SIEMENS

Data sheet 7MH4980-1AA01



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	
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
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

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● 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 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
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	±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

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— -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	16	27-24-22-05
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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For use in hazardous locations

FM

Miscellaneous

Miscellaneous

Environment

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