

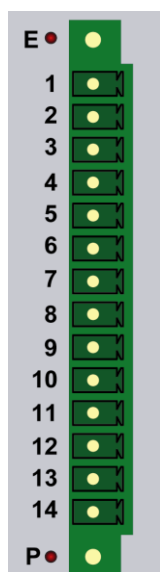
SSI input 5200



- SSI interface
- 2 interfaces
- Output voltage +5V RS485
- Input voltage +5V
- Galvanically isolated data channel
- Selectable between clockmaster / clockslave

Pinout

0	4	8	12
1	5	9	13
2	6	10	14
3	7	11	15



LED:	
0; (8)	data transfer channel 1
1; (9)	CRC error channel 1
4; (12)	data transfer channel 2
5; (13)	CRC error channel 2
E:	failure, red
P:	powers supply, red

Pin	Signal	
1	C1+	Output
2	C1-	Output
3	D1+	Input
4	D1-	Input
5	C2+	Output
6	C2-	Output
7	D2+	Input
8	D2-	Input
9	Power	+24V
10	Power	0V
11	Power	+24V
12	Power	0V
13	Power	+24V
14	Power	0V

*see notes

Attributes

Dataformat:
2x32 bit format

Applications:
The P5200 allows two SSI sensors to be connected directly. Diverse data transfer frequencies and bit widths can be adjusted. The sensor is powered by the SSI interface.

Available prints:

- @P5200L: 2 SSI sensor interfaces
- @P5200R: 2 SSI sensor interfaces

Related Applications:

- 1 SSI sensor interface
 - @P5100: 1 SSI sensor interface
- 2 SSI output interfaces
 - @P5220: 2 SSI slave interfaces

Electrical Data

Power supply external.....	GND required (*see notes), VCC max. +24V ±20%, optional
Operating current.....	5mA at +24V
Operating current @ctiveBus.....	25mA at +3,3V / 35mA at +5V
Input protection	30V overvoltage
SSI-frequency	1.25MHz / 625kHz / 312.5kHz / 156.25kHz
Signal output (Clock).....	difference signal (RS485)
.....	"Low" < -1,5 to -5V
.....	"High" > +1,5 to +5V
Signal input (Data)	difference signal (RS485 compatible)
.....	"Low" = < +0,8V
.....	"High" = > +2,1V to +5V at 4mA to 20mA,
.....	(recommended min. +2,8V or 7mA input current)
(*see notes)	

SSI input 5200

System Information

System ID 0X0204
 System address space 64 bit in, 64 bit out

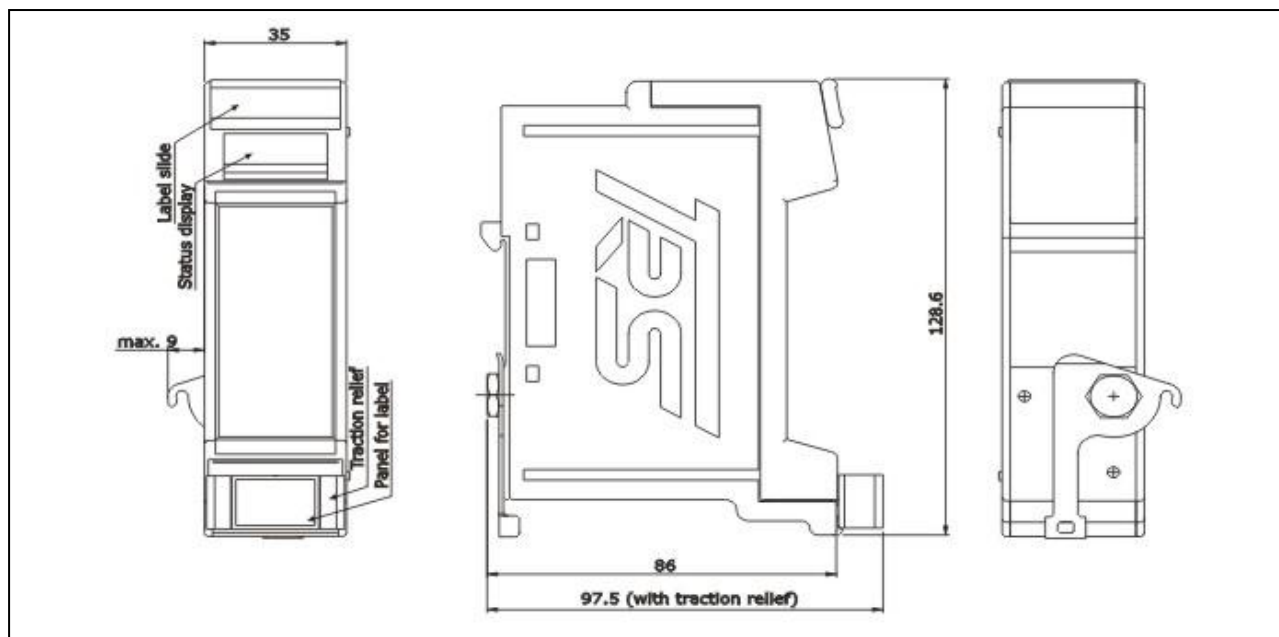
Environmental Conditions

Electromagnetic compatibility (EMC) EN 61000-4-2 (IEC-801-2) / EN 61000-4-4 (IEC-801-4)
 Operating temperature [°C] 0...+55
 Storage temperature [°C] -20...+70
 Humidity (rel) 98% (non condensing)
 Protection class* IP20 (DIN 40 050)
 *The protection class is valid only with housing and connector installed

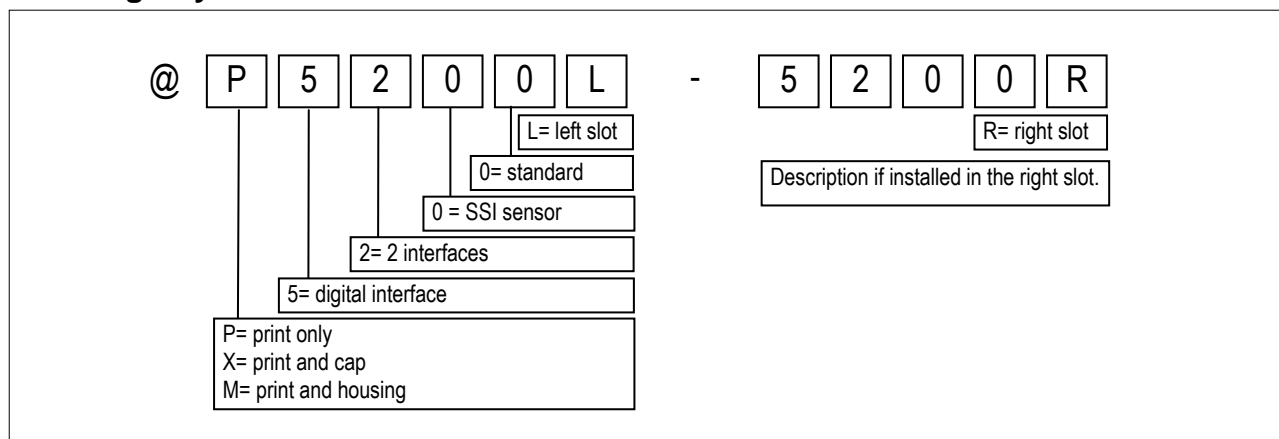
Mechanical Data PCB

Weight approx. 0.05 kg including connector
 Dimension 105mm x 80mm x 12mm

Drawing (effective if mounted in @M housing)



Ordering Key



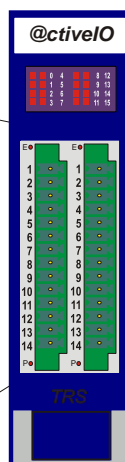
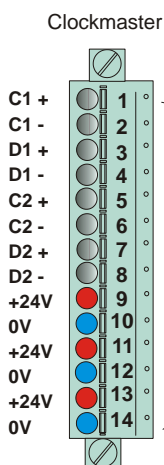
TRsystems GmbH, Eglisshalde 16, 78647 Trossingen, Tel.: +49 (0) 7425 228-0, Fax: +49 (0) 7425 228-34, www.trsystems.de, info@trsystems.de

SSI input 5200

Merkmale:

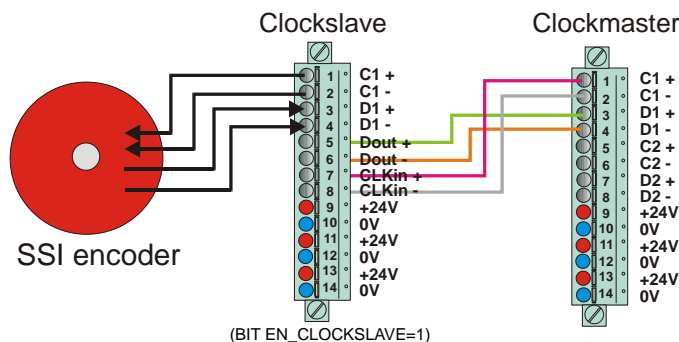
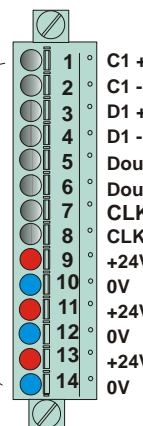
Two different mode are possible:

plug connection if configured as **Clockmaster**
Parameter **Bit 15 = 0**



Clockslave

plug connection if configured as **Clockslave**
Parameter **Bit 15 = 1**

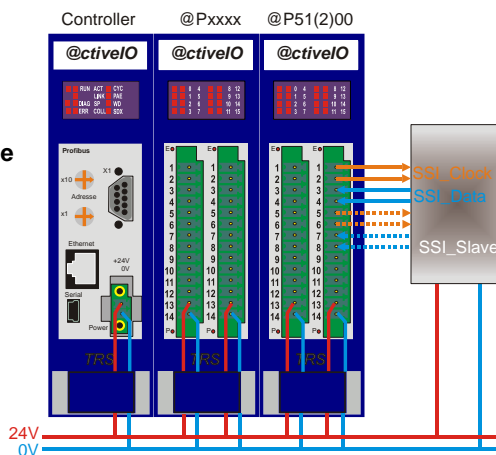


CLOCKSLAVE mode:

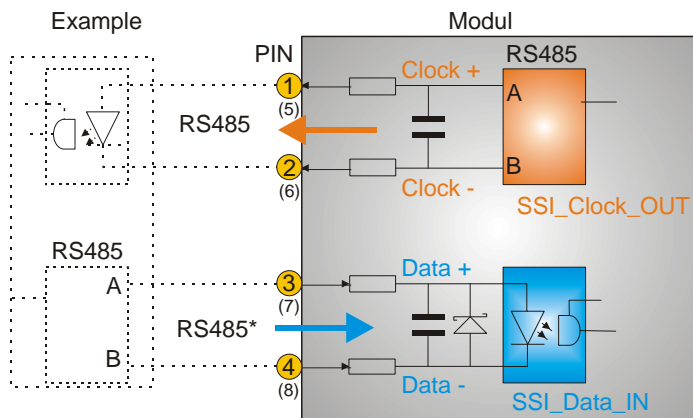
If using as clock master / clock slave module, the pinout is changing. The data- and clock-signal will be looped through the print (Clockslave) because the clock signal come from another hardware (Clockmaster).

Caution:

Power 0V has to be directly connected with power 0V of the interface partner and power 0V of the controller-module.



Example



*see Electrical Data

Input / output signal schematic for Clockmaster

On the left side is a recommendation for circuit from the input / output signal of the module.

SSI input 5200

notes:

Bit	Name	Description																		
0 / 32	Parameter enable	must be set high to change any function																		
1 / 33	not defined																			
2 / 34	not defined																			
3 / 35	not defined	a read access of parameter bit 3 to 0 deliver the firmware version																		
4 / 36 (LSB) - 9 / 41 (MSB)	amount of SSI clock's	amount SSI clock's = amount data bits + 1 min. 5, max. 33 with checksum (bit 14) max. 29																		
10 / 42	SSI clock	<table border="1"> <thead> <tr> <th colspan="2">Bit</th> <th></th> </tr> <tr> <th>11 (43)</th> <th>10 (42)</th> <th></th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1,25 MHz</td> </tr> <tr> <td>0</td> <td>1</td> <td>625 kHz</td> </tr> <tr> <td>1</td> <td>0</td> <td>312,5 kHz (default)</td> </tr> <tr> <td>1</td> <td>1</td> <td>156,25 kHz</td> </tr> </tbody> </table>	Bit			11 (43)	10 (42)		0	0	1,25 MHz	0	1	625 kHz	1	0	312,5 kHz (default)	1	1	156,25 kHz
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11 / 43																				
12 / 44	EN_MONO_PAUSE	1 = SSI clock start after mono pause 0 = (default) SSI clock start after data high and mono pause (mono pause = 28,8µs , independent from SSI clock)																		
13 / 45	EN_GRAY	SSI data gray coded																		
14 / 46	EN_CRC	SSI data with 15 bit checksum, only if checksum valid the data will be accepted. If EN_CRC = 1 data bit 30 contains checksum fail																		
15 / 47	EN_CLOCKSLAVE	SSI will be switched in clockslave mode, data and clock will be looped through the print.																		
16 / 48	EN_DTRANS_INFO	data bit 31 will be used for information datatransfer																		
17 / 49	SBUS_SYNC	SSI clocks will generated synchron to the system bus (Version 9 and later)																		

System bus data:

Bit 31-0 SSI1 Data, Bit 0 = LSB

If parameter bit 14 = 1 then data bit 30 = CRC_ERROR
..... CRC_ERROR = 1 -> Checksum failed, no valid data

If parameter bit 16 = 1 then data bit 31 = data transfer
data transfer = 1 data signal from SSI is changing, normally connected
data transfer = 0 no changing data signal from SSI, probably wire not connected or
no supply voltage

CLOCKSLAVE Mode:

If Parameter Bit 15 EN_CLOCKSLAVE = 1 then only parameter Bits from channel 1 (bit 0 - 17) takes affect. The SSI clock bits (10+11 / 42+43) have no function in this mode, because the clock signal come from another hardware (master).