INSTRUCTION MANUAL
MP - PANEL INDICATORS:

MP95800

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CONTENTS

WARRANTY

Our transmitters have a 5 year warranty.
Follow usage instruction in this manual.
In case of malfunction return to your supplier.

SPECIFICATIONS

GENERAL INTRODUCTION:
Our Panel Indicators are devided in the analogue and microprocessor based MP series.
All MP models are easily programmed via a personal computer with our "Point 'N Click" Software.

Type	analogue	readout	loop-powered	output	alarm	input 4-20	Other input	HART®	ATEX
PM5600	•	LCD	•			•			
PM5625	•	LCD	•			•			old EX
PM5650	•	LED				•			
PM5650-HH	•	LED			•	•			
96000	•	LED		•		•	•		
95000-REL	•	LED			•	•	•		
MP95800		LED		•		•	•		

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	PM5600	PM5650	PM5650-HH
Display	: LCD 3.5 digit	LED 3.5 digit (red)	Specifications as PM5650, but with alarms:
Read rate	: 2.5 / second	3 / second	**Number:** 2; independent setpoints
Accuracy	: 0.1% selected span	0.1% selected span	**Rating:** Maximum 100W, non inductive load
Zero adjustment	: -1999 to +1999 counts	-1999 to +1999 counts	**Setpoints:** 20-turn potentiometer / setpoint
Span adjustment	: 0 to +1999 counts	0 to +1999 counts	**Indication:** LED status lamp for each setpoint
Zero drift	: 0.01%/C	0.01%/C	**Read:** Push-to-read button for each setpoint
Span drift	: 0.01%/C	0.01%/C	**Hysteresis:** Adjustable for each setpoint
Decimal point	: Selectable by DIP switch	Selectable by DIP switch	**Dimensions:** 48 x 96 x 163 mm
Polarity	: Selectable by DIP switch	Selectable by DIP switch	
Connection	: Screw terminals	Screw terminals	**Options for PM-series indicators**
Voltage drop	: 4.5V max.	n.a.	See each model for available options
Dimensions	: 48 x 96 x 80 mm	48 x 96 x 116 mm	-AA : 230VAC; input 0-20mA
Operation temp.	: 0° to 60°C	0° to 60°C	-BB : 115VAC; input 0-20mA
Storage temp.	: -40° to 85°C	-20° to 85°C	-CC : 230VAC; input 4-20mA
Relative humidity	: 95% RH @ 40°C; Non-Condensing	95% RH @ 40°C; Non-Condensing	-DD : 115VAC; input 4-20mA
Available options	: -AA -BB -EE -FF no suffix for standard loop-powered	-AA -BB -CC -DD	-EE : 230VAC; built-in 24VDC transmitter supply -FF : 115VAC; built-in 24VDC transmitter supply

95000-REL series

Display	: LED 3.5 digit (red)
Read rate	: 2.5 / second
Accuracy	: ± 0.1% Full scale
Zero drift	: 0.01%/°C
Zero adjustment	: 20-turn precision potentiometer
Span drift	: 0.01%/°C
Span adjustment	: 20-turn precision potentiometer
Overrange indication	: "1" or "-1" automatic
Open circuit / Burn out	: "-1" for thermocouples
Supply voltage	: 230VAC or 115VAC
Operating temperature	: 0° to 60°C
Storage temperature	: -20° to 85°C
Relative humidity	: 95% RH @ 40°C; Non-Condensing
Dimensions	: 48 x 96 x 163 mm
Alarms	
Number	: 2; independent setpoint SPDT
Rating	: Maximum 100W, non inductive load
Setpoints	: 20-Turn potentiometer / setpoint
Indication	: LED status lamp for each setpoint
Read	: Push-to-read button for each setpoint
Hysteresis	: Adjustable for each setpoint
Available for input types	: RTD (Pt100) or T/C types K,J,T or E

96000 series

Display	: LED 3.5 digit (red)
Read rate	: 2.5 / second
Accuracy	: ± 0.1% Full scale
Analog output	: 1mV/digit non-isolated (except 96850)
Zero drift	: 0.01%/°C
Zero adjustment	: 20-turn precision potentiometer
Span drift	: 0.01%/°C
Span adjustment	: 20-turn precision potentiometer
Overrange indication	: "1" or "-1" automatic
Open circuit / Burn out	: "-1" for thermocouples
Supply voltage	: 230VAC, 115VAC or 24VDC
Operating temperature	: 0° to 60°C
Storage temperature	: -20° to 85°C
Relative humidity	: 95% RH @ 40°C; Non-Condensing
Dimensions	: 24 x 72 x 100 mm
Available for input types	: RTD (Pt100), T/C types K,J,T or E, mVDC, VDC, mA DC or process input

All specifications are subject to change without notice.
For uptodate information and the latest news, please refer to our website at www.s-products.com

Microprocessor-based Indicator MP95800

Display	: LED 3.5 digit (red)
Read rate	: 2.5 / second
Input RTD	: Pt100
Input T/C	: K, J, T, E
Minimum span RTD	: 25°C
Minimum span T/C	: 50°C
Linearization	: On / Off selectable
Zero drift	: ± 0.01%/°C or ± 0.02°C/°C
Span drift	: ± 0.005%/°C or 0.01°C/°C
Cold junction drift	: ± 0.01°C/°C
Excitation current RTD	: 0.1mA
Sensor lead resistance RTD	: 500 Ohm max.
Sensor lead resist. effect	: 0.001°C/Ohm
Sensor lead resistance T/C	: 10 kOhm max.
Open circuit detection	: Up / Down selectable
Startup time	: 20 sec.
Warmup time	: 5 Min.
Supply voltage effect	: 0.001%/V
Supply voltage	: 230 VAC, 115VAC, 12VDC or 24VDC
Ambient temperature	: -10° to 70°C
Storage temperature	: -20° to 85°C
Relative humidity	: 95% RH @ 40°C; Non-Condensing
Dimensions	: 48 x 96 x 116 mm

Available plugin output modules for model MP95800

A3 : 4 - 20 mA & 0 - 1 VDC
A4 : 0 - 20 mA & 0 - 1 VDC
A5 : 4 - 20 mA & 0 - 10 VDC
A6 : 0 - 20 mA & 0 - 10 VDC

Option: Interface and PC software for calibration

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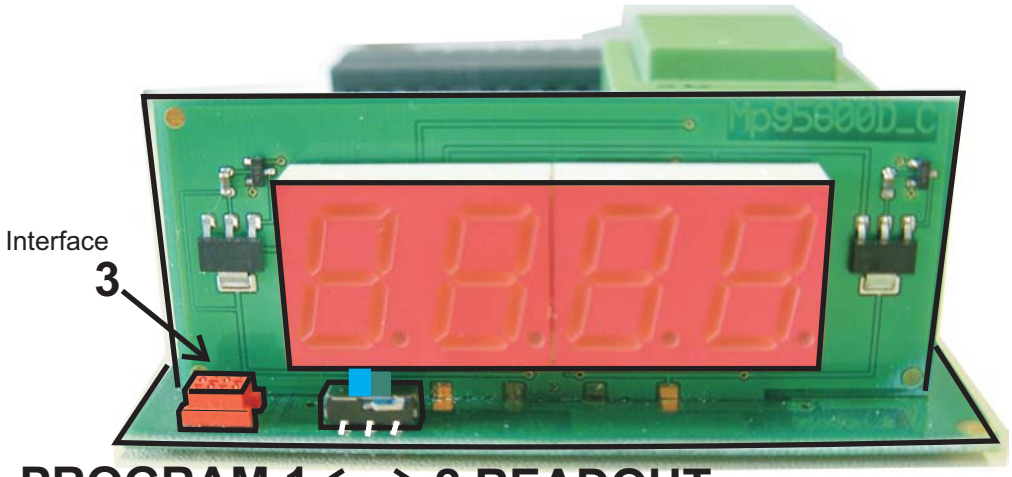
Mp95800

PROGRAMMING

(not required for factory calibrated panelmeters).

Open the panel indicator by removing the front bezel and the cover plate.
Place the cover plate on a soft, non-scratching surface.

Place the switch in the programming position **(1)**.



1. Insert the **CD-ROM** into your computer.
The Software will start automatically. (Or you may run SETUP.EXE)
Just follow the on-screen instructions.
Required is at least Windows 95 or NT and 1MB free space.

2. Connect the interface to the serial port of your computer.
(Usually COM1 or COM2; Default is set to COM2)

3. Attach the **interface** to the transmitter / panel indicator. **3**

4. Start the installed S-PRO Mp - software by clicking the "S"-icon.
First click Upload to read the settings from your meter.
(Try again if you get a “communication error”)
Select the required parameters and download these into the panel meter.

NOTE: SOME (LAPTOP) COMPUTERS CANNOT SUPPLY ENOUGH POWER TO PROGRAM THE INDICATOR. IN THESE CASES YOU WILL NEED TO SUPPLY THE Mp-INTERFACE WITH A 9V BATTERY.

After programming return the switch in the readout position (2).

If you don’t have an additional module now replace the cover plate and the front bezel.
If you do have an output module continue at the next chapter.....

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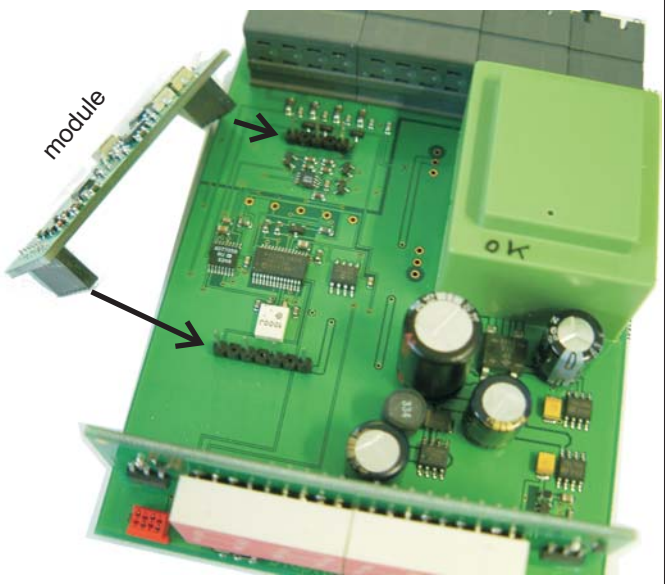
OUTPUT MODULE

available output options:
Mp95800 - A3 : 4 - 20 mA & 0 - 1 VDC (default)
Mp95800 - A4 : 0 - 20 mA & 0 - 1 VDC
Mp95800 - A5 : 4 - 20 mA & 0 - 10 VDC
Mp95800 - A6 : 0 - 20 mA & 0 - 10 VDC



Take the panel indicator out of its housing.

Insert the module on to the corresponding headers.

Replace the panel indicator into its housing.

Mount the cover plate and the bezel.

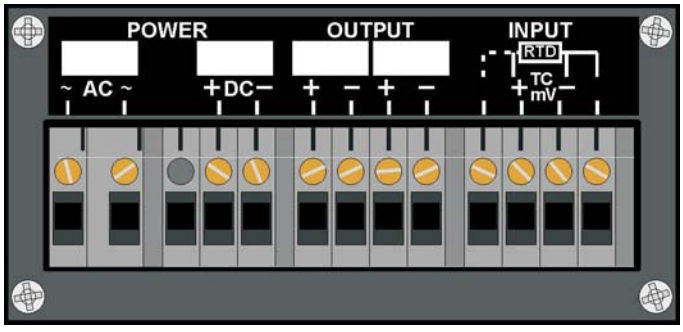
Fill out the labels with the correct values.

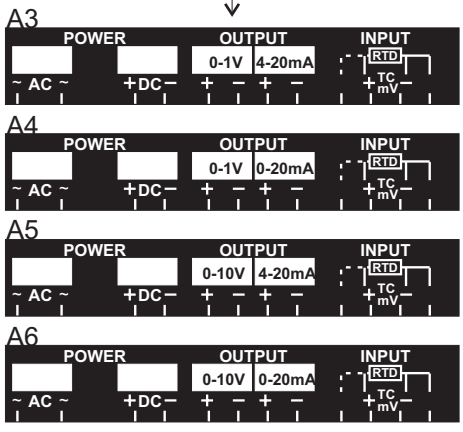
Without the output module display only.

OPERATING

After programming the panel indicator is ready to use.

Connect the proper sensor or input signal to the rear as indicated on the label.
If applicable connect your equipment to the output. (optional output module)
Connect the correct power supply as indicated on the label.





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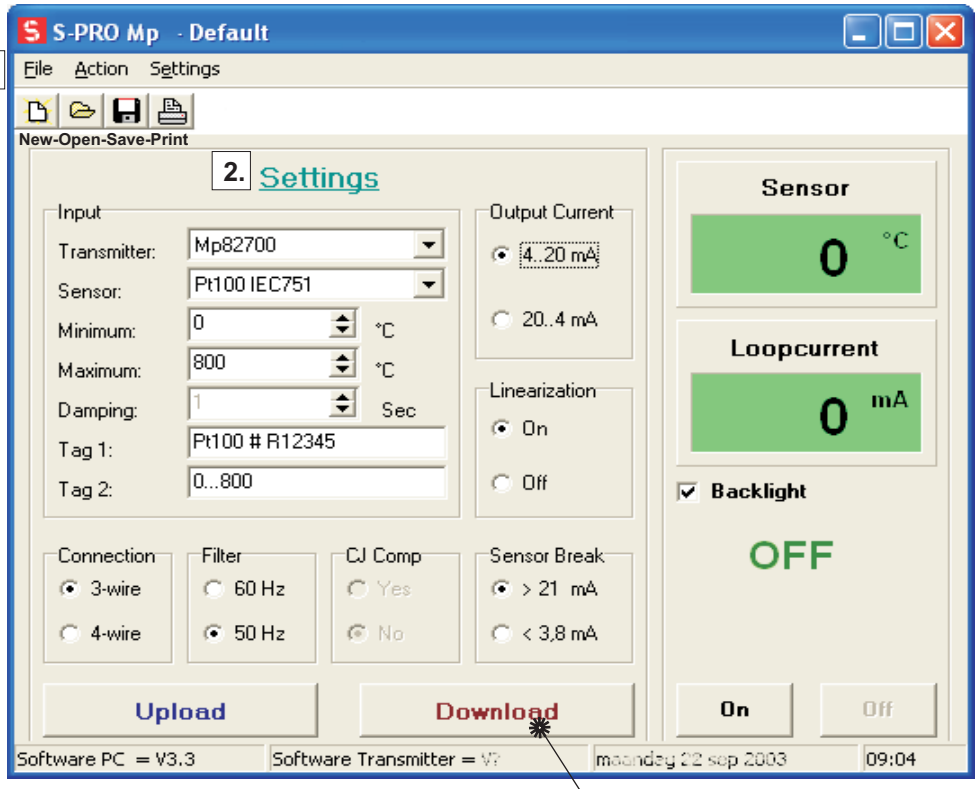
S-PRO Mp Software

General

This program uses the basic Windows® features like Save, Print, and Exit.
We refer to the Windows Help Manual for file handling.
Without a mouse you can reach the menu-items pressing both ALT
and the underlined key. You can jump between the settings with TAB.



Note that you will only get a Sensor / Loopcurrent readout on screen if the transmitter is connected to a sensor.

3. On-Screen Readout

In the Sensor display you'll see the actual input value provided the programmed sensor is connected. Loopcurrent is a calculated value.

Click On to start and Off to quit the on-screen display. You must quit before changing settings.

Upload : Read the configuration from the transmitter.
Download : Write your settings to the transmitter.

1. File - Action - Settings

It is possible to save your settings for later use, to open a previous configuration or to print the present configuration. Either click on File or on one of the icons.
The large Upload and Download buttons are also located under Action.
With a transmitter connected use **Upload** to find out the settings of your transmitter.
After you made the required selections use **Download** to program the transmitter.
Settings is an important menu item. Here you can select **°C** or **°F** and the **COM** port.

2. Settings

NOTE: Make sure to switch Off the on-screen readout, otherwise you can't alter the settings!
Transmitter : Select the transmittertype connected, or use Upload to find out.
Sensor : You may select the input sensor from a list. The choice is limited by the transmitter type.
Thermocouple alloys are mentioned.
Minimum and *Maximum* : Input values for Output Current start and end.
Default are the range minimum and maximum of the selected sensor.
Damping : For Hart-protocol transmitters only, to slow down the output signal.
Tag 1 and *Tag 2* : Any comment you'd like to add. (max 16 characters)

Connection : The number of lead wires on your RTD sensor (i.e. Pt100).
Filter : Set to 50 Hz for Europe and 60 Hz for USA.
CJ Comp : Cold Junction Compensation for Thermocouples
Sensor Break : Fixation of the loopcurrent on sensor malfunction.

Output Current : Choose min...max = 4...20 mA or 20...4 mA (Mp87000: The 0..1V/10V/0..20mA is automatic)
Linearization : Select On to linearize the input curve, or Off if you require the output curve to be the same as the input.

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