

Type SBS

Paperless recorder

Basic features

- ▶ Easy operation by control knob and through menu guidance
- ▶ Interface to SCADA systems, to PLC controls and PC systems
- ▶ Integrated web-server
- ▶ Measurement display via web browser
- ▶ Simultaneous recording of up to 3 batch reports
- ▶ Data transfer via Compact-Flash-Card USB-memory stick
- ▶ Modbus-Master-Function



Technische Merkmale

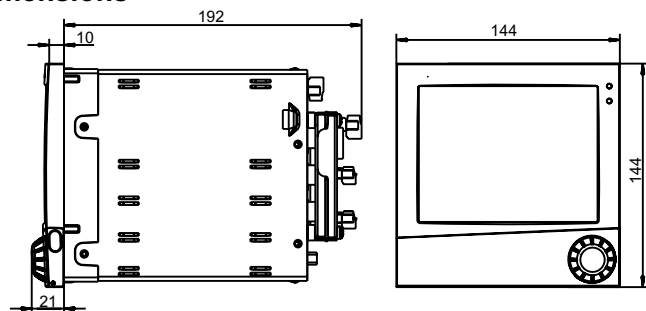
- ▶ 18 analogue inputs max., 24 binary in-/outputs max., additional 24 analogue and 24 binary inputs via interface max.
- ▶ 1 Relay, additional optional 6 Relays
- ▶ Power supply AC100...240 V +10/-15%, 48...63 Hz AC/DC 20...30V, 48...63Hz
- ▶ Internal memory 256 Mbyte, external memory max. 4 GB by CF-card
- ▶ 5,5" TFT colour display, 320x240 Pixel, 256 colours

Building and mode of action

The SBS represents a new generation of paperless recorders that stand out through their modular design for acquisition of measurement data (3...18 measurement inputs can be implemented internally), their innovative operating concept and high standards of security to prevent unauthorized access and manipulation of stored data.

In the SBS, data can be visualized in process as measurement curves, as a bargraph or in alphanumerical form. Powerful PC-programms are available for analyzing and evaluating the archived data, and for configuring the SBS

Dimensions



Block structure

Inputs/Outputs

0... 18 analogue inputs max.
0... 24 binary inputs/outputs max.

(maximum of 3 module slots, can be fitted with 6 analogue inputs or 3 analogue inputs and 8 binary inputs/outputs)

Inputs via interface

additionally
up to 24 analogue inputs and
up to 24 binary inputs

Relay outputs

1 relay (standard)
additionally
6 relays (option)

Display / Operation

5,5" TFT colour display,
320 x 240 pixels,
256 colours

Operation
rotary knob
(left, right, press)

AC 100...240V +10/-15%,
48...63Hz
AC/DC 20...30V, 48...63Hz

Interface

as standard
1x Ethernet 10/100 Mbits/sec
4x USB interfaces
1x RS232/RS485
1x Rs232 (barcode reader)
option:
1x Profibus-DP

Meas. data memory

internal memory
256 Mbytes
external memory
CompactFlash card and
USB memory stick

Internal channels

18x math channels
18x logic channels
27x counters / integrators

Software

Setup program
PC Eval. software
PCA Communications software

Technical data

Analog inputs

Thermocouple

Designation	Type	Standard	Meas. range	Accuracy ¹
Fe-CuNi	L	DIN 43 710	-200 to +900°C	±0.1%
Fe-CuNi	J	EN 60 584	-200 to +1200°C	±0.1% from -100°C
Cu-CuNi	U	DIN 43 710	-200 to +600°C	±0.1% from -150°C
Cu-CuNi	T	EN 60 584	-270 to +400°C	±0.1% from -150°C
NiCr-Ni	K	EN 60 584	-200 to +1372°C	±0.1% from -80°C
NiCr-CuNi	E	EN 60 584	-200 to +1000°C	±0.1% from -80°C
NiCrSi-NiSi	N	EN 60 584	-100 to +1300°C	±0.1% from -80°C
Pt10Rh-Pt	S	EN 60 584	0 to 1768°C	±0.15%
Pt13Rh-Pt	R	EN 60 584	0 to 1768°C	±0.15%
Pt30Rh-Pt6Rh	B	EN 60 584	0 to 1820°C	±0.15% from 400°C
W3Re/W25Re	D		0 to 2495°C	±0.15% from 500°C
W5Re/W26Re	C		0 to 2320°C	±0.15% from 500°C
W3Re/W26Re			0 to 2400°C	±0.15% from 500°C
Chromel-copel		GOST R 8.585-2001	-200 to +800°C	±0.15% from -80°C
Chromel-alumel PLII (Platinel II)		GOST R 8.585-2001	-200 to +1372°C 0 to 1395°C	±0.1% from -80°C ±0.15%
Shortest span	Type L, J, U, T, K, E, N, chromel-alumel, PLII: 100°C Type S, R, B, D, C, W3Re/W26Re, chromel-copel: 500°C			
Range start/end	freely programmable within the limits, in 0.1°C steps			
Cold junction	Pt100 internal or thermostat external constant			
Cold junction accuracy (internal)	± 1°C			
Cold junction temperature (external)	-50 to +150°C adjustable			
Sampling cycle	Channel 1 - 18: 125ms in total			
Input filter	2nd order digital filter; filter constant adjustable from 0 to 10.0 sec			
Electrical isolation	see "Electrical data" on page 5 and "Overview of the electrical isolation" on page 16			
Resolution	> 14 bit			
Features	also programmable in °F			

¹ The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Resistance thermometer

Designation	Standard	Connection circuit	Meas. range	Accuracy ¹	Meas. curr.
Pt100	EN 60 751 (TC = 3.85*10 ⁻³ 1/°C)	2/3-wire	-200 to +100°C	±0.5°C	250µA
		2/3-wire	-200 to +850°C	±0.8°C	250µA
		4-wire	-200 to +850°C	±0.5°C	250µA
Pt100	JIS 1604 (TC = 3.917*10 ⁻³ 1/°C)	2/3-wire	-200 to +100°C	±0.5°C	250µA
		2/3-wire	-200 to +650°C	±0.8°C	250µA
		4-wire	-200 to +650°C	±0.5°C	250µA
Pt100	GOST 6651-94 A.1 (TC = 3.91*10 ⁻³ 1/°C)	2/3-wire, 4-wire	-200 to +100°C	±0.5°C	250µA
		2/3-wire, 4-wire	-200 to +850°C	±0.8°C	250µA
Pt500	EN 60 751 (TC = 3.85*10 ⁻³ 1/°C)	2/3-wire, 4-wire	-200 to +100°C	±0.5°C	100µA
		2/3-wire, 4-wire	-200 to +850°C	±0.9°C	100µA
Pt1000	EN 60 751 (TC = 3.85*10 ⁻³ 1/°C)	2/3-wire	-200 to +100°C	±0.5°C	100µA
		2/3-wire	-200 to +850°C	±0.8°C	100µA
		4-wire	-200 to +850°C	±0.5°C	100µA
Ni 100	DIN 43 760 (TC = 6.18*10 ⁻³ 1/°C)	2/3-wire, 4-wire	-60 to +180°C	±0.4°C	250µA
Pt50	ST RGW 1057 1985 (TC = 3.91*10 ⁻³ 1/°C)	2/3-wire	-200 to +100°C	±0.5°C	250µA
		2/3-wire	-200 to +1100°C	±0.9°C	250µA
		4-wire	-200 to +100°C	±0.5°C	250µA
		4-wire	-200 to +1100°C	±0.6°C	250µA
Cu 50	(TC = 4.26*10 ⁻³ 1/°C)	2/3-wire	-50 to +100°C	±0.5°C	250µA
		2/3-wire	-50 to +200°C	±0.9°C	250µA
		4-wire	-50 to +100°C	±0.5°C	250µA
		4-wire	-50 to +200°C	±0.7°C	250µA

Designation	Standard	Connection circuit	Meas. range	Accuracy ¹	Meas. curr.
Cu 100	GOST 6651-94 A.4 (TC = $4.26 \cdot 10^{-3} 1/^\circ\text{C}$)	2/3-wire	-50 to +100 °C	±0.5 °C	250 µA
		2/3-wire	-50 to +200 °C	±0.9 °C	250 µA
		4-wire	-50 to +100 °C	±0.5 °C	250 µA
		4-wire	-50 to +200 °C	±0.6 °C	250 µA
Connection circuit		2-, 3-, or 4-wire circuit			
Shortest span		15 °C			
Sensor lead resistance		max. 30 per conductor for 3-wire/4-wire circuit max. 10 per conductor for 2-wire circuit			
Range start/end		freely programmable within the limits, in 0.1 °C steps			
Sampling cycle		Channel 1 - 18: 125ms in total			
Input filter		2nd order digital filter; filter constant adjustable from 0 to 10 sec			
Electrical isolation		see "Electrical data" on page 5 and "Overview of the electrical isolation" on page 16			
Resolution		>14 bit			
Features		also programmable in °F			

¹ The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Resistance transmitter and potentiometer

Designation	Meas. range	Accuracy ¹	Meas. curr.
Resistance transmitter	up to 4000 Ω	±4 Ω	100 µA
Potentiometer	< 400 Ω	±400 mΩ	250 µA
	400 Ω to 4000 Ω	±4 Ω	100 µA
Connection circuit		resistance transmitter: 3-wire circuit potentiometer: 2-/3-/4-wire circuit	
Shortest span		600 Ω	
Sensor lead resistance		max. 30 per conductor for 4-wire circuit max. 10 per conductor for 2-/3-wire circuit	
Resistance values		freely programmable within the limits, in 0.1 steps	
Sampling cycle		Channel 1 - 18: 125ms in total	
Input filter		2nd order digital filter; filter constant adjustable from 0 to 10.0 sec	
Electrical isolation		see "Electrical data" on page 5 and "Overview of the electrical isolation" on page 16	
Resolution		>14 bit	

¹ The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Input for DC voltage, DC current

Basic range	Accuracy ¹	Input resistance
-12 to +112 mV	±100 µV	R _E 1 MΩ
-10 to +210 mV	±240 µV	R _E 470 kΩ
-1.5 to +11.5 V	±6 mV	R _E 470 kΩ
-0.12 to +1.12 V	±1 mV	R _E 470 kΩ
-1.2 to +1.2 V	±2 mV	R _E 470 kΩ
-11.2 to +11.2 V	±12 mV	R _E 470 kΩ
Shortest span		5 mV
Range start/end		freely programmable within the limits in 0.01 mV steps
-1.3 to +22 mA	±20 µA	burden voltage 3V
-22 to +22 mA	±44 µA	burden voltage 3V
Shortest span		0.5 mA
Range start/end		freely programmable within the limits in 0.01 mA steps
Overrange/underrange		according to NAMUR NE 43
Sampling cycle		Channel 1 - 18: 125ms in total
Input filter		2nd order digital filter; filter constant adjustable from 0 to 10.0 sec
Electrical isolation		see "Electrical data" on page 5 and "Overview of the electrical isolation" on page 16
Resolution		>14 bit

¹ The linearization accuracy refers to the maximum measuring range. The linearization accuracy is reduced with short spans.

Transducer short circuit/break

	Short-circuit ¹	Break ¹
Thermocouple	not detected	detected
Resistance thermometer	detected	detected
Resistance transmitter	not detected	detected
Potentiometer	not detected	detected
Voltage ± 210 mV	not detected	detected
Voltage $> \pm 210$ mV	not detected	not detected
Current	not detected	not detected

¹ Programmable reaction of device, e.g. triggering alarm

Binary inputs/outputs (option)

Input or output	configurable as input or output
Number	8, 16 or 24, depending on the device version, to DIN VDE 0411, Part 500; max. 25Hz, max. 32V
Input - level - counting frequency	logic "0": -3 to +5V (input current max. ± 1 mA), logic "1": 12 to 30V (2.5mA input current 5mA) 8Hz
High-speed input - task - counting frequency	the first two binary inputs of each module (B1, B2, B9, B10, B17, B18), if the module is not fitted with relays or 6 analog inputs count function, e. g. for flow measurement 10kHz
Output - type - level - sampling cycle	open-collector output, switches relative to positive voltage logic "0": transistor is inhibited (max. permissible voltage across switching transistor 30V, max. leakage current 0.1 mA) logic "1": transistor is switched on (max. voltage across switching transistor 1.6V, max. current 50 mA) at least 1sec (1Hz)

Outputs

1 relay (ex-factory)	changeover (SPDT), 3A, 230V AC ¹
6 relays (option)	changeover (SPDT), 3A, 230V AC ²

¹ With resistive load. ² It is not permissible to mix SELV circuits and supply circuits.

Interfaces

RS232/RS485 (connector 7) - protocol - baud rate - modem - connector - external inputs	Qty. 1, switchable between RS232 and RS485 Modbus master, Modbus slave and barcode reader 9600, 19200, 38400 can be connected SUB-D via the Modbus master/slave function, 24 analog and 24 binary
RS232 for barcode reader (connector 2) - protocol - baud rate - connector - external inputs	Qty. 1 Modbus master, Modbus slave and barcode reader 9600, 19200, 38400 SUB-D via the Modbus master/slave function, 24 analog and 24 binary
Ethernet (connector 6) - quantity - protocols - baud rate - connector - data format	max. 1 TCP, IP, HTTP, DHCP, SMTP, ModbusTCP 10Mbits/sec, 100Mbits/sec RJ45 HTML
USB host (connector 5) - quantity - use - max. current	2 (connector 5 and front; no parallel operation) for connecting a memory stick 100mA
USB device (connector 15) - quantity - use	2 (connector 15 and front; no parallel operation) for connecting to the (master) computer

Screen

Resolution / size	320 x 240 pixels / 5.5"
Type / number of colors	TFT color screen / 256 colors
Screen refresh rate	> 150Hz
Brightness setting	adjustable on instrument
Screen saver (switch-off)	through waiting time or control signal

Electrical data

Supply voltage (switch-mode PSU)	100 - 240V AC +10/-15%, 48 - 63Hz or 20 - 30V AC/DC, 48 - 63Hz
Electrical safety	to EN 61 010, Part 1, August 2002 overvoltage category II, pollution degree 2 terminal for PE conductor
Protection class I	
Test voltages (type test)	
- mains supply circuit to meas. circuit	with AC supply: 2.3kV/50Hz, 1 min, with AC/DC supply: 510kV/50Hz, 1 min
- mains supply circuit to housing (protective conductor)	with AC supply: 2.3kV/50Hz, 1 min, with AC/DC supply: 510V/50Hz, 1 min
- measuring current circuits to meas. current circuit and housing	500V/50Hz, 1 min
- electrical isolation between analog inputs	up to 30V AC and 50V DC
Supply voltage error	< 0.1% of range span
Power consumption	approx. 40VA
Data backup	CompactFlash memory card
Electrical connection	
- mains supply and relays	at rear through pluggable screw terminals, 5.08mm raster, max. conductor cross-section 2.5mm ² or 2x 1.5mm ² with ferrules
- analog and binary inputs	at rear through pluggable screw terminals, 3.81mm raster, max. conductor cross-section 1.5mm ²

Environmental influences

Ambient temperature range	0 to +50°C
Ambient temperature effect	0.03%/°C
Storage temperature range	-20 to +60°C
Climatic conditions	75% relative humidity, no condensation
EMC	EN 61 326
- interference emission	Class A
- immunity to interference	to industrial requirements

Housing

Housing front	zinc die-casting, optionally in stainless steel
Housing type	housing for flush-panel mounting to IEC 61 554, in stainless steel
Bezel size	144 mm x 144 mm to IEC 61 554
Depth behind panel	193 mm (incl. terminals)
Panel cut-out	138 ^{+1.0} mm x 138 ^{+1.0} mm to IEC 61 554
Panel thickness	2 - 40 mm
Housing mounting	in panel to DIN 43 834
Operating position	unrestricted, but taking in to account the viewing angle of the screen, horizontally ±65°, vertically +40° to -65°
Enclosure protection	to EN 60 529 Category 2, front IP65, rear IP20
Weight	approx. 3.5 kg

Interfaces

- ▶ USB interfaces (standard)
- ▶ RS232/RS485 interface (standard)
- ▶ RS232 interface for barcode reader (standard)
- ▶ Ethernet interface (standard)
- ▶ PROFIBUS-DP interface (extra code)

USB interfaces

With USB interfaces, a distinction is made between the host and the device interface. A USB memory stick can be attached to the host interface. The device interface, in conjunction with a standard commercial USB cable, is used to operate the setup program.

The paperless recorder has host and device interfaces connected in parallel on both the front and back panels, of which only one of each type can ever be used.

RS232/RS485 interface

Current process data, as well as specific device data, can be read out via the RS232 or RS485 interface.

Data saved to the internal memory can also be read out in conjunction with the PC Evaluation Software PCA3000 and the PCA Communications Software (PCC).

The RS232 interface permits a maximum lead length of 15 m, the RS485 interface 1.2 km.

Connection is by a 9-pin SUB-D connector on the back of the instrument. Modbus (master and slave) protocols are available, and the transmission mode used is RTU (Remote Terminal Unit).

RS232 for barcode reader

A barcode reader can be attached to the interface. The barcode reader can be used to start or stop batch reporting, and to set batch texts (customer information, batch number...).

The barcode reader can also be operated via the RS232/RS485 interface, and the RS232 interface for the barcode reader can also be used as a Modbus master or slave.

	USB Host/Device	RS232 RS485	Ethernet	PROFIBUS-DP	External CF card
Read current measurement data	yes (device only)	yes	yes	yes	no
Write current measurement data	no	yes	yes	yes	no
Read out stored measurement data	yes	yes	yes	no	yes
Read /write configuration	yes	yes	yes	no	yes
Write user list	yes	yes	yes	no	yes

Ethernet interface

The Ethernet interface can be used in local networks for the communication between the recorder and the setup program and the PCA Communications Software. The IP address is set permanently through the configuration on the instrument or in the setup program, or can be automatically received from a DHCP server.

The integrated web server allows simultaneous access by several PCs to 3 HTML and 3 batch pages.

Transmission protocol: TCP/IP

Network type: 10BaseT, 100BaseT

PROFIBUS-DP interface

The recorder can be integrated into a fieldbus system according to the PROFIBUS-DP standard via the PROFIBUS-DP interface. This PROFIBUS version is especially designed for communication between automation systems and distributed peripheral devices at the field level.

Data are transmitted serially according to the RS485 standard, with a maximum 12 Mbits/sec.

Using the project design tool that is included in the delivery (GSD generator; GSD = device master file), an application-specific GSD file is created, which is used to integrate the recorder into the fieldbus system.

External CompactFlash memory card (CF)

The external CompactFlash memory card (CF) is used to transfer the data from the internal memory to the PC. Configuration data can be created on the PC and then transferred to the recorder by means of the memory card.

On the PC side, data on the card is accessed using a read/write device (CompactFlash reader/writer).

External inputs via interface

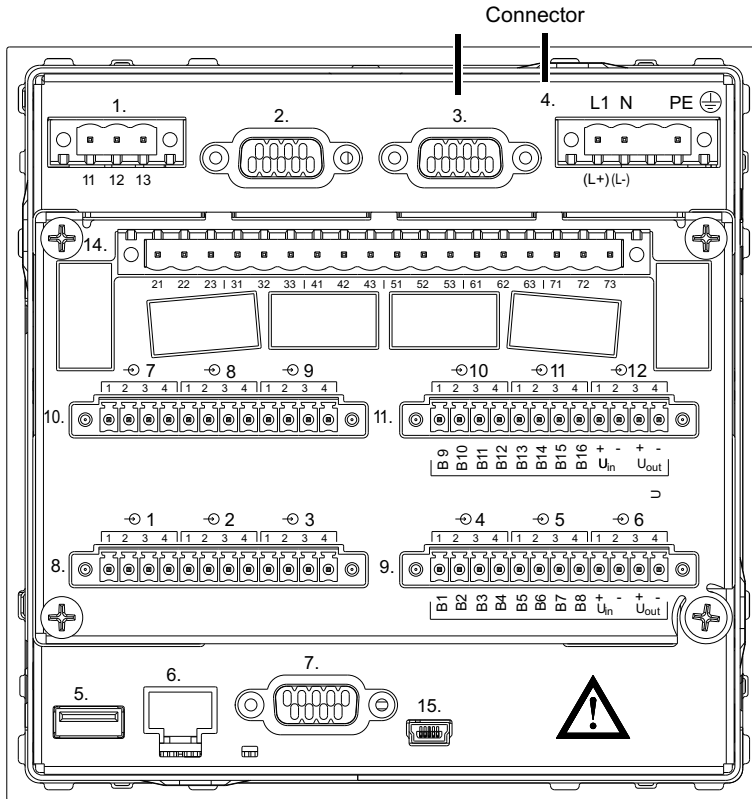
The paperless recorder can acquire and store up to 24 external analog inputs and 24 binary inputs.

Furthermore, the interfaces can be used to enter comments in the event list of the recorder.

Connection diagram

Rear view with pluggable screw terminals

Instrument variant 1

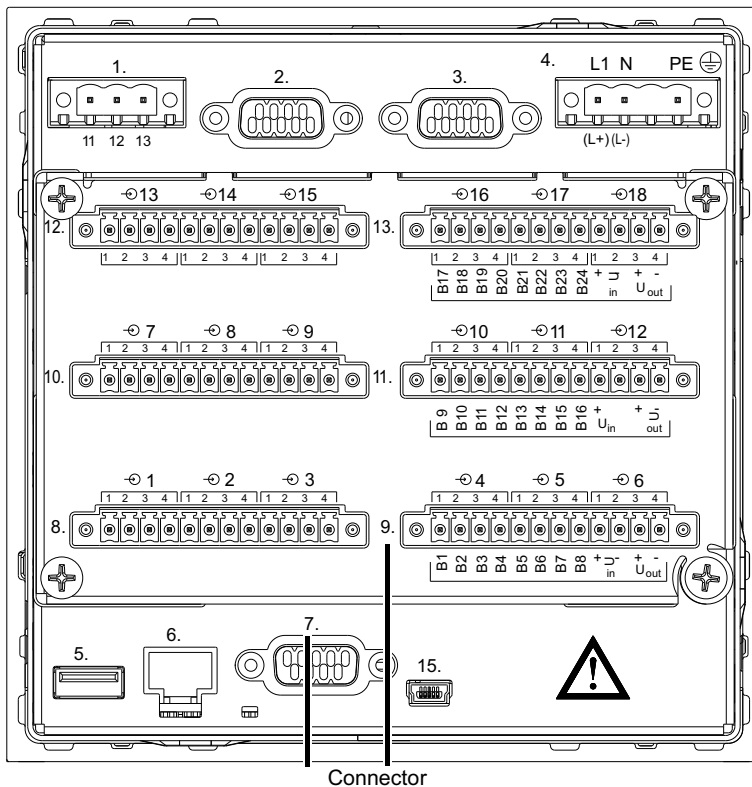


Module slot 3 (top)
fitted with one relay card.

Module slot 2 (middle)
fitted with 6 analog channels or
3 analog channels and
8 binary inputs/outputs.

Module slot 1 (bottom)
fitted with 6 analog channels or
3 analog channels and
8 binary inputs/outputs.

Instrument variant 2


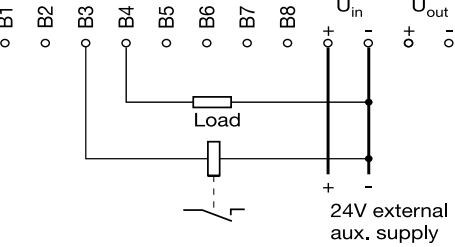
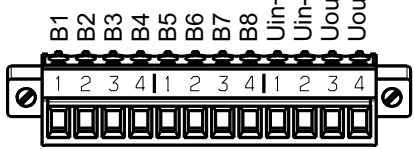

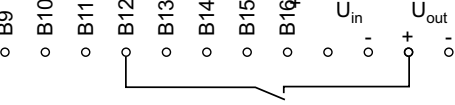
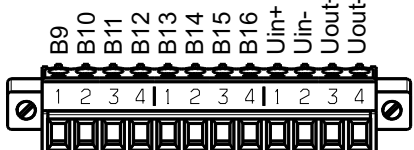
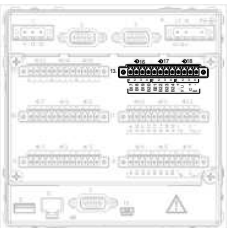
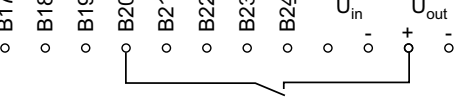
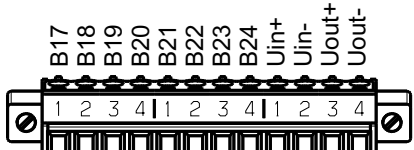



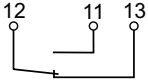
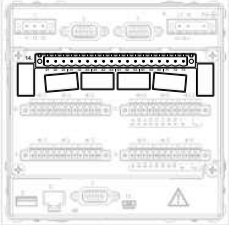
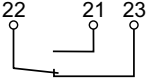
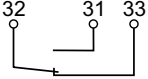
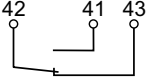
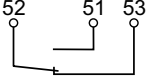
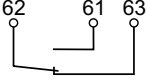
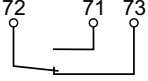






Module slot 3 (top)
fitted with 6 analog channels or
3 analog channels and
8 binary inputs/outputs.

Module slot 2 (middle)
fitted with 6 analog channels or
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8 binary inputs/outputs.

Module slot 1 (bottom)
fitted with 6 analog channels or
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8 binary inputs/outputs.

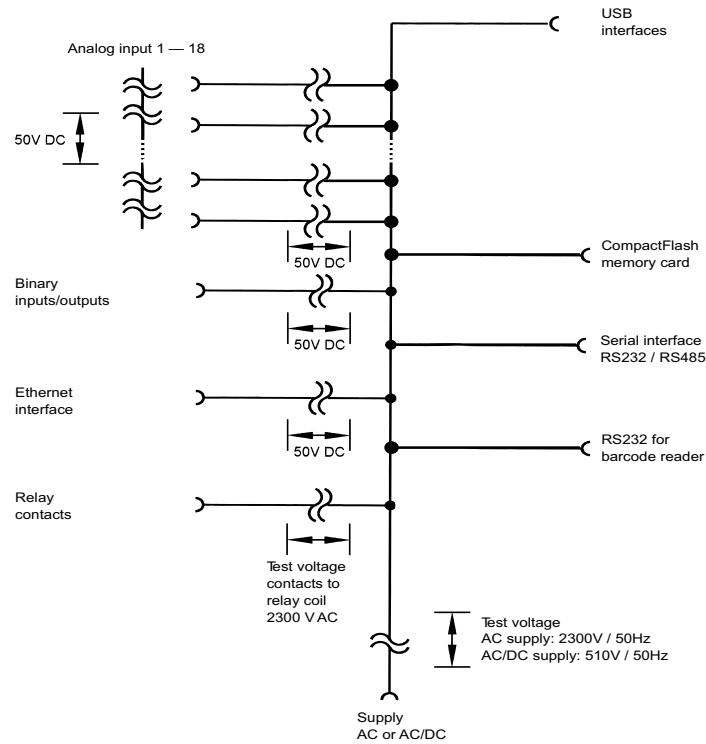
Terminal assignment	Connector	Diagram
Supply		
Supply as on nameplate	Connector 4 L1 (L+) N (L-) PE	
Analog inputs		
Thermocouple	Connectors 8 to 11 (input 1 to 12) for instrument variant 1 or Connectors 8 to 13 (input 1 to 18) for instrument variant 2 	
RTD in 2-wire circuit		
RTD in 3-wire circuit		
RTD in 4-wire circuit		
Resistance transmitter		<p>E = End S = Slider A = Start</p>
Potentiometer in 2-wire circuit		
Potentiometer in 3-wire circuit		
Potentiometer in 4-wire circuit		
Voltage input 0 - 1V		
Voltage input 0 - 10V		
Current input		

Terminal assignment	Connector	Diagram
<p>Binary inputs/outputs</p> <p>Configuration (through the setup program or on the instrument) defines which are binary inputs and which are outputs.</p>		
<p>B1 ... B8</p> <p>voltage-controlled LOW = -3 to +5V DC LOW = 12 to 30V DC</p> <p>Supply voltage 24V/60mA</p> 	<p>Connector 9 only on modules with 3 analog inputs</p> <p>B1 binary input/output 1 ... B8 binary input/output 8</p> <p>U_{in}+ external aux. supply U_{in}- ground for external aux. supply U_{out}+ +24V aux. supply U_{out}- ground for aux. supply</p>	 <p>Example: Connecting a load to binary output 4 (B4) and a solid-state relay to binary output 3 (B3) requires an external auxiliary supply.</p> <p>Diagram of the connector:</p> 
<p>B9 ... B16</p> <p>voltage-controlled LOW = -3 to +5V DC LOW = 12 to 30V DC</p> <p>Supply voltage 24V/60mA</p> 	<p>Connector 11 only on modules with 3 analog inputs</p> <p>B9 binary input/output 9 ... B16 binary input/output 16</p> <p>U_{in}+ external aux. supply U_{in}- ground for external aux. supply U_{out}+ +24V aux. supply U_{out}- ground for aux. supply</p>	 <p>Example: Binary input 12 (B12) is operated from the internal power supply.</p> <p>Diagram of the connector:</p> 
<p>B17 ... B24</p> <p>voltage-controlled LOW = -3 to +5V DC LOW = 12 to 30V DC</p> <p>Supply voltage 24V/60mA</p> 	<p>Connector 13 only for instr. variant 2 and for modules with 3 analog inputs</p> <p>B17 binary input/output 17 ... B24 binary input/output 24</p> <p>U_{in}+ external aux. supply U_{in}- ground for external aux. supply U_{out}+ +24V aux. supply U_{out}- ground for aux. supply</p>	 <p>Example: Binary input 20 (B20) is operated from the internal power supply.</p> <p>Diagram of the connector:</p> 
<p>Relay outputs</p>		

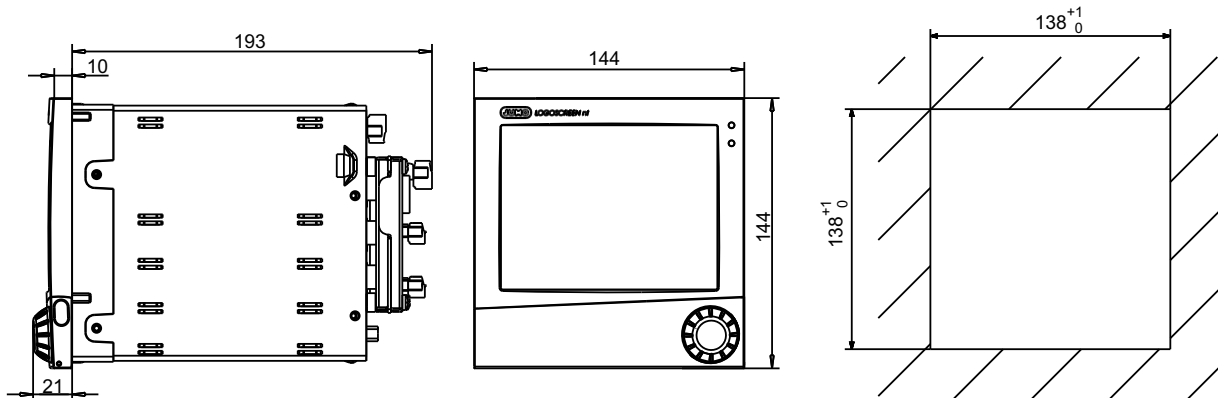
Terminal assignment	Connector	Diagram
Relay 1 changeover (SPDT)	Connector 1 	
Relay 2 changeover (SPDT)	Connector 14 only for instrument variant 1 	
Relay 3 changeover (SPDT)		
Relay 4 changeover (SPDT)		
Relay 5 changeover (SPDT)		
Relay 6 changeover (SPDT)		
Relay 7 changeover (SPDT)		
Interfaces		
RS232 for barcode reader 9-pin SUB-D socket connector	Connector 2 	2 RxD Receive Data 3 TxD Transmit Data 5 GND Ground
PROFIBUS-DP 9-pin SUB-D socket connector (extra code)	Connector 3 	3 RxD/TxD-P Receive/Transmit Data-Pos. B conductor 5 DGND Ground for data transmission 6 VP Supply voltage-Pos. 8 RxD/TxD-P Receive/Transmit Data-Neg. A conductor
USB host interface for connecting memory sticks	Connector 5 	The recorder also has a USB host interface on the front panel, connected in parallel. The two interfaces cannot both be operated at the same time.
Ethernet RJ45 socket connector	Connector 6 	1 TX+ Transmit Data + 2 TX- Transmit Data - 3 RX+ Receive Data + 6 RX- Receive Data -
RS232 9-pin SUB-D socket connector (switchable to RS485)	Connector 7 	2 RxD Receive Data 3 TxD Transmit Data 5 GND Ground
RS485 9-pin SUB-D socket connector (switchable to RS232)	Connector 7 	3 TxD+/RxD+ Transmit/Receive Data + 5 GND Ground 8 TxD-/RxD- Transmit/Receive Data -

Terminal assignment	Connector	Diagram
USB host interface for connecting a PC	Connector 15 	The recorder also has a USB device interface on the front panel, connected in parallel. The two interfaces cannot both be operated at the same time.

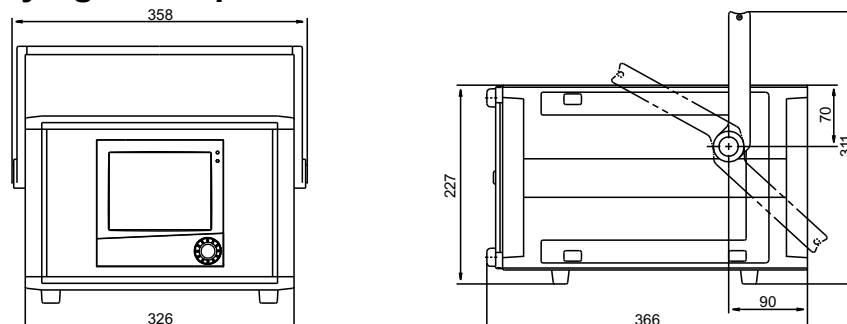
Overview of the electrical isolation



Dimensions



Universal carrying case option - TG-35



Order Code

SBS -			-				-			-		
Software												
without software package	0											
with software package *	1											
Language instrument texts												
Factory setting (English/German)		8										
Set to customer specification		9										
Modulslot 1 (bottom)												
not used				0								
3 analogue inputs and 8 binary inputs/outputs				2								
6 analogue inputs				3								
Slot 2 (middle)												
not used					0							
3 analogue inputs and 8 binary inputs/outputs					2							
6 analogue inputs					3							
Slot 3 (top)												
not used						0						
6 Relay outputs						1						
3 analogue inputs and 8 binary inputs/outputs						2						
6 analogue inputs						3						
Power Supply												
AC 100...240V +10/-15%, 48...63Hz								33				
AC/DC 20...30V, 48...63Hz									25			
Extra Codes												
Lithium battery for memory buffering (ex-factory)											020	
Storage capacitor (instead of extra code 020)											021	
Math and logic module												260
Profibus-DP interface												267
universal carrying case												350

Order example: SBS-18-300-33-020,260

* Softwarepaket

Consisting off PC-Software (PCA3000) and the PCA-Kommunikations-software (PCC).