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*Card for inserting in power supply*

*External Module*

# PSC-ETH-2 - Ethernet Power Supply Controller

## Interface between Ethernet IP Network and Power Supply

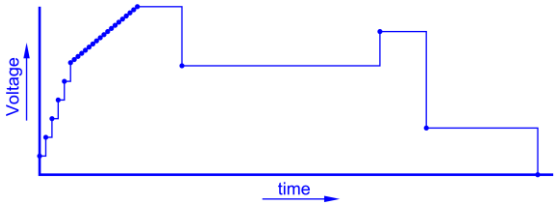
- IP-address configurable by user
- Build-in Card or External Module

## Features

- Programming & Monitoring resolution 16 bit
- Web Interface
- Digital user in and outputs (isolated)
- Change power supply modes (Remote/Local etc.)
- Read-back of status signal
- Programming & Monitoring accuracy ± 0.1%
- DHCP Operation
- Integrated Sequencer
- Software Calibration
- SCPI commands

## Integrated sequencer

Arbitrary Waveform generator
or standalone automation.
The sequencer is integrated
in the Ethernet controller.
User defined Waveforms can
be stored in the sequencer.




- Converts a power supply into an Arbitrary Waveform Generator
- Ideal for repetitive testing and automotive
- Can work like a PLC or stand-alone automation:
  steps interact with the actual in- and outputs
- Waveform generator independent of computer
  Stand-alone operating possible
- Battery voltage simulation, Surges, Function generator, etc.
- 25 free sequences having max. 2000 steps each
- Combination of fast and very slow sequences
- Steps from 1 ms till hours

## Web Interface


- Setting & Monitoring of voltage and current, actual and set values
- Setting & Monitoring Output On/Off
- Monitoring Status Icons: DC-fail, CC-mode, PSOL, Over Temp etc.
- Sequencer Uploading and Selecting
- Running, Pausing, Stopping and Triggering of Sequences
- Running in Single Step Mode

## Sequencer

The PSC-ETH can control the power supply by a sequence without the need of an external computer.
The sequencer can even control the user outputs and read the user inputs.
A sequence is built from user programmable steps (or program lines).

A sequence step can do the following:

- Set the output Voltage and Current
- Jump to defined step number, unconditional or under condition of: Digital outputs or inputs, Variable, output voltage or current.
- Increment or Decrement output Voltage, Current or Variable
- Possibility to create loops, subroutines, ramps etc.
- Set a Digital output (8 available)
- Wait for trigger from Computer or Pause
- Set an internal Variable or internal Timer (resp. 8 or 2 available)

Sequences can be started / paused / stopped by: Commands via Ethernet (software) or by User Inputs (hardware) or Web.

Using digital user inputs for starting or stopping a sequence, makes it possible to choose the sequences by selecting the corresponding input, without being connected to a computer.

## Analog inputs and outputs

The 2 analog in- and outputs have a 16 bits resolution. Offset and full scale can be software calibrated.
Input linearity error is +/- 1 LSB, output linearity error is +/- 2 LSB. TC typical is 10 ppm / °C.
Each analog in- and output can be set or read. Analog voltages are standardized on 0 - 5 VDC (with optional Power Sink $I_{mon}$ = –5 - 5 VDC).
Analog in- and outputs have a common zero.

## Status monitoring

The PSC provides logic status inputs to monitor the status signals of the power supply:
CC mode, current or voltage limit, DC fail, AC fail, Over Temperature, PSOL, etc.

## Controls

Remote ShutDown: Enables / disables the output voltage of the power supply.
REMOTE: Switches from manual control to remote control (not on PSC-ETH-2 module).

## Digital User Inputs and Outputs

The PSC-ETH-2 provides eight 60VDC opto-isolated logic inputs with common zero for custom use.
The input impedance is 1800 Ohm, Logic high = 2.5 - 30VDC, Logic low = 0V.
The PSC-ETH-2 provides also eight 60VDC opto-isolated, logic, open drain outputs with common zero for custom use.
The output impedance is 7Ohm, maximum rating is 30VDC / 200mA.

## Software & Accessories

Example software and manual in PDF format can be downloaded from the website via **link**.
The PSC-ETH-2 module is supplied with a Analog Programming Cable and a Line Cord.

## General

| | |
|---|---|
| Temperature: | Operating temperature –20 - 50 °C, Storage temperature –40 - +70 °C. |
| Humidity: | Max. 95% RH, non condensing, up to 40 °C, max. 75% RH, non condensing, up to 50 °C. |
| Insulation: | LAN & Logic I/O to Case 60 VDC (functional insulation). |
| | LAN & Logic I/O to 'minus' DC power terminal 60 VDC (functional insulation). |

***Warning!*** *LAN & Logic I/O connectors are at safety level of the 'minus' DC power terminal of the power supply they are build in.*
*For Reinforced Insulation between LAN & Logic I/O and DC power terminals, build in an ISO-AMP and use external Module PSC-ETH-2 EXT.*

## External Module PSC-ETH-2 EXT

### Enclosure

Dimensions (h x w x d ): 89 x 85.5 x 118.5 mm
Weight: 0.7 kg
Degree of protection: IP20

### Insulation

LAN & Analog & Logic I/O to case: 60 VDC
Mains input to case: 2500 VAC

### Input Power

Rated voltage: 230VAC, wide range 98 - 264 VAC, 48 - 62 Hz
Power consumption: 10 W
Hold-up time @ 110 VAC : 80 ms, @ 230 VAC : 300 ms

### EMC

Emission : EN 61326-1, class B equipment (for use in domestic establishments)
Immunity : EN 61326-1, equipment for use in industrial and domestic establishments

## Ordering Information

| Models | Order Code | Description | Digital User I/O | Comments |
|---|---|---|---|---|
| ES150 | Option P150 | ES150 Series with Build-in Card | Not available | Analog programming connector removed |
| ES300 | Option P179 | ES300 Series with Build-in Card | Not available | Analog programming connector removed |
| SM800 | Option P256 | SM800 Series with Build-in Card | Available | Analog programming connector still available |
| SM1500 | Option P177 | SM1500 Series with Build-in Card | Available | Analog programming connector still available |
| SM6000 | Option P157 | SM6000 Series with Build-in Card | Available | Analog programming connector still available, except on models SM300-20 & SM600-10. |