

# Signal converter

<b>Signal converter</b>	<b>SK 1S-1P</b>	<b>SSI - Parallel</b>
-------------------------	-----------------	-----------------------



The converter module been designed for industrial applications that require converting a sensor or encoder signal available in SSI format into a parallel signal.

This device has 12 screw terminal connections and a 37-pin (parallel) Sub-D socket.

The module can be easily and conveniently mounted in a cabinet on a standard DIN rail.

<p><b>DC</b> 18 ... 36 V Power supply</p>	<p>max. 100 kHz Input frequency</p>	<p>max. 30 Hz Output frequency</p>	<p>SSI input</p>	<p>DIN-rail mounting</p>
---	---	--	------------------	--------------------------

## Characteristics

- Input: synchronous serial interface SSI.
- Output: parallel, max. 26 bits, 8 .. 30 V, max. 100 mA, short-circuit proof and bus-capable.
- Master/Slave operation switchable.
- Switchable Gray/Binary input code.
- Switchable Gray/Binary/BCD output code.
- Hold and OE inputs.
- Strobe output.
- Housing for DIN rail mounting EN 50022.
- Connection with plug-in screw terminals and 37-pin Sub-D socket.

## Benefits

- SSI encoders for retrofitting old controls with parallel input.

<b>Order no.</b>		
Signal converter	<b>8.SK.1S-1P</b>	<i>Scope of delivery</i> - Signal converter - Manual

# Signal converter

<b>Signal converter</b>	<b>SK 1S-1P</b>	<b>SSI - Parallel</b>
-------------------------	-----------------	-----------------------

## Technical data

Electrical characteristics	
<b>Power supply</b>	18 ... 36 V DC 5 V DC $\pm$ 10% optional 12 V DC $\pm$ 10% optional
<b>Power consumption (no load)</b>	70 mA (18 ... 36 V DC) 250 mA (5 V DC) 110 mA (12 V DC)
<b>Isolation voltage</b>	500 V / 1 min
<b>Type of connection</b>	plug-in screw terminals and Sub-D female contacts, 37-pin

SSI signal input	
<b>Resolution</b>	10 ... 26 bits
<b>Code type</b>	Binary or Gray
<b>Data input</b>	RS422/RS485 receiver
<b>Clock input</b>	RS422/RS485 receiver
<b>Clock output</b>	RS422/RS485 driver
<b>Master operation</b>	clock frequency internal, 100 kHz data entry app. 30 values/sec
<b>Slave operation</b>	clock frequency internal, max. 125 kHz delay between pulse trains min 500 $\mu$ s data entry app. 30 values/sec

Mechanical characteristics	
<b>Material</b>	housing Polycarbonate
<b>Mounting</b>	35 mm DIN rail (acc. to EN 50022)
<b>Dimensions (W x H x D)</b>	45 x 118 x 137.5 mm [1.77 x 4.65 x 5.41"]
<b>Protection</b>	IP20
<b>Weight</b>	approx. 300 g [10.58 oz]
<b>Working temperature</b>	0 °C ... +50 °C [+32 °F ... +122 °F] non condensing
<b>Storage temperature</b>	-20 °C ... +70 °C [-4 °F ... +158 °F] non condensing
<b>Relative humidity</b>	< 80 % (non condensing)
<b>Protection class</b>	protection class II
<b>Application area</b>	pollution level 2 overvoltage category II

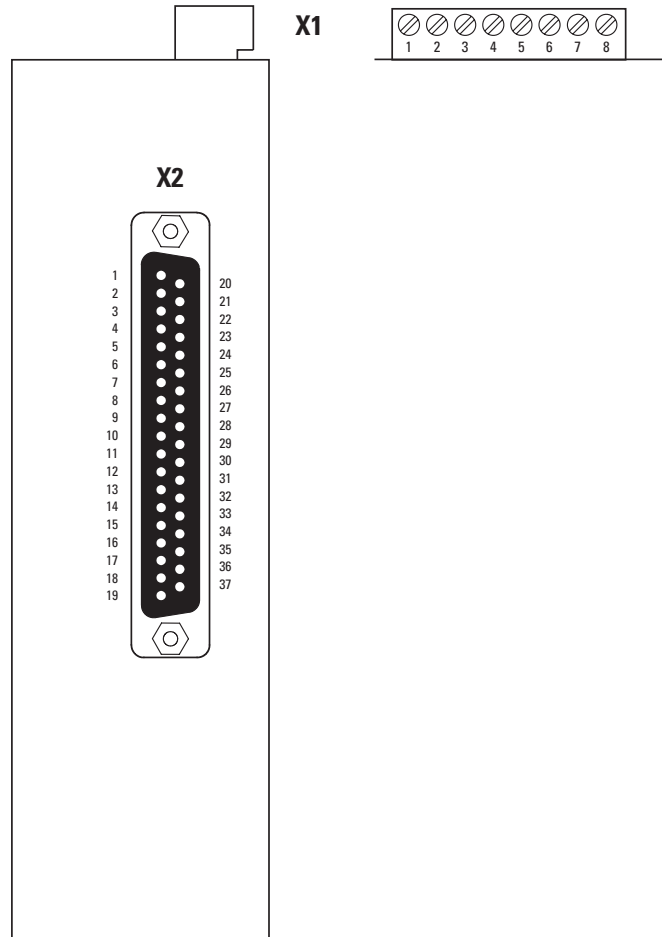
Parallel outputs	
<b>Logic</b>	PNP, 8 ... 30 V 100 mA, short-circuit proof
<b>Isolation voltage</b>	3 kV / 1 min

Approvals	
<b>CE compliant</b> in accordance with	
EMC Directive	2014/30/EU
RoHS Directive	2011/65/EU
<b>UKCA compliant</b> in accordance with	
EMC Regulations	S.I. 2016/1091
RoHS Regulations	S.I. 2012/3032

# Signal converter

<b>Signal converter</b>	<b>SK 1S-1P</b>	<b>SSI - Parallel</b>
-------------------------	-----------------	-----------------------

## Terminal assignment



Interface	Function	Screw terminals, 8-pin									
<b>Connection X1</b>		Signal:	0 V	+V	⊥	GND	Data-	Data+	Clk+	Clk-	
	Power supply	Pin:	7	8	6	-	-	-	-	-	
	SSI input	Pin:	-	-	-	5	4	3	2	1	

Interface	Function	Sub-D female contacts, 37-pin											
<b>Connection X2</b>	Parallel outputs	Signal:	Vs	Vs	Vs	Bit 0	Bit 1	Bit 2	Bit 3	Bit 4	Bit 5	Bit 6	
		Pin:	1	20	2	21	3	22	4	23	5	24	
		Signal:	Bit 7	Bit 8	Bit 9	Bit 10	Bit 11	Bit 12	Bit 13	Bit 14	Bit 15	Bit 16	
		Pin:	6	25	7	26	8	27	9	28	10	29	
		Signal:	Bit 17	Bit 18	Bit 19	Bit 20	Bit 21	Bit 23	Bit 22	Bit 24	Bit 25	Reserve	
		Pin:	11	30	12	31	13	32	14	33	15	34	
		Signal:	Error 2	Strobe	Error 1	Output Enable	Hold	GND	GND				
		Pin:	16	35	17	36	18	37	19				

+V : Power supply  
 0 V : Encoder power supply ground GND (0 V)  
 GND : Power supply ground GND (0 V)  
 SSI-GND  
 Data+, Data- : Data +/- (SSI)  
 Clk+, Clk- : Clock +/- (SSI)

Vs : Supply voltage output driver  
 Bit 0 ... 25 : Signal outputs  
 Reserve : Bus-capable signal lines (for extensions)  
 Error 1, 2 : Error signal output (1 = SSI, 2 = output driver)  
 Strobe : Output take-over pulses  
 Output Enable : Input bus control  
 Hold : Input holding value (up to max. 30 ms)

# Signal converter

<b>Signal converter</b>	<b>SK 1S-1P</b>	<b>SSI - Parallel</b>
-------------------------	-----------------	-----------------------

## Dimensions

Dimensions in mm [inch]

