Check Box S1-S5 - Chart recorder

Standard equipment

▸ USB interface

▸ 3.5" graphic display with touch screen

▸ Integrated mains unit for supply of the sensors

▸ 4-20 mA output of all connected active sensors

▸ Pulse output (for total consumption) in case of flow sensors

▸ 2 alarm relays (pot.-free switch-over contacts, max. 230 V, 3 A)

Software options

▸ Integrated webserver

▸ Mathematics calculation function

▸ Totalizer function

Hardware options

▸ Integrated data logger

▸ Ethernet / RS 485 interface

▸ Additional sensor inputs (digital or analogue) selectable

Panel mounting

Back view

Description		Sensor input 1+2	Sensor input 3+4	Order no.
Check Box S1-S5 - Mobile chart recorder with graphic display and touch screen	S 1	Digital	--------	2255330407
	S 2	Digital	Digital	2255330408
	S 3	Digital	Analog	2255330409
	S 4	Analog	--------	2255330410
	S 5	Analog	Analog	2255330411
Options:				
Option: Integrated data logger for 100 million measured values				2255460217
Option: Integrated Ethernet and RS 485 interface				2255460216
Option: Integrated webserver				2255460218
Option: „Mathematics calculation function" for 4 freely selectable channels, (virtual channels): addition, subtraction, division, multiplication				2255332469
Option: „Totalizer function for analogue signals"				2255332470
External Gateway Profibus for RS 485 interface connection				2255332467
External Gateway Profinet for RS 485 interface connection				2255332676
Further accessories:				
PMH Basic – data evaluation graphically and in tabular form - reading of the measured data via USB or Ethernet, license for 2 workstations				2255332468

Technical Check Box S1-S5	
Dimensions	118 x 115 x 98 mm IP 54 (wall housing) 92 x 92 x 75 mm (panel mounting)
Inputs	2 digital inputs for FA 5xx resp. VA 5xx
Interface	USB
Power supply	100-240 VAC, 50-60 Hz
Accuracy	Please refer sensor specification
Alarm outputs	2 relays, (pot.-free)
Options	
Data logger	100 million measuring values start/stop time, measuring rate freely adjustable
2 additional sensor inputs	for connection of pressure sensors, temperature sensors, clamp-on ammeters, third-party sensors with 4-20 mA, 0 to 10 V, Pt 100, Pt 1000

The sensor inputs board 1 and 2 can be selected according to the required sensors (see table pages 16 to 18):

Input signals	
Current signal Internal or external power supply Measuring range Resolution Accuracy Input resistance	(0-20mA/4-20mA) 0-20 mA 0.0001 mA ± 0.03 mA ± 0.05 % 50 Ω
Voltage signal Measuring range Resolution Accuracy Input resistance	(0-1 V) 0-1 V 0.05 mV ± 0.2 mV ± 0.05 % 100 kΩ
Voltage signal Measuring range Resolution Accuracy Input resistance	(0-10 V / 30 V) 0-10 V 0.5 mV ± 2 mV ± 0.05 % 1 MΩ
RTD Pt 100 Measuring range Resolution Accurancy	-200-850°C 0.1°C ± 0.2°C (-100-400°C) ± 0.3°C (further range)
R**TD Pt 1000** Measuring range Resolution Accuracy	-200-850°C 0.1°C ± 0.2° (-100-400°C)
Pulse Measuring range	minimum pulse length 500 µs frequency 0 - 1 kHz, max. 30 VDC

Digital	Digital	Digital	Digital
m³/h, m³	°Ctd	A, kW/h	

Flow sensor	Dew point sensor	Current meter	Thirt-party with RS 485

Analog	Analog	Analog	Analog
bar	A	°C	°C

4-20 mA
0-20 mA
0-10 V
Pulse
Pt 100
Pt 1000

| Pressure sensor	Clamp-on ammeter	Temperature sensor	Third party sensor analog output

Configuration of flow sensor

▶ In the menu of the Check Box S1-S6, the flow sensor Flow Check can be set to the respective pipe inside diameter. Furthermore, the unit, the gas type and the reference condition can be set. The meter reading can be set to „zero" if necessary.
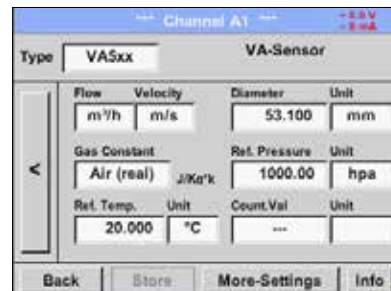

Configuration of flow sensor

Graphic view

▶ In the graphic view all measured values are indicated as curves.

▶ It is possible to browse back on the time axis by a slide of the finger (without data logger maximum 24 h, with data logger back to the start of the measurement).
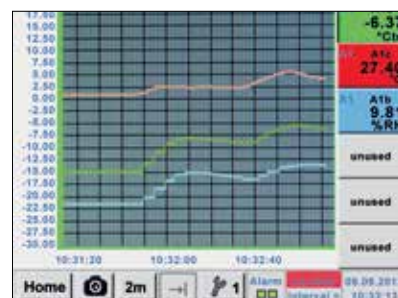
Graphic view

Data logger

▶ With the option „integrated data logger" the measured values are stored in the Check Box S1-S6. The time interval can be determined freely. It is also possible to set the start time and end time of the data recording. Reading the measured data via USB interface or via the optional Ethernet interface.
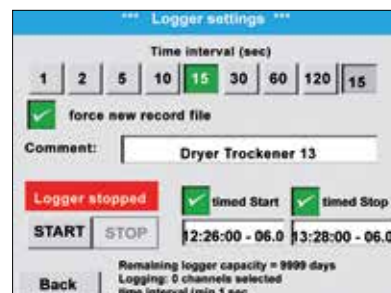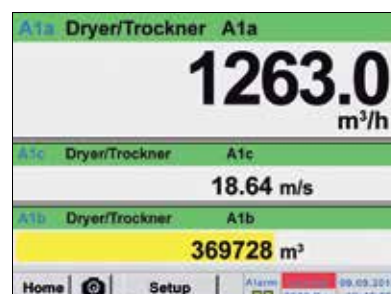

Data logger

Selection of the language

▶ Many languages are already stored in every Check Box

▶ S1-S6. The desired language can be selected via the selection button.

Selection of the language

All relevant parameters at a glance

▶ In addition to the flow rate in m³ / h, the Check Box S1-S6 also displays other parameters such as total consumption in m³ and speed in m/s.

All relevant parameters at a glance

Webserver

The new webserver with extended features for the chart recorders Check Box S6 and Check Box S1-S5 is available with immediate effect. Users can get direct access to their measured values worldwide (current and historic ones) and display them on their smart phone, tablet or computer. For monitoring of threshold values users can receive an automated „alarm E-mail".

The new webserver can be ordered as an option with each stationary Check Box S1-S6, but also for their mobile devices. For using the features of the webservers, the Check Box S1.S6 must be set up with it's own IP address within the network..

The webserver provides a website, which displays the measuring values. This website can be accessed from any web browser on each smart phone, tablet or computer via it's unique IP address. This is all possible without the installation of any new or additional software.

Automated „alarm e-mail" for threshold value exceedance:

Access authorization
Different groups with different users/passwords can be assigned to different access levels.

Starting the data logger
In case of a stopped data logger the group operator or administrator can start the data logger remotely, via the web server.

PS: The new webserver can be retro fitted to any Check Box S1-S6 already in use.

View of the real time measured values (graphic table view)

View of the historic measured values as a single chart (time period freely selectable)