DS 400 - Chart recorder

for all relevant parameters of compressed air



Standard equipment:

- · USB interface
- · 3.5" graphic display with touch screen
- · Integrated mains unit for supply of the sensors
- 4...20 mA analogue output of all connected active sensors
- Pulse output (for total consumption) in case of flow sensors
- 2 alarm relays (pot.-free changeover contacts, max. 230 V, 3 A)

Software options:

- · Integrated webserver
- · Mathematics calculation function
- Totaliser function

Hardware options:

- · Integrated data logger
- · Ethernet / RS 485 interface
- · Additional sensor inputs (digital or analogueue) selectable

The sensor inputs 1 and 2 and 3 and 4 can be selected according to the required sensors (see table pages 20 to 21):

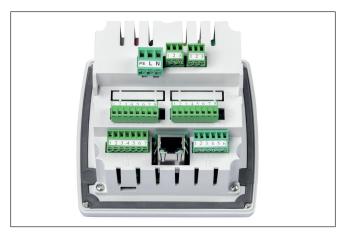
Digital	Digital	Digital	Digital	Digital	Analogue	Analogue	Analogue	Analogue
m³/h, m³	°Ctd	A, kWh		ŀ	oar	А	°C	°C
		348.01 v 151.56 v 135.649 w 685.45 mm	MOD- BUS					420 mA 020 mA 010 V Pulse Pt 100 Pt 1000
Flow sensor	Dew point sensor	Current/ effective power meter	Third-party sensors with RS 485	Pressu	re sensor	Clamp-on ammeter	Temperature sensor	Third party sensor analogue output

Chart recorder





Panel mounting



Back view

sured values of different sensors/devices)

CS Network - Energy Monitoring with Client / Server Solution

(max. 200 measured values of different sensors / devices)

DESCRIPTION			ORDER NO.				
	Sensor input 1+2	Sensor input 3+4					
	Digital (Z500 4003)		0500 4000 D				
DS 400 - Chart recorder	Digital (Z500 4003)	Digital (Z500 4003)	0500 4000 DD				
with graphic display and touch screen	Digital (Z500 4003)	Analogue (Z500 4001)	0500 4000 DA				
	Analogue (Z500 4001)		0500 4000 A				
	Analogue (Z500 4001)	Analogue (Z500 4001)	0500 4000 AA				
Options:							
Option: Integrated data lo	Z500 4002						
Option: Integrated Etherne	Z500 4004						
Option: Integrated webser	Z500 4005						
Option: "Mathematics cald (virtual channels): addition	Z500 4007						
Option: "Totaliser function	Z500 4006						
External Gateway Profibu	Z500 3008						
Further accessories:							
CS Basic – data evaluatio measured data via USB o	0554 8040						
CS Network – energy mor sured values of different s	0554 8041						
CS Network – energy mor sured values of different s	0554 8042						
CS Network – energy mor	0554 8043						

TECHNICAL DS 400

Dimensions: 118 x 115 x 98 mm

IP 54 (wall housing) 92 x 92 x 75 mm (panel mounting)

2 digital inputs for FA 5xx Inputs:

resp. VA 5xx

Interface: **USB** interface

Power supply: 100...240 VAC, 50-60 Hz Accuracy: See sensor specifica-

Alarm outputs: 2 relays, (pot.-free)

Options:

Data logger: 100 million measured

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

NPUT SIGNALS	
Current signals	(020 mA/420 mA)

Current signals internal or external power supply Measuring range Resolution Accuracy

0...20 mA 0.0001 mA Input resistance ± 0.03 mA ± 0.05 % 50 Ω

0...1 V

0.05 mV

100 kΩ

0...10 V

0.5 mV

1 ΜΩ

0.1 °C

± 0.2 mV ± 0.05 %

(0...10 V / 30 V)

 \pm 2 mV \pm 0.05 %

-200...850 °C

Voltage signal: (0...1 V)

Measuring range Resolution Accuracy

Input resistance

Voltage signal Measuring range Resolution Accuracy

Input resistance **RTD** Pt 100

Measuring range Resolution

Accuracy

RTD Pt 1000 Measuring range Resolution

Accuracy

Pulse Measuring range

-200...850 °C 0.1 °C

± 0.2° (-100...400 °C)

Min pulse length 500 µs frequency 0...1 kHz

± 0.2 °C (-100...400 °C)

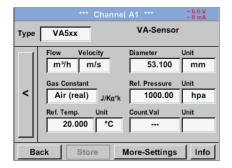
± 0.3 °C (further range)

max. 30 VDC

0554 8044

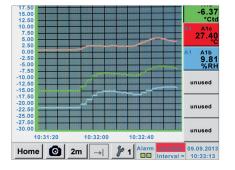
DS 500 / DS 400

Easy operation via touchscreen:



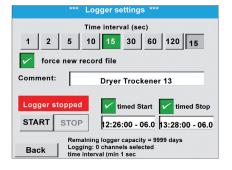
Configuration of flow sensor

In the menu of the DS 500 / DS 400, the flow sensor VA 5xx 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.



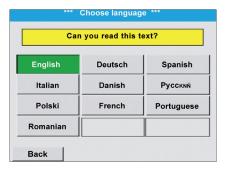
Graphic view

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).



Data logger

With the option "integrated data logger" the measured values are stored in the DS 500 / DS 400. The time interval can be freely set. Furthermore there is the possibility to fix the starting time and the end time of the data recording. Read-out of the measured data via USB interface or via the optional Ethernet interface.



Selection of the language

DS 500 / DS 400 "speaks" several languages. The desired language can be selected via the selection button.

A1a Dryer/Trockner A1a 1263.0 m³/h A1c Dryer/Trockner A1c 18.64 m/s A1b Dryer/Trockner A1b 369728 m³ Home Setup Alarm (19.47.55) (19.47.55)

All relevant parameters at a glance

In addition to the flow rate in m^3 / h, the DS 500 / DS 400 also displays other parameters such as total consumption in m^3 and speed in m/s.

Chart recorder



Web server

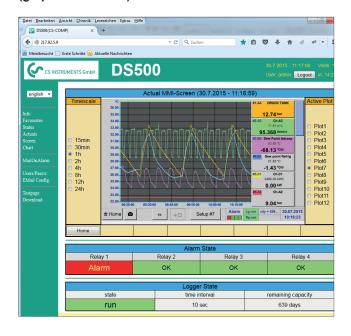
The new webserver with substantially extended features for the chart recorders DS 500 and DS 400 is available with immediate effect. Users can thereby get direct access to their measured data worldwide (current and historic ones) and display them on their smart phone, tablet or computer.

The new webserver can be ordered as an option with each stationary DS 500/400, but also for their mobile devices. For using the features of the webservers, the DS 500/400 must be set up with it's own IP address within the corporate network.

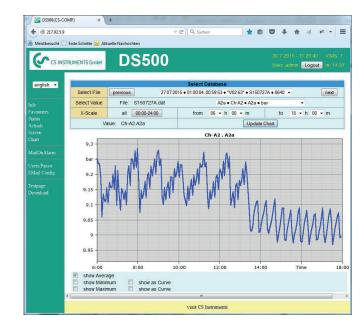
The web server in the DS 500/400 provides a website, which displays the measured values. This website can be accessed from smartphones, tablets and computers via the respectively installed browser. Advantage: This is all possible without the installation of any new or additional software.



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



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



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 retrofitted to any DS 500/DS 400 already in use.