

Temperature module, 3 inputs for connection of up to 3 temperature sensors, for SIMOCODE pro V basic unit

product brand name	SIMOCODE
product designation	temperature module
product type designation	TM
General technical data	
product component	
• input for thermistor connection	No
• input for analog temperature sensors	Yes
• input for ground fault detection	No
consumed active power	0.2 W
surge voltage resistance rated value	4 000 V
shock resistance according to IEC 60068-2-27	15 g / 11 ms
vibration resistance according to IEC 60068-2-6	1 ... 6 Hz: 15 mm, 6 ... 500 Hz: 2 g
reference code according to IEC 81346-2	B
measurable temperature	
• initial value	-50 °C
• full-scale value	500 °C
Substance Prohibition (day/month/year)	05/01/2012
SVHC substance name	Lead CAS-No. 7439-92-1 Lead monoxide (lead oxide) CAS-No. 1317-36-8 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one CAS-No. 71868-10-5 Melamine CAS-No. 108-78-1
Net Weight	131 g
measurable temperature	
• with NTC minimum	80 °C
• with NTC maximum	160 °C
• with KTY 84 minimum	-40 °C
• with KTY 84 maximum	300 °C
• with KTY 83-110 minimum	-50 °C
• with KTY 83-110 maximum	175 °C
• with Pt 1000 minimum	-50 °C
• with Pt 1000 maximum	500 °C
• with Pt 100 minimum	-50 °C
• with Pt 100 maximum	500 °C
relative temperature-related measurement deviation at 20 °C	2 %
sensor current for Pt 100 typical	1 mA
sensor current for Pt 1000/KTY 83-110/KTY 84/NTC typical	0.2 mA
diagnostics function at sensor input with Pt 100	
• short-circuit detection	Yes
• open-circuit detection	Yes
diagnostics function at sensor input with Pt 1000	
• short-circuit detection	Yes
• open-circuit detection	Yes
diagnostics function at sensor input with KTY 83-110	
• short-circuit detection	Yes
• open-circuit detection	Yes
diagnostics function at sensor input with KTY 84	
• short-circuit detection	Yes
• open-circuit detection	Yes
diagnostics function at sensor input with NTC	

<ul style="list-style-type: none"> • short-circuit detection 	Yes
<ul style="list-style-type: none"> • open-circuit detection 	No
type of connection technology of sensor circuit	2-wire or 3-wire connection
A/D conversion time at sensor circuit	500 ms
Electromagnetic compatibility	
EMC emitted interference according to IEC 60947-1	class A
EMC immunity according to IEC 60947-1	corresponds to degree of severity 3
conducted interference	
<ul style="list-style-type: none"> • due to burst according to IEC 61000-4-4 	1 kV
<ul style="list-style-type: none"> • due to conductor-earth surge according to IEC 61000-4-5 	2 kV
<ul style="list-style-type: none"> • due to conductor-conductor surge according to IEC 61000-4-5 	1 kV
field-based interference according to IEC 61000-4-3	10 V/m
Inputs/ Outputs	
number of inputs	3
number of digital inputs	0
number of analog inputs	3
number of outputs as contact-affected switching element	0
number of analog outputs	0
Protective and monitoring functions	
design of the sensor for temperature measurement connectable	PT100 / PT1000 / KTY83-110 / KTY84 / NTC
Precision	
temperature drift per °C	0.05 %/°C
Installation/ mounting/ dimensions	
mounting position	any
fastening method	screw and snap-on mounting
height	92 mm
width	22.5 mm
depth	124 mm
required spacing	
<ul style="list-style-type: none"> • top 	40 mm
<ul style="list-style-type: none"> • bottom 	40 mm
<ul style="list-style-type: none"> • left 	0 mm
<ul style="list-style-type: none"> • right 	0 mm
Connections/ Terminals	
type of electrical connection for auxiliary and control circuit	screw-type terminals
type of connectable conductor cross-sections	
<ul style="list-style-type: none"> • solid 	1x (0.5 ... 4.0mm ²), 2x (0.5 ... 2.5 mm ²)
<ul style="list-style-type: none"> • finely stranded with core end processing 	1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.5 mm ²)
<ul style="list-style-type: none"> • for AWG cables solid 	1x (20 ... 14), 2x (20 ... 16)
<ul style="list-style-type: none"> • for AWG cables stranded 	1x (20 ... 12), 2x (20 ... 14)
tightening torque with screw-type terminals	0.8 ... 1.2 N·m
tightening torque [lbf·in] with screw-type terminals	7 ... 10.3 lbf·in
Ambient conditions	
installation altitude at height above sea level	
<ul style="list-style-type: none"> • 1 maximum 	2 000 m
<ul style="list-style-type: none"> • 2 maximum 	3 000 m; max. +50 °C (no protective separation)
<ul style="list-style-type: none"> • 3 maximum 	4 000 m; max. +40 °C (no protective separation)
ambient temperature	
<ul style="list-style-type: none"> • during operation 	-25 ... +60 °C
<ul style="list-style-type: none"> • during storage 	-40 ... +80 °C
<ul style="list-style-type: none"> • during transport 	-40 ... +80 °C
environmental category	
<ul style="list-style-type: none"> • during operation according to IEC 60721 	3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
<ul style="list-style-type: none"> • during storage according to IEC 60721 	3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
<ul style="list-style-type: none"> • during transport according to IEC 60721 	3K6 (no formation of ice, no condensation), 3C3 (no salt mist), 3S2 (sand must not get into the devices), 3M6
relative humidity during operation	5 ... 95 %

Electrical Safety

touch protection against electrical shock finger-safe

Galvanic isolation

galvanic isolation between inputs and electronics No

Approvals Certificates

Environment General Product Approval

[Environmental Con-
firmations](#)



General Product Approval EMV Test Certificates Maritime application



[Type Test Certificates/Test Report](#)



Maritime application other Industrial Commu-
nication



[Confirmation](#)

[Confirmation](#)



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3UF7700-1AA00-0>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3UF7700-1AA00-0>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3UF7700-1AA00-0>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3UF7700-1AA00-0&lang=en

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