

SIMATIC ET 200SP, TM SIWAREX WP351 HF, verifiable weighing module for automatic dosing-, filling-, checking- and totalizing scales, 3xDI, 3xDQ, 1xCI, 1xRS485, 1xEthernet, 1x LC (1-4mV/V) Calibration certificates in preparation



General information	
Product type designation	TM SIWAREX WP351 HF
HW functional status	1
Firmware version	V1.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
usable BaseUnits	BU type C0
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	No
<ul style="list-style-type: none"> <li>Adjustment of measuring range</li> </ul>	Yes; $\pm 0 \dots 4$ mV/V
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V15.1
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	- / -
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD as of Revision 5
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.34

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
• Short-circuit protection	Yes
• Reverse polarity protection	Yes
Input current	
Current consumption, max.	140 mA; Without DQ
Power	
Power available from the backplane bus	94.5 mW
Power loss	
Power loss, typ.	1.7 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
Input voltage	
• Type of input voltage	24 V DC
• Rated value (DC)	24 V
• for signal "0"	< 5 V DC
• for signal "1"	+11 to +30V
• permissible voltage at input, min.	-30 V
• permissible voltage at input, max.	30 V
Input current	
• for signal "1", typ.	1.6 mA
Input delay (for rated value of input voltage)	
for technological functions	
— parameterizable	Yes
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Digital outputs	
Number of digital outputs	3
Current-sourcing	Yes

Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
Digital output functions, parameterizable	
• Freely usable digital output	Yes
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
Output voltage	
• Type of output voltage	DC
Output delay with resistive load	
• "0" to "1", typ.	20 μs
• "1" to "0", typ.	30 μs
Parallel switching of two outputs	
• for uprating	No
Switching frequency	
• with resistive load, max.	500 Hz
Total current of the outputs	
• Current per channel, max.	0.5 A; the total current of all outputs ≥ 0.6 A, the ambient temperature is reduced by -1 °C per 100 mA
• Current per module, max.	1.5 A; Observe derating
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.	56 Ω; when using SIWAREX IS 87 ohm for 7MH4710-5BA; 180 ohm when using 7MH4710-5CA
• Resistance of full bridge, max.	4 100 Ω

## Errors/accuracies

Linearity error (relative to input range), (+/-)	0.001 %
Error limit according to DIN 1319-1	0.002 %; of full-scale value
Accuracy class	III
Temperature coefficient, zero point	≤ ±0.015 μV/K
Temperature coefficient, span	≤ ±5 ppm/K

## 1. Interface

Interface types	
• RS 485	Yes; Terminated internally with 390 Ω / 220 Ω / 390 Ω

## 2. Interface

Interface types	
• Number of ports	1
• RJ 45 (Ethernet)	Yes; 10/100 Mbit/s
Protocols	
• IP protocol	Yes; IPv4
• Web server	Yes
Interface types	
RJ 45 (Ethernet)	
• Autonegotiation	Yes
• Autocrossing	Yes
RS 485	
• Transmission rate, max.	115.2 kbit/s
• Cable length, max.	1 000 m; ≤ 115 kbps, shielded cable
Protocols	
Web server	
• HTTP	Yes
• HTTPS	No
Interrupts/diagnostics/status information	
Diagnostics function	Yes; Diagnostic alarm
Substitute values connectable	No
Alarms	
• Diagnostic alarm	Yes; Parameterizable
• Hardware interrupt	Yes; Parameterizable
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes
• Short-circuit	Yes
• Group error	Yes; green/red DIAG LED
Diagnostics indication LED	
• ERROR LED	Yes; green/red DIAG LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
Integrated Functions	
Load cell	
• Automatic weighing instrument	SWA/AGFI; SWE/ACI; SKW/SCW; SWT/DTAWI
• Non-automatic weighing instrument	NAWI
• fraction of the error limit pi	0.4
• Number of verification intervals, max.	3x 6 000 d (d=e)
• permissible input signal per verification interval, min.	0.5 µV/d (d=e)
• Sampling rate	1 024 Hz

- Resolution of input signal ±20 000 000 parts at 0 ... 4 mV/V
- Common mode voltage, min. 2.8 V
- Common mode voltage, max. 7.7 V
- input resistance of signal line, typ. 8 MΩ
- input resistance of sense line, typ. 300 MΩ
- Cable length, max. 500 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

#### Isolation

Isolation tested with 707 V DC (type test)

#### Ambient conditions

##### Ambient temperature during operation

- horizontal installation, min. -30 °C
- horizontal installation, max. 60 °C
- vertical installation, min. -30 °C
- vertical installation, max. 50 °C

##### Altitude during operation relating to sea level

- Installation altitude above sea level, max. 5 000 m; more than 2 000 m above sea level, the ambient temperature is reduced by -1 °C per 100 m
- Ambient air temperature-barometric pressure-altitude 1 080 ... 533 hPa (-1 000 ... 5 000 m above sea level)

#### Decentralized operation

- to SIMATIC S7-300 Yes
- to SIMATIC S7-400 Yes
- to SIMATIC S7-1200 Yes
- to SIMATIC S7-1500 Yes
- to standard PROFIBUS master Yes
- to standard PROFINET controller Yes

#### Dimensions

- Width 20 mm
- Height 57 mm
- Depth 72 mm

#### Weights

Weight, approx. 50 g

**last modified:** 07/13/2020