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**Operating instructions**

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## Series S302

Numeric large size displays  
with analog interface

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**1 Contact**

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## 2 Legal note

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This operation manual has been prepared with the utmost care. However, we do not accept any liability for possible errors. We always appreciate your suggestions for improvement, corrections, comments and proposals. Please contact us: [editing@siebert-group.com](mailto:editing@siebert-group.com)

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**Table of contents**


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<b>1 Contact</b>	<b>2</b>
<b>2 Legal note</b>	<b>3</b>
<b>3 Safety precautions</b>	<b>6</b>
Important information .....	6
Safety .....	6
Intended use.....	6
Mounting and installation.....	6
Grounding.....	6
EMC measures.....	7
Disposal.....	7
<b>4 Unit description</b>	<b>8</b>
Model designation .....	8
Unit construction.....	8
Principle circuit diagram .....	9
Central Processing Unit.....	9
Signal input.....	9
Function inputs .....	9
Serial interface.....	10
Menu display .....	10
Menu buttons.....	10
Switching output .....	10
Status indicators .....	10
Sensor voltage supply .....	10
Power supply .....	10
<b>5 Control</b>	<b>11</b>
Input signal .....	11
Display area.....	11
Increment.....	11
Averaging .....	11
Switching outputs .....	11
Wire break .....	11
Serial interface.....	12
Decimal point.....	12
Leading zero suppression .....	12
Display test.....	12
Demo operation mode.....	12
Stopping the display .....	12

Flashing .....	12
Brightness.....	12
<b>6 Parametrization</b> .....	<b>13</b>
Menu.....	13
Menu operation.....	13
Menu table.....	13
<b>7 Technical data</b> .....	<b>15</b>
Unit properties .....	15
Max. power consumption .....	16
Analog signal input .....	16
Current measurement .....	16
Voltage metering .....	17
Switching output .....	17
Screw-type terminals .....	17
Housing colors.....	17
Front frame .....	17
Ambient conditions .....	17
Measurements and weights .....	18

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### 3 Safety precautions

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#### Important information

Read these operating instructions before starting the unit. They provide you with important information on the use, safety and maintenance of the units. This helps you to protect yourself and prevent damage to the unit.



Information intended to help you to avoid death, bodily harm or considerable damage to property is highlighted by the warning triangle shown here; it is imperative that this information be properly heeded.

The operating instructions are intended for trained professional electricians familiar with the safety standards of electrical technology and industrial electronics.

Store these operating instructions in an appropriate place.

The manufacturer is not liable if the information in these operating instructions is not complied with.

#### Safety



Components inside the units are energized with electricity during operation. For this reason, mounting and maintenance work may only be performed by professionally-trained personnel while observing the corresponding safety regulations.

The repair and replacement of components and modules may only be carried out by the manufacturer for safety reasons and due to the required compliance with the documented unit properties.

The units do not have a power switch. They are operative as soon as the operating voltage is applied.

#### Intended use

The units are intended for use in industrial environments. They may only be operated within the limit values stipulated by the technical data.

When configuring, installing, maintaining and testing the units, the safety and accident-prevention regulations relevant to use in each individual case must be complied with.

Trouble-free, safe operation of the units requires proper transport, storage, installation, mounting and careful operation and maintenance of the units.

#### Mounting and installation

The attachment options for the units were conceived in such a way as to ensure safe, reliable mounting.



The user must ensure that the attachment hardware, the unit carrier and the anchoring at the unit carrier are sufficient to securely support the unit under the given surrounding conditions.

The units are to be mounted in such a way that they can be opened up while mounted. Sufficient space for the cables must be available in the unit near the cable entries.

Sufficient space is to be kept clear around the units to ensure air circulation and to prevent the build-up of heat resulting from use. The relevant information must be heeded in the case of units ventilated by other means.



When the housing fasteners are opened, the front frame of the housing hinges out upward or downward (depending on the unit version) automatically.

#### Grounding

All devices are equipped with a metal housing. They comply with safety class I and require a protective earth connection. The connecting cable for the operating voltage must contain a protective earth wire of a sufficient cross section (DIN VDE 0106 part 1, DIN VDE 0411 part 1).

## EMC measures

The devices comply with the EU Directive 89/336/EEC (EMC Directive) and provide the required interference immunity. Observe the following when connecting the operating voltage and data cables:

Use shielded data cables.

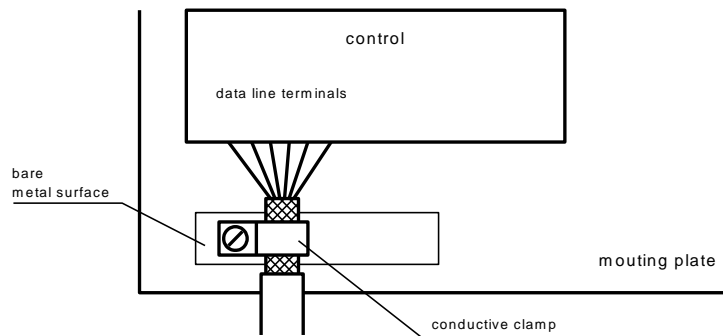
The data and operating voltage cables must be laid separately. They may not be laid together with heavy-current cables or other interference-producing cables.

The cable thickness must be properly assessed (DIN VDE 0100 Part 540).

The cable lengths inside the units are to be kept as short as possible to prevent interference. This applies especially to unshielded operating voltage cables. Shielded cables are also to be kept short due to any interference which might be emitted by the shielding.

Neither excessively long cables nor cable loops may be placed inside the units.

The connection of the cable shielding to the functional ground (PE) must be as short and low-impedance as possible. It should be made directly to the mounting plate over a large area with a conductive clip:



The cable shielding is to be connected at both cable ends. If equipotential bonding currents are expected due to the cable arrangement, electrical isolation is to be performed on one side. In this case, capacitive connection (approx.  $0.1\mu\text{F}/600\text{ V AC}$ ) of the shielding on the isolated side must occur.

## Disposal

Units or unit parts which are no longer needed are to be disposed of in accordance with the regulations in effect in your country.

## 4 Unit description

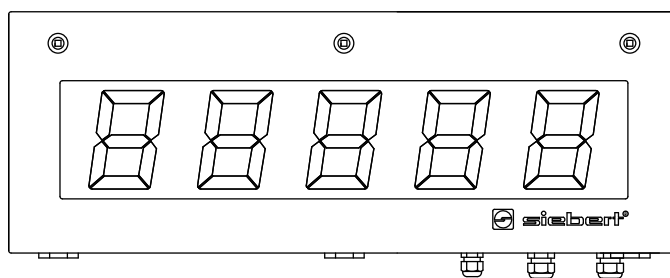
### Model designation

This manual applies to units with the following model designation (x = the 'x's in the model designation indicate the size and design of the units (see Chapter 7):

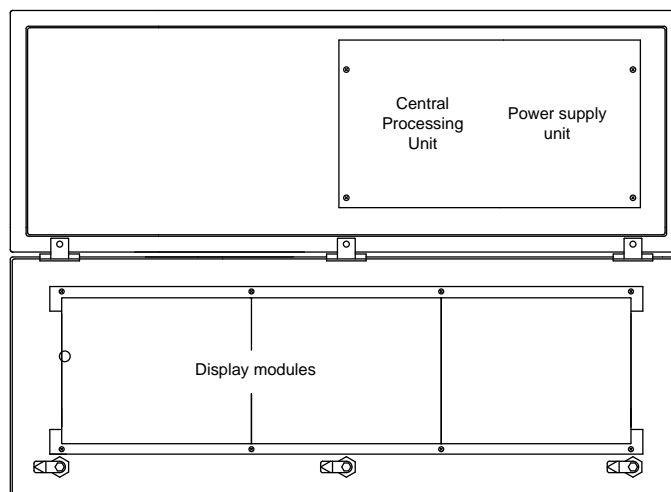
S302-xx/xx/xx-xxx/xx-A0

### Unit construction

The following figure shows model type S302-05/10/xx-xxx/xx-xx as example for the other model types. The front frame of the housing is locked with quick-action releases. When opening the unit the front frame hinges downward.



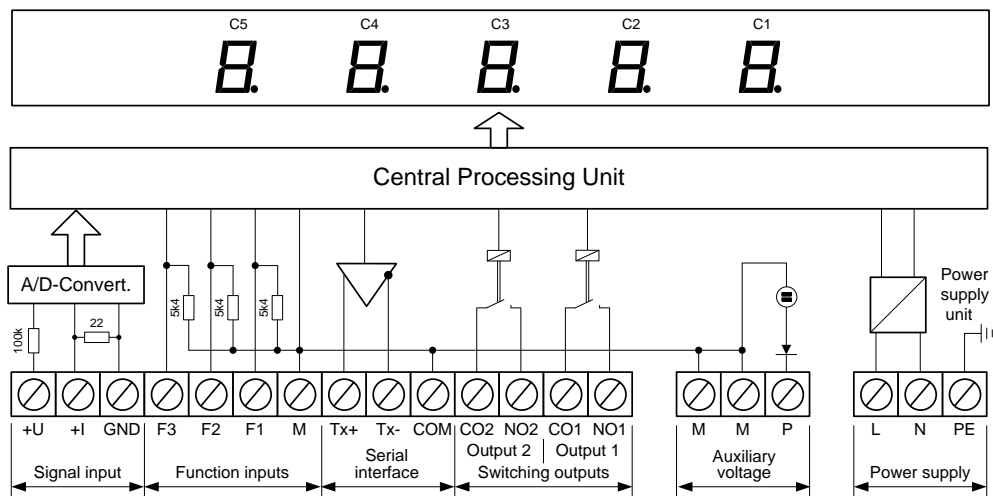
The following figure shows the unit when open.



Units with double-sided display show the same information on the front and on the rear side.

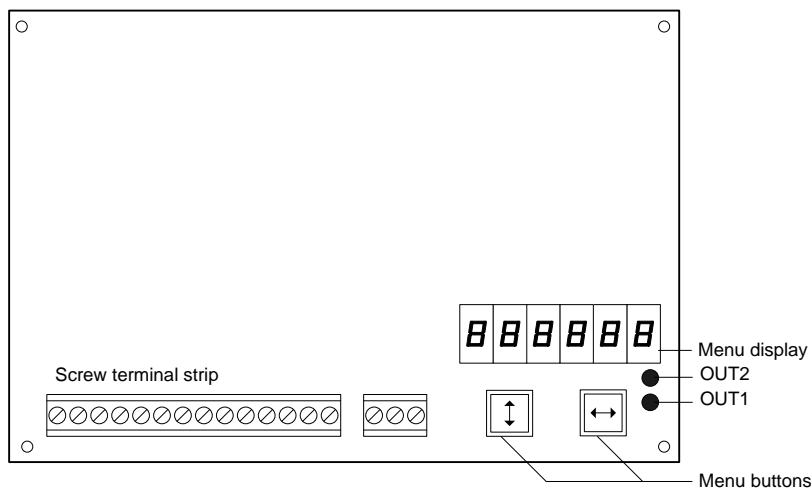


## Principle circuit diagram



## Central Processing Unit

The following figure shows the Central Processing Unit, located in the lower part of the housing.



## Signal input

The signal input is located on the screw-type terminal strip of the control computer.

The units can be activated by means of the analog signals 0...20 mA, 4...20 mA, 0... 10 V and 2...10 V.

Die Betriebsspannung und die Signaleingänge sind von der internen Signalverarbeitung galvanisch getrennt.

The operating voltage and the signal input are galvanically isolated from the internal signal processing.

## Function inputs

The function inputs are located on the screw-type terminal strip of the control computer. They allow reduction in brightness and flashing of the display, independently of commands via the analog interface (see Chapter 5).

The function inputs are designed for the following signal voltages:

Signal voltage: L = -3.5...+5 V (open input = L)  
H = +18...30 V (active H), M = reference potential

### **Serial interface**

The devices have a serial interface RS422. It is located on the screw-type terminal strip of the control computer and serves for reading out the display values.

### **Menu display**

The parameterization of the units is carried out in a menu of the menu display (see Chapter 6). In normal mode, the menu display corresponds to the main display. For devices with more than six positions, *LINE* is shown in the menu display in normal operation.

### **Menu buttons**

The menu buttons are used to control the menu (see Chapter 6).

### **Switching output**

The devices dispose of a switching output (relay) with potential-free make contact (NC, NO, CO).

### **Status indicators**

The status indicators (LEDs) of the control computer have the following meaning:

OUT1    Switching output 1 is active  
OUT2    Switching output 2 is active

### **Sensor voltage supply**

An auxiliary voltage for supply of a sensor (24 V  $\pm$ 20 %, max. 50 mA, reference potential = M), which is galvanically isolated from the operating voltage, is supplied by the units on terminal P.

### **Power supply**

The screw-type terminals for the power supply are located on the power supply unit in the bottom section of the housing. They have the following designations:

Devices for a power supply 115 V AC or 230 V AC	L, N and PE
Devices for a power supply 24 V DC	+, – and PE

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## 5 Control

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### Input signal

The units can be activated by means of the analog signals 0...20 mA, 4...20 mA, 0... 10 V and 2...10 V. The input signal that activates the unit can be set under menu item 1.

### Display area

Start and end value of the display area can be set in the menu items 2 and 3 as follows:

The initial value of the display area is set in menu item 2 and the final value is set in menu item 3. In the display the menu item will appear (flashing) and the current setting. Also the decimal points flash one after the other. The digit with the decimal point flashing can be set to the value requested with the menu button [↔]. The minus sign is set in the left digit. It appears between 9 and 0.

The display shows a  $\square$  (overflow) in case of a display overrange and a  $\square$  (underflow) in case of a display underrange.

### Increment

The step width of quickly changing measuring signals or large scale values can be incremented in menu item 4 to allow the reliable reading of the digit with the lowest order.

With setting 5, the position C1 shows only the figures 0 and 5. When setting 10, it shows a fixed zero.

With setting 50, the position C1 only shows a fixed zero, and the position C2 only shows the figures 0 and 5. When setting 100, the positions C2 and C1 show a fixed zero.

### Averaging

The analog-digital converter has an integration period of approx. 0.25 s to allow quick measuring processes to be recorded. In case of strongly superimposed measuring signals it may be useful to show an average value over several integration intervals.

With setting 1 under menu item 5, no average value over several integration intervals is determined. With setting 2, 4 or 8, an average value is determined over 2, 4 or 8 integration intervals.

### Switching outputs

The units have two switching outputs (relays) with potential-free make-contacts (output 1: CO1, NO1; Exit 2: CO2, NO2). The switching points can be set in the menu items 6 and 7.

The switching point of the output 1 is set in menu item 6 and the switching point of the output 7 is set in menu item 7. In the menu display the menu item (flashing) and the current setting will appear. The decimal point also light up successively. The digit with the decimal point flashing can be set to the value requested by means of the menu key [↔]. The minus sign can be set in the left digit. It appears between 9 and 0.

The switching outputs are activated with a measured value equal to or higher than the switching point set in the menu. They are deactivated as soon as the measuring value drops below the switching point set by the hysteresis set in menu item 8. The corresponding status indicator of the control computer (OUT1, OUT2) will light if the switching output is active.

The actual display value is compared. A decimal point set in menu item A is not considered.

The switching functions are not defined in the menu mode.

### Wire break

If in menu item 1 the setting 4...20 mA is selected and if the input signal falls below the value of 3.6 mA, the unit interprets it as wire break, and the display shows *L*.

The same applies if 2...10 V is selected in menu item 1 and the input signal falls below 1.8 V.

## Serial interface

The devices have a serial interface RS422. It transmits the current display value as ASCII data telegram containing 6 characters and the final CR/LF (**xxxxxx<CR><LF>**) in intervals of approx. 0.25 s.

The characters contain the current display value (right-aligned) including the algebraic sign (left-aligned) or a possible overflow/underflow or wire breakage error. The leading zero suppression and a decimal point, which was set in menu item A are ignored.

The data telegram always contains six characters and CR/LF independently of how many digits the unit has. Unneeded characters are blank characters.

The parameters of the serial interface are: 9600 Bd, no parity, 8 data bits, 1 stop bit.

## Decimal point

A fixed decimal point can be set in menu item A.

Devices with LRD<sup>®</sup> display have no decimal points.

## Leading zero suppression

In menu item C it is set if leading zeros are to be displayed or suppressed.

## Display test

In menu item F, you can set whether a display test is to be performed after the operating voltage is applied.

## Demo operation mode

If the setting *PLAY* is selected in menu item F, random characters are displayed. In this case, it is impossible to control the unit.

## Stopping the display

An H signal on the F3 function input stops the display but the analog input signal is still evaluated.

## Flashing

Flashing of the display can also be activated by application of the H signal to functional input F1.

For devices provided with an LRD<sup>®</sup> display flashing is not possible.

## Brightness

The brightness can be reduced with an H signal on function input F2.

For units provided with a LRD<sup>®</sup> display brightness reduction is not possible.

## 6 Parametrization

### Menu

The parameterization of the devices is carried out in a menu in the menu display.

### Menu operation

To start the menu, press both menu buttons simultaneously (approx. 1 sec.) until the first menu item appears in the menu display. It is now possible to navigate in the menu as follows:

Next menu item	Shortly press key [↕]
Page menu items forward	Press key [↕] long
Previous menu item	Double-click on key [↕]
Page menu items backward	Double-click on key [↕] and keep it pressed
Next setting	Shortly press key [↔]
Page settings forward	Press key [↔] long
Previous setting	Double-click on key [↔]
Page setting backward	Double-click on key [↔] and keep it pressed

To exit the menu shortly press the key [↕] in menu item U. Depending on the setting in menu item U the settings made are either saved (set) or not saved (escape) or the factory settings are reset (default).

Canceling the menu without saving the settings made is possible by pressing both menu buttons simultaneously (approx. 1 sec.). It will occur automatically if 60 seconds pass without a menu button being pressed.

Once the menu is closed, the device behaves in the same manner as when the operating voltage was applied.

In the menu mode the character  $\bar{\square}$  appears in the main display. Control of the display is not possible in menu mode.

### Menu table

The menu items are displayed in the following menu table. The factory settings are marked with an \*. Individual menu items or settings can be suppressed in another menu item, depending on the unit version or setting.

Menu item	Settings	Display
1 Input signal	0...20 mA*	1 0-20
	4...20 mA	1 4-20
	0...10 V	1 0-10
	2...10 V	1 2-10
2 Start value <sup>1)</sup>	-9999...00000*...99999	2 00000
3 End value <sup>2)</sup>	-9999...00000...99999	3 00000
4 Increment	1* (digit C1 = 0...9)	4 1
	5 (digit C1 = 0/5)	4 5
	10 (digit C1 = 0)	4 10
	50 (digit C2 = 0/5, digit C1 = 0)	4 50
	100 (digit C2 = 0, digit C1 = 0)	4 100
5 Averaging	No averaging	5 1
	Averaging over 2 intervals	5 2
	Averaging over 4 intervals*	5 4
	Averaging over 8 intervals	5 8

6	Switching point <sup>1)</sup>	-9999...00000*...99999	6	00000
7	Switching point <sup>2)</sup>	-9999...00000...99999	7	00000
8	Hysteresis	1% of the upper limit of the effective range *	B	1
		2% of the upper limit of the effective range	B	2
		5% of the upper limit of the effective range	B	5
		10% of the upper limit of the effective range	B	10
A	Decimal point	No decimal point*	A	0
		Decimal point digit C1	A	1
		Decimal point digit C2	A	2
		↓	↓	
		Decimal point digit C5	A	5
C	Leading zeros	Leading zeros not displayed*	C	00
		Leading zeros displayed	C	0000
F	Display test	No display test at power-on*	F	----
		Display test at power-on	F	BBBB
		Demo operation mode	F	PLAY
U	Save	Save parameters* (Set)	U	SET
		Not saving parameters (Escape)	U	ESC
		Restore to factory settings (Default)	U	DEF

<sup>1)</sup> The setting range depends on the display range of the unit

Display range	Unit version	Setting range	Factory settings menu items 3 and 7
2 digits	S302-x2/xx/xx-xxx/xx-xx	-9...00...99	10
3 digits	S302-x3/xx/xx-xxx/xx-xx	-99...000...999	100
4 digits	S302-x4/xx/xx-xxx/xx-xx	-999...0000...9999	1000
5 digits	S302x5/xx/xx-xxx/xx-xx	-9999...00000...99999	10000

## 7 Technical data

### Unit properties

The model designation is structured as follows:

S302	-	<input type="text"/>	/	<input type="text"/>	/	<input type="text"/>	-	<input type="text"/>	/	<input type="text"/>	-	<input type="text"/>
No dimension symbol	0	:	:	:	:	:	:	:	:	:	:	:
Dimension symbol	F	:	:	:	:	:	:	:	:	:	:	:
1 Digit	1	:	:	:	:	:	:	:	:	:	:	:
2 Digits	2	:	:	:	:	:	:	:	:	:	:	:
↓	↓	:	:	:	:	:	:	:	:	:	:	:
8 Digits	8	:	:	:	:	:	:	:	:	:	:	:
Character height 25 mm	0 3	:	:	:	:	:	:	:	:	:	:	:
Character height 57 mm	0 6	:	:	:	:	:	:	:	:	:	:	:
Character height 100 mm	1 0	:	:	:	:	:	:	:	:	:	:	:
Character height 160 mm	1 6	:	:	:	:	:	:	:	:	:	:	:
Character height 250 mm	2 5	:	:	:	:	:	:	:	:	:	:	:
LED Standard	0	:	:	:	:	:	:	:	:	:	:	:
LED, SMD technology		:	:	:	:	:	:	:	:	:	:	:
LED for outdoor use	2	:	:	:	:	:	:	:	:	:	:	:
LRD <sup>®</sup>	4	:	:	:	:	:	:	:	:	:	:	:
Character color red	R	:	:	:	:	:	:	:	:	:	:	:
Character color green	G	:	:	:	:	:	:	:	:	:	:	:
Character color white	W	:	:	:	:	:	:	:	:	:	:	:
Character color red/green/orange switchable	M	:	:	:	:	:	:	:	:	:	:	:
Display readable on one side	1	:	:	:	:	:	:	:	:	:	:	:
Display readable on both sides	2	:	:	:	:	:	:	:	:	:	:	:
Steel sheet housing, coated	0	:	:	:	:	:	:	:	:	:	:	:
Steel sheet housing, bilayer painting	1	:	:	:	:	:	:	:	:	:	:	:
Stainless steel housing V2A, coated	2	:	:	:	:	:	:	:	:	:	:	:
Stainless steel housing V2A, brushed	3	:	:	:	:	:	:	:	:	:	:	:
Stainless steel housing V4A, brushed	5	:	:	:	:	:	:	:	:	:	:	:
Protection type IP54	0	:	:	:	:	:	:	:	:	:	:	:
Protection type IP65	1	:	:	:	:	:	:	:	:	:	:	:
Protection type IP54 with climate adjustment	2	:	:	:	:	:	:	:	:	:	:	:
Protection type IP54 with climate adjustment and heating	4	:	:	:	:	:	:	:	:	:	:	:
Wall mounting, cable entry point from the bottom	0	:	:	:	:	:	:	:	:	:	:	:
Wall mounting, cable entry point from the top	1	:	:	:	:	:	:	:	:	:	:	:
Hanging installation, cable entry point from the bottom	2	:	:	:	:	:	:	:	:	:	:	:
Hanging installation, cable entry point from the top	3	:	:	:	:	:	:	:	:	:	:	:
Wall mounting and hanging installation, cable entry point from the bottom	4	:	:	:	:	:	:	:	:	:	:	:
Wall mounting and hanging installation, cable entry point from the top	5	:	:	:	:	:	:	:	:	:	:	:
Power supply 230 V AC ±15 %, 50 Hz	A	:	:	:	:	:	:	:	:	:	:	:
Power supply 24 V DC ±15 %	B	:	:	:	:	:	:	:	:	:	:	:
Power supply 115 V AC ±15 %, 60 Hz	C	:	:	:	:	:	:	:	:	:	:	:
Interface		:	:	:	:	:	:	:	:	x	x	:

## Max. power consumption

Units with one-sided display	[VA] <sup>1)</sup>
<b>1 digit</b>	
S302-x1/10/xx-1xx/xx-xx	12 (50)
S302-x1/16/xx-1xx/xx-xx	22 (50)
S302-x1/25/xx-1xx/xx-xx	26
<b>2 digits</b>	
S302-x2/06/xx-1xx/xx-xx	12
S302-x2/10/xx-1xx/xx-xx	15 (50)
S302-x2/16/xx-1xx/xx-xx	37 (50)
S302-x2/25/xx-1xx/xx-xx	46
<b>3 digits</b>	
S302-x3/06/xx-1xx/xx-xx	13
S302-x3/10/xx-1xx/xx-xx	17 (50)
S302-x3/16/xx-1xx/xx-xx	51 (50)
S302-x3/25/xx-1xx/xx-xx	63
<b>4 digits</b>	
S302-x4/06/xx-1xx/xx-xx	14
S302-x4/10/xx-1xx/xx-xx	21 (50)
S302-x4/16/xx-1xx/xx-xx	64 (50)
S302-x4/25/xx-1xx/xx-xx	79
<b>5 digits</b>	
S302-x5/06/xx-1xx/xx-xx	15
S302-x5/10/xx-1xx/xx-xx	23 (50)
S302-x5/16/xx-1xx/xx-xx	77 (50)
S302-x5/25/xx-1xx/xx-xx	96
<b>6 digits</b>	
S302-x6/03/xx-1xx/xx-xx	16
S302-x6/06/xx-1xx/xx-xx	16
S302-x6/10/xx-1xx/xx-xx	26 (50)
S302-x6/16/xx-1xx/xx-xx	91 (50)
S302-x6/25/xx-1xx/xx-xx	113
<b>7 digits</b>	
S302-x7/06/xx-1xx/xx-xx	17
S302-x7/10/xx-1xx/xx-xx	30 (50)
S302-x7/16/xx-1xx/xx-xx	104 (50)
S302-x7/25/xx-1xx/xx-xx	130
<b>8 digits</b>	
S302-x8/06/xx-1xx/xx-xx	18
S302-x8/10/xx-1xx/xx-xx	32 (50)

Units with double-sided display	[VA] <sup>1)</sup>
<b>1 digit</b>	
S302-x1/10/xx-2xx/xx-xx	16 (91)
S302-x1/16/xx-2xx/xx-xx	35 (91)
S302-x1/25/xx-2xx/xx-xx	42
<b>2 digits</b>	
S302-x2/06/xx-2xx/xx-xx	15
S302-x2/10/xx-2xx/xx-xx	21 (91)
S302-x2/16/xx-2xx/xx-xx	66 (91)
S302-x2/25/xx-2xx/xx-xx	83
<b>3 digits</b>	
S302-x3/06/xx-2xx/xx-xx	17
S302-x3/10/xx-2xx/xx-xx	26 (91)
S302-x3/16/xx-2xx/xx-xx	92 (91)
S302-x3/25/xx-2xx/xx-xx	116
<b>4 digits</b>	
S302-x4/06/xx-2xx/xx-xx	19
S302-x4/10/xx-2xx/xx-xx	33 (91)
S302-x4/16/xx-2xx/xx-xx	119 (91)
S302-x4/25/xx-2xx/xx-xx	150
<b>5 digits</b>	
S302-x5/06/xx-2xx/xx-xx	21
S302-x5/10/xx-2xx/xx-xx	38 (91)
S302-x5/16/xx-2xx/xx-xx	146 (91)
S302-x5/25/xx-2xx/xx-xx	184
<b>6 digits</b>	
S302-x6/03/xx-2xx/xx-xx	23
S302-x6/06/xx-2xx/xx-xx	23
S302-x6/10/xx-2xx/xx-xx	43 (91)
S302-x6/16/xx-2xx/xx-xx	173 (91)
S302-x6/25/xx-2xx/xx-xx	217
<b>7 digits</b>	
S302-x7/06/xx-2xx/xx-xx	25
S302-x7/10/xx-2xx/xx-xx	51 (91)
S302-x7/16/xx-2xx/xx-xx	200 (91)
S302-x7/25/xx-2xx/xx-xx	250
<b>8 digits</b>	
S302-x8/06/xx-2xx/xx-xx	27
S302-x8/10/xx-2xx/xx-xx	55 (91)

- 1) The values given are approximate values. For units with built-in heating, the values for power consumption specified in the table increase by approx. 10 – 100 VA (exact values on request), depending on the unit size.  
 () Values in parentheses are valid for LRD<sup>®</sup> versions.

The power consumption for the unit version model S302-xx/xx/0x-xxx/xx-xx is also valid for the unit version S302-xx/xx/2x-xxx/xx-xx (LEDs for external use).

## Analog signal input

Resolution	16 Bit
Measurement rate	approx. 4/s
Measurement error	0,02% of the final value ±1 digit (25 °C)
Temperature coefficient	<50 ppm/°C

## Current measurement

Input resistance	approx. 22 Ω
Input signal	0...±20 mA, max. ±100 mA



### Voltage metering

Input resistance	approx. 100 kΩ
Input signal	0...±10 V, max. ±40 V

### Switching output

Maximum switching voltage	30 V AC/DC
Maximum switching current	500 mA (ohmic load)

### Screw-type terminals

Control computer	Capacity of terminals 0,14...1,5 mm <sup>2</sup>
Power supply	Capacity of terminals 0,2...4 mm <sup>2</sup>

### Housing colors

Case front	RAL 5002 ultramarine
Case rear part	RAL 7035 light grey

### Front frame

S302-xx/xx/xR-xxx/xx-xx	Plastic, tinted red, non-reflective
S302-xx/06/xG-xxx/xx-xx	Plastic, tinted green, non-reflective
S302-xx/10/xG-xxx/xx-xx	Plastic, tinted green, non-reflective
Other model types	Plastic, clear, non-reflective

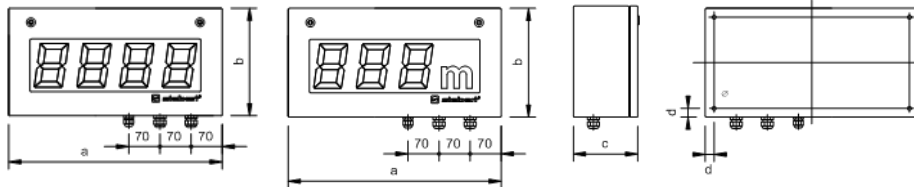
### Ambient conditions

Operating temperature	0...55 °C
Storage temperature	-30...85 °C
Relative humidity	max. 95 % (non-condensing)

## Measurements and weights

### Units with one-side display

The following figure shows unit versions S302-04/10/4x-1xx/xx-xx and S302-F3/10/4x-1xx/xx-, representing the other unit versions listed in the following table.



1 digit		a [mm]	b [mm]	c [mm]	d [mm]	Ø [mm]	Weight [kg] <sup>1)</sup>
S302-01/10/xx-1xx/xx-xx		330 <sup>2)</sup>	245	110 (145)	16	7	6 (7) <sup>2)</sup>
S302-01/16/xx-1xx/xx-xx		390	300	110 (145)	20	9	7 (9)
S302-01/25/xx-1xx/xx-xx		570	400	110	20	9	11
<b>2 digits</b>	<b>1 digit + dimension symbol</b>						
S302-02/06/xx-1xx/xx-xx	-	300 <sup>3)</sup>	185	110	16	7	5 <sup>3)</sup>
S302-02/10/xx-1xx/xx-xx	S302-F1/10/xx-1xx/xx-xx	330 <sup>2)</sup>	245	110 (145)	16	7	6 (7) <sup>2)</sup>
S302-02/16/xx-1xx/xx-xx	S302-F1/16/xx-1xx/xx-xx	390	300	110 (145)	20	9	7 (9)
S302-02/25/xx-1xx/xx-xx	S302-F1/25/xx-1xx/xx-xx	570	400	110	20	9	11
<b>3 digit</b>	<b>2 digit + dimension symbol</b>						
S302-03/06/xx-1xx/xx-xx	S302-F2/06/xx-1xx/xx-xx	300 <sup>3)</sup>	185	110	16	7	5 <sup>3)</sup>
S302-03/10/xx-1xx/xx-xx	S302-F2/10/xx-1xx/xx-xx	480	245	110 (145)	16	7	8 (9)
S302-03/16/xx-1xx/xx-xx	S302-F2/16/xx-1xx/xx-xx	670	300	110 (145)	20	9	11 (13)
S302-03/25/xx-1xx/xx-xx	S302-F2/25/xx-1xx/xx-xx	1030	400	110	20	9	18
<b>4 digit</b>	<b>3 digit + dimension symbol</b>						
S302-04/06/xx-1xx/xx-xx	S302-F3/06/xx-1xx/xx-xx	300 <sup>3)</sup>	185	110	16	7	5 <sup>3)</sup>
S302-04/10/xx-1xx/xx-xx	S302-F3/10/xx-1xx/xx-xx	480	245	110 (145)	16	7	8 (9)
S302-04/16/xx-1xx/xx-xx	S302-F3/16/xx-1xx/xx-xx	670	300	110 (145)	20	9	11 (13)
S302-04/25/xx-1xx/xx-xx	S302-F3/25/xx-1xx/xx-xx	1030	400	110	20	9	18
<b>5 digit</b>	<b>4 digit + dimension symbol</b>						
S302-05/03/xx-1xx/xx-xx	-	300 <sup>3)</sup>	185	110	16	7	5 <sup>3)</sup>
S302-05/06/xx-1xx/xx-xx	S302-F4/06/xx-1xx/xx-xx	400	185	110	16	7	6
S302-05/10/xx-1xx/xx-xx	S302-F4/10/xx-1xx/xx-xx	680	245	110 (145)	16	7	10 (12)
S302-05/16/xx-1xx/xx-xx	S302-F4/16/xx-1xx/xx-xx	960	300	110 (145)	20	9	14 (17)
S302-05/25/xx-1xx/xx-xx	S302-F4/25/xx-1xx/xx-xx	1500	400	110	20	9	24
<b>6 digit</b>	<b>5 digit + dimension symbol</b>						
S302-06/03/xx-1xx/xx-xx	S302-F5/03/xx-1xx/xx-xx	300 <sup>3)</sup>	185	110	16	7	5 <sup>3)</sup>
S302-06/06/xx-1xx/xx-xx	S302-F5/06/xx-1xx/xx-xx	400	185	110	16	7	6
S302-06/10/xx-1xx/xx-xx	S302-F5/10/xx-1xx/xx-xx	680	245	110 (145)	16	7	10 (12)
S302-06/16/xx-1xx/xx-xx	S302-F5/16/xx-1xx/xx-xx	960	300	110 (145)	20	9	14 (17)
S302-06/25/xx-1xx/xx-xx	S302-F5/25/xx-1xx/xx-xx	1500	400	110	20	9	24
<b>7 digit</b>	<b>6 digit + dimension symbol</b>						
-	S302-F6/03/xx-1xx/xx-xx	300 <sup>3)</sup>	185	110	16	7	5 <sup>3)</sup>
S302-07/06/xx-1xx/xx-xx	S302-F6/06/xx-1xx/xx-xx	510	185	110	16	7	7
S302-07/10/xx-1xx/xx-xx	S302-F6/10/xx-1xx/xx-xx	870	245	110 (145)	16	7	12 (14)
S302-07/16/xx-1xx/xx-xx	S302-F6/16/xx-1xx/xx-xx	1100	300	110 (145)	20	9	16 (20)
S302-07/25/xx-1xx/xx-xx	S302-F6/25/xx-1xx/xx-xx	1730	400	110	20	9	28
<b>8 digit</b>	<b>7 digit + dimension symbol</b>						
S302-08/06/xx-1xx/xx-xx	S302-F7/06/xx-1xx/xx-xx	510	185	110	32	7	7
S302-08/10/xx-1xx/xx-xx	S302-F7/10/xx-1xx/xx-xx	870	245	110 (145)	32	7	12 (14)

<sup>1)</sup> The figures shown for weight are approximate.

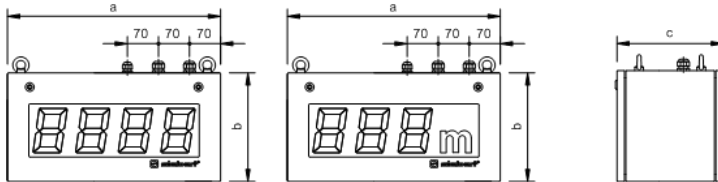
<sup>2)</sup> Units with Profibus interface: a = 480 mm, Weight = 8 (9) kg

<sup>3)</sup> Units with Profibus interface or integrated heating: a = 400 mm, Weight = 6 kg;  
Units with Profibus interface and integrated heating: a = 510 mm, Weight = 7 kg

( ) Values in round brackets are valid for LRD<sup>®</sup> versions.

## Units with double-side display

The following figure shows unit versions S302-04/10/4x-2xx/xx-xx and S302-F3/10/4x-2xx/xx-, representing the other unit versions listed in the following table.



Units with character height of 25 mm (S302-xx/03/xx-2xx/xx-xx) and 57 mm (S302-xx/06/xx-2xx/xx-xx) are provided with 2 eyes instead of 4.

1 digit		a [mm]	b [mm]	c [mm]	Weight [kg] <sup>1)</sup>
S302-01/10/xx-2xx/xx-xx		330 <sup>2)</sup>	245	170 (240)	9 (11) <sup>2)</sup>
S302-01/16/xx-2xx/xx-xx		390	300	170 (240)	11 (12)
S302-01/25/xx-2xx/xx-xx		570	400	170	17
<b>2 digit</b>	<b>1 digit + dimension symbol</b>				
S302-02/06/xx-2xx/xx-xx	-	300 <sup>3)</sup>	185	170	7 <sup>3)</sup>
S302-02/10/xx-2xx/xx-xx	S302-F1/10/xx-2xx/xx-xx	330 <sup>2)</sup>	245	170 (240)	9 (9) <sup>2)</sup>
S302-02/16/xx-2xx/xx-xx	S302-F1/16/xx-2xx/xx-xx	390	300	170 (240)	11 (11)
S302-02/25/xx-2xx/xx-xx	S302-F1/25/xx-2xx/xx-xx	570	400	170	17
<b>3 digit</b>	<b>2 digit + dimension symbol</b>				
S302-03/06/xx-2xx/xx-xx	S302-F2/06/xx-2xx/xx-xx	300 <sup>3)</sup>	185	170	7 <sup>3)</sup>
S302-03/10/xx-2xx/xx-xx	S302-F2/10/xx-2xx/xx-xx	480	245	170 (240)	12 (15)
S302-03/16/xx-2xx/xx-xx	S302-F2/16/xx-2xx/xx-xx	670	300	170 (240)	17 (19)
S302-03/25/xx-2xx/xx-xx	S302-F2/25/xx-2xx/xx-xx	1030	400	170	27
<b>4 digit</b>	<b>3 digit + dimension symbol</b>				
S302-04/06/xx-2xx/xx-xx	S302-F3/06/xx-2xx/xx-xx	300 <sup>3)</sup>	185	170	7 <sup>3)</sup>
S302-04/10/xx-2xx/xx-xx	S302-F3/10/xx-2xx/xx-xx	480	245	170 (240)	12 (15)
S302-04/16/xx-2xx/xx-xx	S302-F3/16/xx-2xx/xx-xx	670	300	170 (240)	17 (19)
S302-04/25/xx-2xx/xx-xx	S302-F3/25/xx-2xx/xx-xx	1030	400	170	27
<b>5 digit</b>	<b>4 digit + dimension symbol</b>				
S302-05/03/xx-2xx/xx-xx	-	300 <sup>3)</sup>	185	170	7 <sup>3)</sup>
S302-05/06/xx-2xx/xx-xx	S302-F4/06/xx-2xx/xx-xx	400	185	170	8
S302-05/10/xx-2xx/xx-xx	S302-F4/10/xx-2xx/xx-xx	680	245	170 (240)	15 (19)
S302-05/16/xx-2xx/xx-xx	S302-F4/16/xx-2xx/xx-xx	960	300	170 (240)	21 (26)
S302-05/25/xx-2xx/xx-xx	S302-F4/25/xx-2xx/xx-xx	1500	400	170	36
<b>6 digit</b>	<b>5 digit + dimension symbol</b>				
S302-06/03/xx-2xx/xx-xx	S302-F5/03/xx-2xx/xx-xx	300 <sup>3)</sup>	185	170	7 <sup>3)</sup>
S302-06/06/xx-2xx/xx-xx	S302-F5/06/xx-2xx/xx-xx	400	185	170	8
S302-06/10/xx-2xx/xx-xx	S302-F5/10/xx-2xx/xx-xx	680	245	170 (240)	15 (19)
S302-06/16/xx-2xx/xx-xx	S302-F5/16/xx-2xx/xx-xx	960	300	170 (240)	21 (27)
S302-06/25/xx-2xx/xx-xx	S302-F5/25/xx-2xx/xx-xx	1500	400	170	36
<b>7 digit</b>	<b>6 digit + dimension symbol</b>				
-	S302-F6/03/xx-2xx/xx-xx	300 <sup>3)</sup>	185	170	7 <sup>3)</sup>
S302-07/06/xx-2xx/xx-xx	S302-F6/06/xx-2xx/xx-xx	510	185	170	9
S302-07/10/xx-2xx/xx-xx	S302-F6/10/xx-2xx/xx-xx	870	245	170 (240)	18 (23)
S302-07/16/xx-2xx/xx-xx	S302-F6/16/xx-2xx/xx-xx	1100	300	170 (240)	24 (29)
S302-07/25/xx-2xx/xx-xx	S302-F6/25/xx-2xx/xx-xx	1730	400	170	42
<b>8 digit</b>	<b>7 digit + dimension symbol</b>				
S302-08/06/xx-2xx/xx-xx	S302-F7/06/xx-2xx/xx-xx	510	185	170	9
S302-08/10/xx-2xx/xx-xx	S302-F7/10/xx-2xx/xx-xx	870	245	170 (240)	18 (23)

<sup>1)</sup> The figures shown for weight are approximate.

<sup>2)</sup> Units with Profibus interface: a = 480 mm, Weight = 12 (15) kg

<sup>3)</sup> Units with Profibus interface or integrated heating: a = 400 mm, Weight = 8 kg;  
Units with Profibus interface and integrated heating: a = 510 mm, Weight = 9 kg

( ) Values in round brackets are valid for LRD<sup>®</sup> versions.