



SIMATIC S7-1500, TM SIWAREX WP521 ST, single-channel weighing module for one platform or hopper scales with analog load cells / strain gauges (full bridges), 3xDI, 3xDQ, 1xRS485, 1xEthernet, 1xLC load cell interface (1-4mV/V)

General information	
Product type designation	TM SIWAREX WP521 ST
Firmware version	V1.0.0
<ul style="list-style-type: none"> FW update possible 	Yes
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	STEP 7 V14 or higher
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	GSD Revision 5
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML
Installation type/mounting	
Rail mounting	Yes; S7-1500 mounting rail
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> Rated value (DC) 	24 V
<ul style="list-style-type: none"> permissible range, lower limit (DC) 	19.2 V
<ul style="list-style-type: none"> permissible range, upper limit (DC) 	28.8 V
<ul style="list-style-type: none"> Reverse polarity protection 	Yes
Power	
Power consumption from the backplane bus	0.55 W
Power loss	
Power loss, typ.	2.4 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Inputs 	32 byte
<ul style="list-style-type: none"> Outputs 	32 byte
Digital inputs	
Number of digital inputs	3
Digital inputs, parameterizable	Yes
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Digital outputs	
Number of digital outputs	4
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
Digital output functions, parameterizable	
<ul style="list-style-type: none"> Switching tripped by comparison values 	Yes
<ul style="list-style-type: none"> Freely usable digital output 	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> with resistive load, max. 	0.5 A; Per digital output

Output voltage	
• Type of output voltage	DC
Output delay with resistive load	
• "0" to "1", max.	65 µs
• "1" to "0", max.	110 µs
Total current of the outputs	
• Current per module, max.	2 A
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Encoder	
Connection of signal encoders	
• For strain gauges (full bridges) with 4-conductor connection	Yes
• For strain gauges (full bridges) with 6-conductor connection	Yes
• Resistance of full bridge, min.	40 Ω
• Resistance of full bridge, max.	4 100 Ω
1. Interface	
Interface types	
• RS 485	Yes
2. Interface	
Interface types	
• RJ 45 (Ethernet)	Yes; 10/100 Mbit/s
• Number of ports	1
Interrupts/diagnostics/status information	
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
• Hardware interrupt	Yes
Diagnoses	
• Monitoring the supply voltage	Yes
• Wire-break	Yes
• Short-circuit	Yes
Diagnostics indication LED	
• RUN LED	Yes
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green LED
• Channel status display	Yes; green LED
• for channel diagnostics	Yes; red LED
Integrated Functions	
Counter	No
Fast mode	No
Load cell	
• Non-automatic weighing instrument	NAWI
• Sampling rate	100 Hz
• Resolution of input signal	±1 000 000 parts pro mV/V
• Common mode voltage, min.	0.25 V
• Common mode voltage, max.	4.75 V
• Cable length, max.	800 m; when using the SIWAREX 7MH4702-8AG cable
Measuring functions	
Measuring range	
— -1 mV/V to +1 mV/V	Yes
— -2 mV/V to +2 mV/V	Yes
— -4 mV/V to +4 mV/V	Yes
Potential separation	
Potential separation channels	
• between the channels and backplane bus	Yes
Isolation	
Isolation tested with	707 V DC (type test)

Ambient conditions

Ambient temperature during operation	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	40 °C

Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

Weights

Weight, approx.	240 g
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Classifications

	Version	Classification
eClass	14	27-24-22-05
eClass	12	27-24-22-05
eClass	9.1	27-24-22-05
eClass	9	27-24-22-05
eClass	8	27-24-22-05
eClass	7.1	27-24-22-05
eClass	6	27-24-22-05
ETIM	9	EC001422
ETIM	8	EC001422
ETIM	7	EC001422

Approvals / Certificates

General Product Approval	For use in hazardous locations
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[KC](#)

[FM](#)

For use in hazardous locations



[Miscellaneous](#)

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