

Overview DIP switch settings Modular Components

Note: All DIP switch settings or changes have to be done while battery is disconnected.

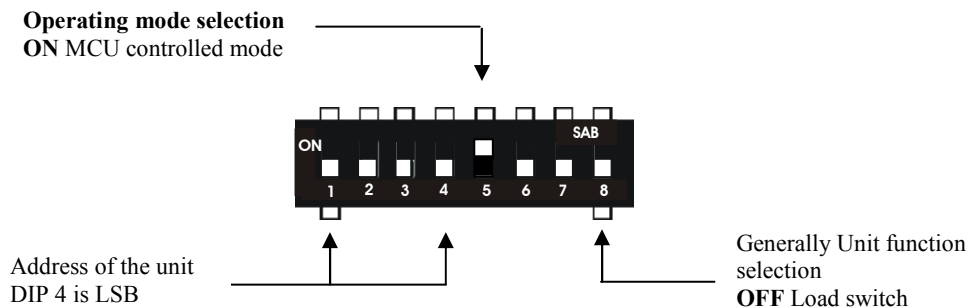
Selecting operating function by DIP switch settings

MPS

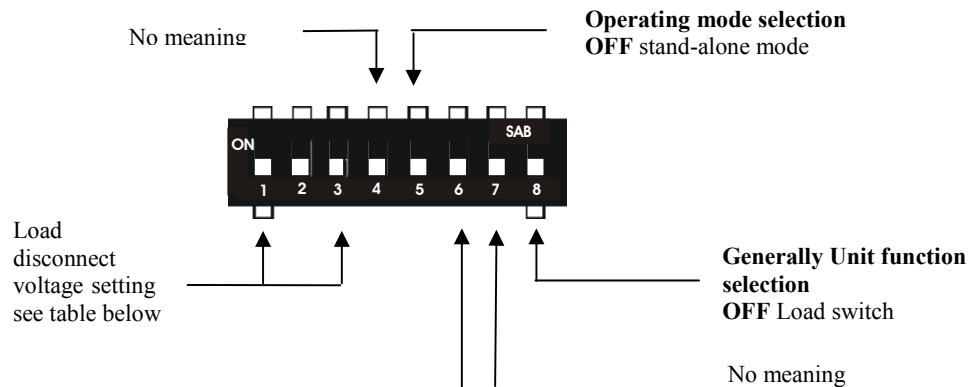
Using MPS as load switch

DIP switch settings for unit operating in MCU controlled mode:

Note: If unit is used as Load switch, settings of DIP switch 6 and 7 have no meaning!



DIP switch settings for unit operating in Stand-alone mode:



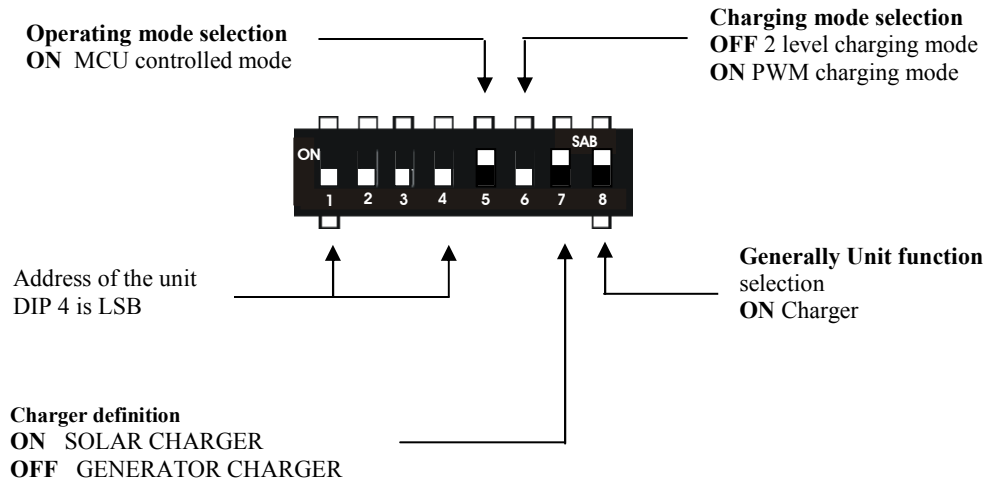
DIP_No	1	2	3	12 V System	24 V System	48V System
	OFF	OFF	OFF	LVD = 11,00 V	LVD = 22,00 V	LVD = 44,00 V
	ON	OFF	OFF	LVD = 11,25 V	LVD = 22,50 V	LVD = 45,00 V
	OFF	ON	OFF	LVD = 11,50 V	LVD = 23,00 V	LVD = 46,00 V
	ON	ON	OFF	LVD = 11,75 V	LVD = 23,50 V	LVD = 47,00 V
	X	X	ON	LVD = 12,00 V	LVD = 24,00 V	LVD = 48,00 V

	12 V System	24 V System	48V System
Low Voltage Reconnect	LVR = 12,8	LVR = 25,6 V	LVR = 51,2 V
Hi Voltage Disconnect	HVD = 15,5 V	HVD = 31 V	HVD = 62 V

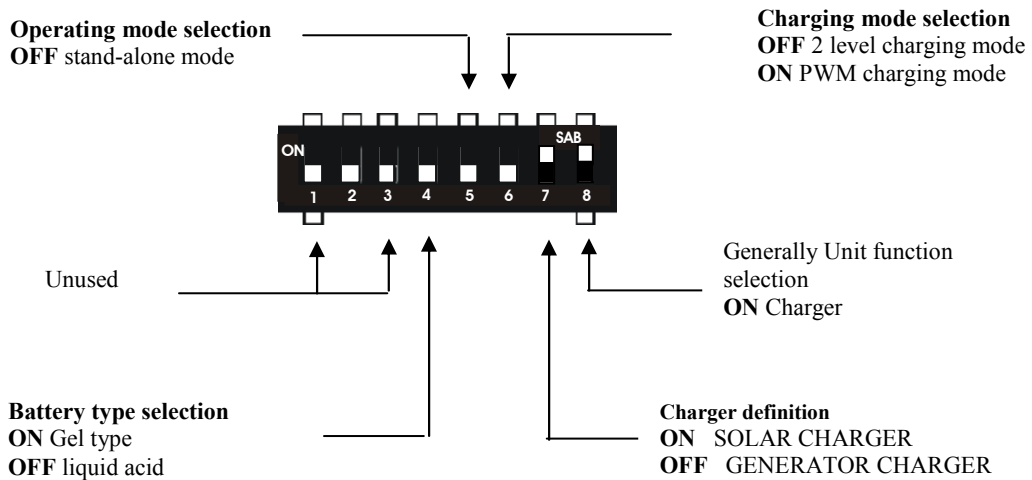
Fixed values in stand alone mode:

Using MPS as Charger

DIP switch settings for unit operating in MCU controlled mode:



DIP switch settings for unit operating in Stand-Alone mode:



Note: Charge cycles are only active in PWM mode.

Charge cycles	Target Voltage	Target Voltage	Target Voltage	independent cycle length	Indication Voltage	Cycle length
	12V System	24V System	48V System			
Float	13.8V	27.6V	55.2V	non	non	
Boost	14.4V	28.8V	57.6V	30 min/day	12.5	2 hours
Equalisation (not available for sealed batteries)	14.8V	29.6V	59.2V	non	12.1	2hours

Note: All values are temperatur compensated (-4mV/°C per cell)

If using 2 level control the connect / disconnect levels are shown in the following table:

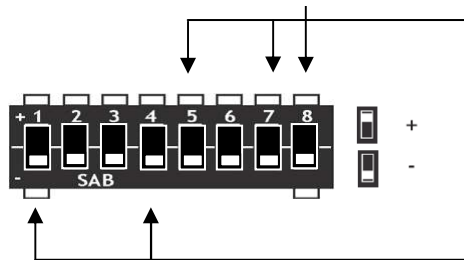
Nominal voltage	12 V System	24 V System	48V System
Charging start / stop levels (Dump load disconnect / connect levels)	13.1V / 14.4V	26.2V / 28.8V	52.4V / 57.6

MPPT

MPPT 100/30 configuration for a 12V or 24V system (48V is not available)

Note: DIP switches have to be in - or + position only!!

DIP switch 8 must be set to + for a MCU controlled unit. (If set to - it works in stand-alone mode) DIP switch 5 and 6 are reserved.



DIP switch 5, 6, 7 must be set to “-“ in MCU controlled mode,
 DIP switch 7 in stand alone-mode: - liquid acid battery,
 + sealed type battery

DIP switch 1 to 4 defines the Address of the unit
 Has no meaning in stand-alone mode

Addressing the MPPT 30/100 as MCU controlled CHARGER

DIP switch 1 to 4 defines the address of the unit in MCU controlled mode. Up to 16 addresses (DIP switch sets) are possible to assign.

Note: Every MPPT 30/100 used as MCU controlled CHARGER must have a unique address (DIP switch combination).

Internal default settings (fixed) for MPPT used as solar charger

	12V System	24V System
High voltage disconnect	15.5V	31V

Unit can run in linear mode only

Charge cycles	Target Voltage	Target Voltage	independent cycle length	Indication Voltage	Cycle length
	12V System	24V System			
Float	13.8V	27.6V	non	non	
Boost	14.4V	28.8V	30 min/day	12.5	2 hours
Equalisation not for sealed batteries	14.8V	29.6V	non	12.1	2hours

Note: All values are temperatur compensated (-4mV/°C per cell)

MCU

Setting up the system (basic setup)

This has to be done first before all parts of the system are connected to the battery, the solar modules or loads. All units run later (after connected to battery) in default mode with default settings. This offers the user to build up an elementary system without using a computer.

Note:

If individual settings are needed a further configuration has to be done after this by means of MODCOM and computer.

The basic setup allocates default settings to each involved unit depending on its function (see tables in the unit's configuration chapters).

The internal relays toggles by battery voltage levels and is intended to use therefore to start and stop a backup generator. The relays contacts are potential free and can switch up to 3A.

Relays default settings	12V System	24V System	48V System
Relays switch ON voltage (LVD + 0.2V)	11.7V	23.4V	46.8V
Relays switch OFF voltage	14.2V	28,4V	56,8V

Note: All system devices must be first disconnected from battery

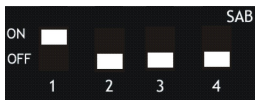
Configure the MCU

First step is always setting up the MCU for the intended system voltage. This is done by the DIP switches number 2 and 3.

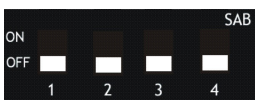
Oversight DIP-switch number and meaning:

DIP-switch 1: Timer power support

On-> MCU timer is supported by the internal coin cell.



Off -> MCU timer is supported by the system battery



Note: in this case system timer will be reset to 00.00 if system battery is disconnected from the MCU.

DIP-switch 2 and 3: System voltage selection.

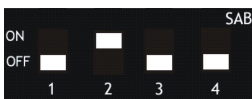
DIP 2 and 3 are OFF: 12V system voltage.



DIP 2 OFF and DIP 3 ON: 24V system voltage.



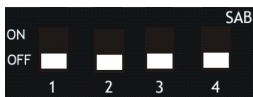
DIP 2 ON and DIP 3 OFF: 48V system voltage.



DIP 2 ON and DIP 3 ON: For service only.

DIP-switch 4: Battery type selection

DIP 4 Off: Liquid acid type battery



DIP 4 On: Gel type battery



MCU Reset:

Valid for MCU1.0 --> from firmware 113

Valid for MCU2.0 --> from firmware 210

Setting MCU to default settings and clear datalogger without using the Modcom.

1. MCU Power off
2. Dip1,4 --> off; Dip2,3 --> on
3. MCU Power up
LED2 (green) is flashing after MCU reset is finished.
4. MCU Power off
5. Dip1-4 back to the individual settings