

## Display with SSI-interface



# DSA

- ❑ 8 digit LED-display
- ❑ 4 outputs
- ❑ multiplier
- ❑ electronic adjustment
- ❑ non-volatile EEPROM memory
- ❑ 2 analog outputs (option)
- ❑ parallel datamodule (option)
- ❑ RS485 communication (option)



## General

The **DSA-SXXX** is a multifunctional display for sensors with an SSI-interface. Rotary encoders with 12 or 24 databits in Gray-code as well as linear displacement sensors can be connected. This high tech display has four programmable outputs. Several parameters are programmable to adjust the display to your specific needs. The parameters and presets are stored in a non-volatile EEPROM memory. The actual position can also be stored in this memory.

Four front-panel keys ensure easy programming. The DSA, including the front-panel, are designed for heavy industrial applications.

Optional are two fully programmable analog outputs (1x 0..±20mA + 1x 0..±10V). The analog outputs can be used to convert the SSI-value into an analog signal. The parallel datamodule has 24 inputs and 24 outputs. With this module it is possible to convert the position into BCD-, Gray- or Binary-code. The inputs can be used for external presets. To communicate with other devices the DSA has an optional RS485 communication device.



## Functions

### SSI-protocol and number of bits

Parameters can be set to 13 bit or 25 bit protocol and the number of bits that the DSA will use.

### Multiplicator and decimal point

Using the multiplicator and decimal point it is possible to adjust the displayed value. This feature makes it easy to work with millimeters, centimeters, inches, degrees etc.

### Electronic adjustment

This feature makes a mechanical adjustment of the rotary encoder unnecessary.

### Offset

It is possible to program a positive or negative offset.

### Disable programming mode

With a specific parameter it is possible to deny others access to the programming mode.

### Store

If a high signal is detected on the input "store", the displayed value will not be refreshed.

### Outputs

The four outputs can be programmed (with or without hysteresis!) as:

- ☐ Range signal.
- ☐ Limit switch.
- ☐ Time pulse.

### Difference measurement

By connecting three DSA displays it is possible to measure difference (A-B). Several parameters for this function are standard.

## Technical specifications

Supply voltage	10..35 VDC
Current drain	< 250 mA (< 150 mA at 24 VDC)
SSI-input	
Code	Gray; 25 bit protocol, 24 databits or 13 bit protocol, 12 databits
Data-input	Optocoupler, RS422
Clock-output	Driver, RS422
Clock-frequency	125 kHz
Inputs	Optically isolated; low 0..+5V ; high +10..+35V
Resistance	App. 1,8 kOhm at 24V
Output	Optically isolated, NPN transistor, open emitter with PTC
I <sub>max</sub>	50 mA
Supply voltage	Max. 35 V
Output voltage	Supply – 3,50 V (at 50mA)
	Supply – 2V (at 20mA)
Analog voltage output	
Range	-10.000 .. +10.000 V
Resolution	1,22 mV (14-bit D/A)
Max. off-set error	1 mV at 25°C
Max. current	10 mA (short circuit proof)
Analog current output	
Range	-20.00 .. +20 mA
Resolution	2,44 mA (14-bit D/A)
Max. off-set error	2µA at 25°C
R <sub>max</sub>	550E
Parallel data input	Optically isolated; low 0..+5V ; high +10..+35V
Resistance	6,8 kOhm at 24V
Parallel data output	Optically isolated, NPN transistor, open emitter with PTC
Current	50 mA max.
Supply voltage	35 V max.
Output voltage	Supply – 3,50 V (at 50mA)
	Supply – 2V (at 20mA)
Serial communication	EIA standard RS485
Display range	–9999999..99999999
Cycle time	5 ms
Datamemory	EEPROM
Display	8 digit, 7-segment red LED; 14mm high
Operating temperature	0 .. 50°C
Weight	< 0,6 kg
Protection	Front IP50; with protective cover IP54; Rear IP20

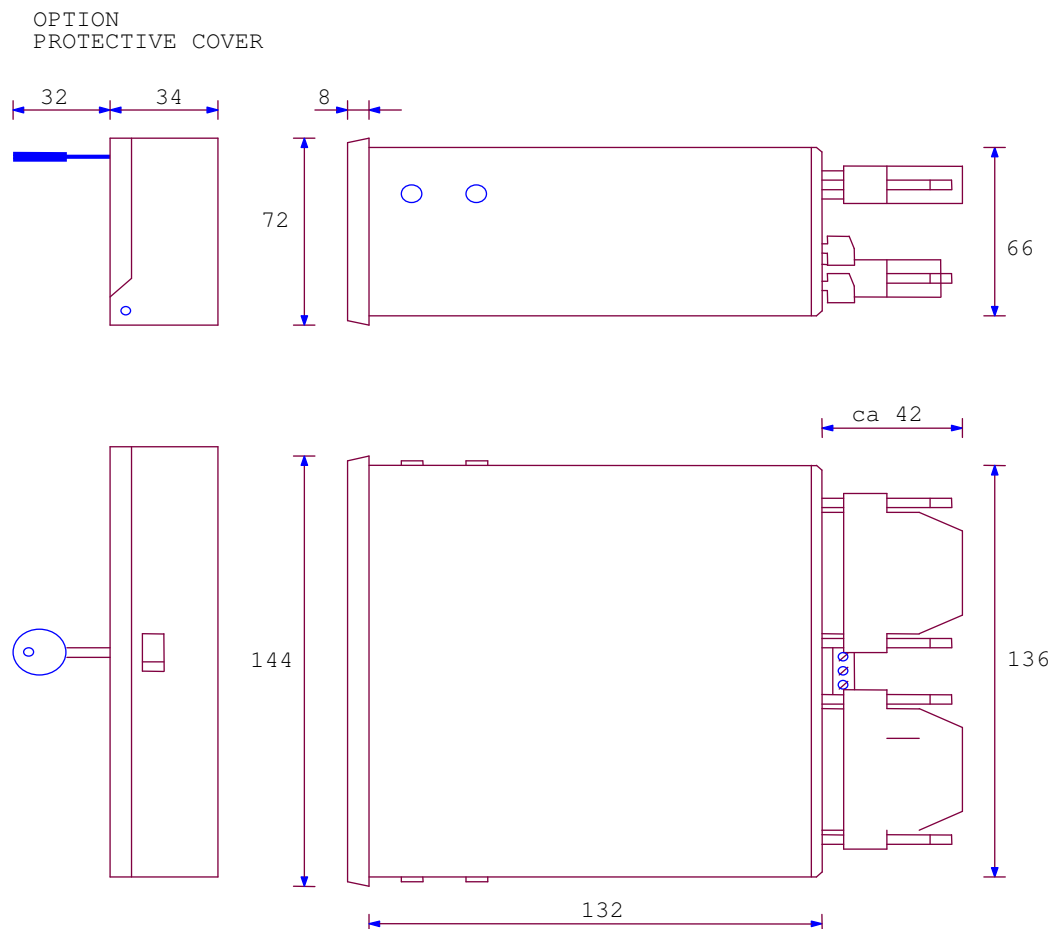
## Options

- ☐ Two fully programmable analog outputs (current and voltage, 14 bit D/A).
- ☐ 24 digital inputs and 24 digital outputs, used for external presetting and converting the position to BCD-, Binary- or Gray-code.
- ☐ RS485-communication.

## Connections

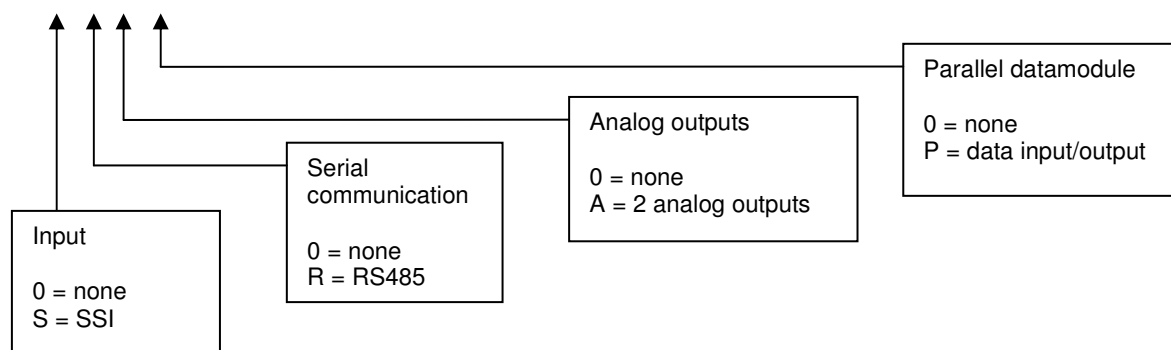
- ☐ Screw terminal.
- ☐ Data module: 37-pole Sub-D connectors.

## Sizes



## Ordering Guide

DSA-X X X X



Protective cover: **CDS-B**  
Connectors are included.

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