 V output voltage. If the potentiometer is turned fully to the right, setting #7 is selected. The MPC will then function as a charger with a *boost voltage* of 14.6 V and a *float voltage* of 13.8 V.

CONFIGURATION TABLE

Setting	Type	Output voltage	
		Boost	Float
#1	Converter	13.8 V	
#2	Charger	14.1 V	13.3 V
#3		14.2 V	13.4 V
#4		14.3 V	13.5 V
#5*		14.4 V	13.6 V
#6		14.5 V	13.7 V
#7		14.6 V	13.8 V

* Factory setting

TECHNICAL DETAILS

INPUT		
Supply voltage		24 V DC
Range		18.0 V ... 35.0 V DC
Overvoltage	Limitation	> 32.0 V DC
	Reset	< 31.8 V DC
GENERAL		
Connections		4 x 6.3 mm faston
Cable recommendations		2.5 mm ²
Dimensions (HxWxD)		50 x 98 x 88 mm
Weight		290 g
Operational temperature		-10 °C ... +40 °C
Standby current		±18 mA
OUTPUT CONVERTER		
Voltage		13.8 V DC
Stabilisation		±1%
Current limitation		±5 A
OUTPUT CHARGER		
Voltage	Boost	14.1 V ... 14.6 V DC
	Float	13.3 V ... 13.8 V DC
Charge forcing		every 24 hours
Stabilisation		±1%
Current limitation		±5 A



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