



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
FW update possible	Yes
Product function	
I&M data	Yes; I&M0 to I&M3
Isochronous mode	Yes
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	STEP 7 V14 or higher
PROFIBUS from GSD version/GSD revision	GSD Revision 5
PROFINET from GSD version/GSD revision	GSDML
Installation type/mounting	
Rail mounting	Yes; S7-1500 mounting rail
Supply voltage	
Load voltage L+	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
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	
Inputs	32 byte
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	
Switching tripped by comparison values	Yes
Freely usable digital output	Yes
Switching capacity of the outputs	

• 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 μ s
• "1" to "0", max.	110 μ s
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
Interfaces	
Number of RS 485 interfaces	1
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	$\pm 1\,000\,000$ 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)		
Degree and class of protection			
IP degree of protection	IP20		
Standards, approvals, certificates			
CE mark	Yes; CE marking / EC Declaration of Conformity		
Ecological footprint			
environmental product declaration	Yes		
Global warming potential			
— global warming potential, (total) [CO2 eq]	122.59 kg		
— global warming potential, (during production) [CO2 eq]	23.3 kg		
— global warming potential, (during operation) [CO2 eq]	98.8 kg		
— global warming potential, (after end of life cycle) [CO2 eq]	0.49 kg		
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		
Air pressure acc. to IEC 60068-2-13			
Operation, min.	795 hPa		
Operation, max.	1 080 hPa		
Storage/transport, min.	660 hPa		
Storage/transport, max.	1 080 hPa		
Mechanics/material			
Enclosure material (front)	plastic		
Dimensions			
Width	35 mm		
Height	147 mm		
Depth	129 mm		
Weights			
Weight, approx.	240 g		
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	10	EC001422
	ETIM	9	EC001422
	ETIM	8	EC001422
	ETIM	7	EC001422
Approvals / Certificates			
General Product Approval			



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[KC](#)

For use in hazardous locations

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Environment



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