## **SIEMENS**

## **Data sheet**

## 6ES7144-5KD50-0BA0



SIMATIC ET 200AL, AI 4xRTD/TC, 4x M12, degree of protection IP67

General information	
Product type designation	AI 4xRTD/TC
HW functional status	FS01
Firmware version	V1.0.x
Product function	
● I&M data	Yes; I&M0 to I&M3
Engineering with	
STEP 7 TIA Portal configurable/integrated from version	STEP 7 V16 or higher
<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP4 and higher
<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD as of Revision 5
<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	GSDML V2.34
Supply voltage	
power supply according to NEC Class 2 required	No
Load voltage 1L+	
<ul> <li>Rated value (DC)</li> </ul>	24 V
<ul> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
<ul> <li>Reverse polarity protection</li> </ul>	Yes; against destruction
Input current	
Current consumption (rated value)	25 mA; without load
from load voltage 1L+ (unswitched voltage)	4 A; Maximum value
from load voltage 2L+, max.	4 A; Maximum value
Power loss	
Power loss, typ.	0.6 W
Analog inputs	
Number of analog inputs	4
<ul> <li>For voltage measurement</li> </ul>	4
<ul> <li>For resistance/resistance thermometer measurement</li> </ul>	4
For thermocouple measurement	4
permissible input voltage for voltage input (destruction limit), max.	15 V
Constant measurement current for resistance-type transmitter, typ.	230 300 μΑ
Cycle time (all channels), min.	90 ms
Technical unit for temperature measurement adjustable	Yes; Degrees Celsius / degrees Fahrenheit / Kelvin
Input ranges (rated values), voltages	
• -80 mV to +80 mV	Yes; 16 bit incl. sign
<ul><li>— Input resistance (-80 mV to +80 mV)</li></ul>	10 ΜΩ
Input ranges (rated values), thermocouples	
• Type B	Yes; 16 bit incl. sign
— Input resistance (Type B)	10 ΜΩ

Type C		
Type   Yes, 16 bit Incl. sign   10 MD   Yes, 16 bit Incl. sign	• Type C	Yes; 16 bit incl. sign
- Type I	— Input resistance (Type C)	10 ΜΩ
- Type J - Input resistance (Type I) - Type I -	• Type E	Yes; 16 bit incl. sign
- Tipout resistance (type U)  - Type K  - Type K  - Input resistance (Type K)  - Input resistance (Type K)  - Input resistance (Type N)  - Type N  - Input resistance (Type N)  - Input resistance (Type N)  - Input resistance (Type N)  - Input resistance (Type R)  - Input resistance (Type S)  - Input resistance (Type S)  - Input resistance (Type T)  - Input resistance (Type T)  - Input resistance (Type U)  - Input resistance (Type U)  - Input resistance (Ni 100)  - Ni 100  - Ni 100  - Input resistance (Ni 100)  - Input resistance (Ni 100)  - Input resistance (Pt 100)  - Input resistance (P	— Input resistance (Type E)	10 ΜΩ
- Type K	• Type J	Yes; 16 bit incl. sign
Input resistance (Type IX)  Type IX  Input resistance (Type IX)  Input resistance (IX IX I	<ul><li>— Input resistance (type J)</li></ul>	10 ΜΩ
- Type L  - Input resistance (Type L)  - Type N  - Input resistance (Type N)  - Type R  - Input resistance (Type N)  - Type R  - Input resistance (Type R)  - Type T  - Input resistance (Type T)  - Input resistance (Type T)  - Input resistance (Type T)  - Input resistance (Type U)  - Input resistance (Ni 100)  - Ni 1000  - Ni 1000  - Ni 1000  - Input resistance (Ni 100)  - Ni 1000  - Input resistance (Pt 100)  - Input	• Type K	Yes; 16 bit incl. sign
Type N	<ul><li>— Input resistance (Type K)</li></ul>	10 ΜΩ
Type N	• Type L	Yes; 16 bit incl. sign
Type R	<ul><li>— Input resistance (Type L)</li></ul>	10 ΜΩ
Type R	• Type N	Yes; 16 bit incl. sign
Type S	<ul><li>— Input resistance (Type N)</li></ul>	10 ΜΩ
Type S	• Type R	Yes; 16 bit incl. sign
- Input resistance (Type S)  ■ Type T Input resistance (Type T) Input resistance (Type U) Input ranges (rated values), resistance thermometer  ■ Ni 100 Input ranges (rated values), resistance thermometer  ■ Ni 100 Input resistance (Ni 100) Input resistance (Ni 100) Input resistance (Ni 100) Input resistance (Ni 100) Input resistance (Ni 1000) Input resistance (Ni 1000	<ul><li>— Input resistance (Type R)</li></ul>	10 ΜΩ
Type T	• Type S	Yes; 16 bit incl. sign
Input resistance (Type T)	<ul><li>— Input resistance (Type S)</li></ul>	10 ΜΩ
	• Type T	Yes; 16 bit incl. sign
Input resistance (Type U)	— Input resistance (Type T)	10 ΜΩ
Input resistance (Type U)	• Type U	Yes; 16 bit incl. sign
Nil 100		10 ΜΩ
- Input resistance (Ni 1000)	Input ranges (rated values), resistance thermometer	
Ni 1000     — Input resistance (Ni 1000)	• Ni 100	Yes; Standard/climate
- Input resistance (Ni 1000) PI 1000	— Input resistance (Ni 100)	10 ΜΩ
Pt 100     — Input resistance (Pt 100)     Pt 1000     — Pt 1000     — Input resistance (Pt 1000)     — Input resistance (Input	• Ni 1000	Yes; Standard/climate
- Input resistance (Pt 100) Per 1000	— Input resistance (Ni 1000)	10 ΜΩ
PH 1000     — Input resistance (Pt 1000)     Input range (rated values), resistors		Yes; Standard/climate
Input resistance (Pt 1000) 10 MΩ  Input ranges (rated values), resistors  ● 0 to 150 ohms	— Input resistance (Pt 100)	10 ΜΩ
Input ranges (rated values), resistors  • 0 to 150 ohms	• Pt 1000	Yes; Standard/climate
Input ranges (rated values), resistors	— Input resistance (Pt 1000)	
- Input resistance (0 to 150 ohms)  • 0 to 300 ohms - Input resistance (0 to 300 ohms)  Thermocouple (TC)  Temperature compensation  - parameterizable - internal temperature compensation with compensations socket - dynamic reference temperature - fixed reference temperature  **Cable length**  • shielded, max.  **Analog value generation for the inputs*  **Measurement principle integration and conversion time/resolution per channel  • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time, parameterizable • Integration alconversion time for wire-break monitoring - additional conversion time for resistance measurement • Interference voltage suppression for interference frequency ff in Hz  Smoothing of measured values  • parameterizable • Step: None • Step: None • Step: None • Step: Medium  * Yes; 16x cycle time  * Yes; 16x cycle time	Input ranges (rated values), resistors	
O to 300 ohms — Input resistance (0 to 300 ohms)  Thermocouple (TC)  Temperature compensation — parameterizable Yes — internal temperature compensation Yes — external temperature compensation with compensation socket — dynamic reference temperature value Yes — fixed reference temperature Ves  Cable length  • shielded, max. 30 m  Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes; channel by channel • Integration time (ms) — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values • Step: None • Step: None • Step: Medium  Ves • 10 MΩ  Yes  Yes  O 10 MΩ  Yes  Yes  Yes  O 2 MS  O 30 M  Analog value generation for the inputs  Integration  Integration  Integration  Integration time/resolution per channel  • Resolution with overrange (bit including sign), max.  16 bit  Yes; channel by channel  16.7 / 20 / 60  18 / 21 / 61 ms  4 ms  2 ms  Smoothing of measured values  • yes  Step: None • Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes	• 0 to 150 ohms	Yes
● 0 to 300 ohms — Input resistance (0 to 300 ohms) 10 MΩ  Thermocouple (TC)  Temperature compensation — parameterizable Yes — internal temperature compensation Yes — external temperature compensation with compensations socket — dynamic reference temperature Ves — fixed reference temperature Ves  Cable length ● shielded, max. 30 m  Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel ● Resolution with overrange (bit including sign), max. ● Integration time, parameterizable Ves; channel by channel ● Integration time (ms) ■ Basic conversion time, including integration time (ms) — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement ● Interference voltage suppression for interference frequency ff in Hz  Smoothing of measured values  ● parameterizable Yes • Step: None Yes; 1x cycle time • Step: None • Step: Medium  • Step: Medium  Yes (16 x cycle time  Yes; 16 x cycle time	— Input resistance (0 to 150 ohms)	10 ΜΩ
Thermocouple (TC)  Temperature compensation  — parameterizable Yes — internal temperature compensation Yes — external temperature compensation with compensations socket — dynamic reference temperature value Yes — fixed reference temperature Yes  Cable length  • shielded, max. 30 m  Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes; channel by channel • Integration time (ms) • Basic conversion time for wire-break monitoring — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values • parameterizable Yes; 1x cycle time • Step: None Yes; 1x cycle time • Step: Medium  Yes; 16x cycle time		Yes
Thermocouple (TC)  Temperature compensation  — parameterizable Yes — internal temperature compensation Yes — external temperature compensation with compensations socket — dynamic reference temperature value Yes — fixed reference temperature Yes  Cable length  • shielded, max. 30 m  Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes; channel by channel • Integration time (ms) • Basic conversion time for wire-break monitoring — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values • parameterizable Yes; 1x cycle time • Step: None Yes; 1x cycle time • Step: Medium  Yes; 16x cycle time	— Input resistance (0 to 300 ohms)	10 ΜΩ
Temperature compensation  - parameterizable	· · · · · · · · · · · · · · · · · · ·	
— parameterizable — internal temperature compensation — external temperature compensation with compensations socket — dynamic reference temperature value — fixed reference temperature — fixed reference temperature  Cable length  • shielded, max.  Analog value generation for the inputs  Measurement principle Integration and conversion time/resolution per channel  • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time, parameterizable • Integration time, including integration time (ms) — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  • parameterizable • Step: None • Step: None • Step: Iow • Step: Medium  Yes; 18 cycle time  Yes; 18 cycle time		
internal temperature compensation external temperature compensation with compensation socket dynamic reference temperature value fixed reference temperature shielded, max.  20 m  Analog value generation for the inputs  Measurement principle Integration and conversion time/resolution per channel  • Resolution with overrange (bit including sign), max. • Integration time, parameterizable • Integration time (ms) additional conversion time for wire-break monitoring additional conversion time for wire-break monitoring additional conversion time for resistance measurement • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  • parameterizable • Step: None • Step: None • Step: low • Step: Medium  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Ye		Yes
- external temperature compensation with compensations socket - dynamic reference temperature value - fixed reference temperature  **Cable length  **shielded, max.**  **Analog value generation for the inputs  **Measurement principle**  **Integration and conversion time/resolution per channel  **Resolution with overrange (bit including sign), max.**  **Integration time, parameterizable**  **Integration time (ms)**  **Basic conversion time, including integration time (ms)**  - additional conversion time for wire-break monitoring - additional conversion time for resistance measurement  **Interference voltage suppression for interference frequency f1 in Hz  **Smoothing of measured values**  **Pes**  **Step: None**  **Step: None**  **Step: None**  **Step: Medium**  **Yes**  **Step: None**  **Yes**	•	
compensations socket  dynamic reference temperature value fixed reference temperature Yes  Cable length  • shielded, max.  Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel  • Resolution with overrange (bit including sign), max. • Integration time, parameterizable Yes; channel by channel  • Integration time (ms) 16.7 / 20 / 60  • Basic conversion time, including integration time (ms) 18 / 21 / 61 ms  additional conversion time for wire-break monitoring additional conversion time for resistance measurement  • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  • parameterizable Yes  • Step: None Yes; 1x cycle time  • Step: low Yes; 4x cycle time  • Step: Medium  Yes; 16x cycle time  Yes; 16x cycle time	·	
Cable length  • shielded, max.  Analog value generation for the inputs  Measurement principle Integration and conversion time/resolution per channel  • Resolution with overrange (bit including sign), max.  • Integration time, parameterizable  • Integration time, parameterizable  • Integration time, including integration time (ms)  • Basic conversion time, including integration time (ms)  — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement  • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  • parameterizable  • Step: None • Step: low • Step: Medium  Yes; 16x cycle time Yes; 16x cycle time Yes; 16x cycle time		
Cable length  • shielded, max.  Analog value generation for the inputs  Measurement principle Integration and conversion time/resolution per channel  • Resolution with overrange (bit including sign), max.  • Integration time, parameterizable  • Integration time (ms)  • Basic conversion time, including integration time (ms)  — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement  • Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  • parameterizable  • Step: None  • Step: low • Step: Medium  9 and Max.  30 m  30 m  30 m  30 m  30 m  30 m  4 ms  16 bit  Yes; channel by channel  16.7 / 20 / 60  18 / 21 / 61 ms  4 ms  2 ms  60 / 50 / 16.7 frequency f1 in Hz	<ul> <li>— dynamic reference temperature value</li> </ul>	Yes
shielded, max.  Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel  Resolution with overrange (bit including sign), max. Integration time, parameterizable Yes; channel by channel Integration time (ms) Basic conversion time, including integration time (ms) Additional conversion time for wire-break monitoring Additional conversion time for resistance measurement Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  Parameterizable Yes Step: None Step: low Step: Medium  Step: Medium  Step: Medium  Additional conversion time for resistance for yes the conversion of the form of the conversion of the form of the conversion of the c	— fixed reference temperature	Yes
Analog value generation for the inputs  Measurement principle integration and conversion time/resolution per channel  Resolution with overrange (bit including sign), max. Integration time, parameterizable integration time (ms) including integration time (ms) Basic conversion time, including integration time (ms) Additional conversion time for wire-break monitoring in additional conversion time for resistance measurement Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  Parameterizable Yes Step: None Yes; 1x cycle time Step: low Yes; 16x cycle time Yes; 16x cycle time	Cable length	
Measurement principle integrating  Integration and conversion time/resolution per channel  Resolution with overrange (bit including sign), max.  Integration time, parameterizable Yes; channel by channel  Integration time (ms) 16.7 / 20 / 60  Basic conversion time, including integration time (ms) 18 / 21 / 61 ms  — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement  Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  Parameterizable Yes  Step: None Yes; 1x cycle time  Step: low Yes; 4x cycle time  Step: Medium Yes; 16x cycle time	• shielded, max.	30 m
Integration and conversion time/resolution per channel  Resolution with overrange (bit including sign), max.  Integration time, parameterizable  Integration time (ms)  Basic conversion time, including integration time (ms)  Additional conversion time for wire-break monitoring  Additional conversion time for resistance measurement  Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  Parameterizable  Step: None Step: low Step: Medium  Yes; 16x cycle time Yes; 16x cycle time Yes; 16x cycle time Yes; 16x cycle time	Analog value generation for the inputs	
<ul> <li>Resolution with overrange (bit including sign), max.</li> <li>Integration time, parameterizable</li> <li>Integration time (ms)</li> <li>Basic conversion time, including integration time (ms)</li> <li>— additional conversion time for wire-break monitoring</li> <li>— additional conversion time for resistance measurement</li> <li>Interference voltage suppression for interference frequency f1 in Hz</li> <li>Smoothing of measured values</li> <li>• parameterizable</li> <li>• Step: None</li> <li>• Step: low</li> <li>• Step: Medium</li> <li>Yes; 1x cycle time</li> <li>Yes; 16x cycle time</li> <li>Yes; 16x cycle time</li> </ul>	Measurement principle	integrating
<ul> <li>Integration time, parameterizable</li> <li>Integration time (ms)</li> <li>Basic conversion time, including integration time (ms)</li> <li>— additional conversion time for wire-break monitoring</li> <li>— additional conversion time for resistance measurement</li> <li>Interference voltage suppression for interference frequency f1 in Hz</li> <li>Smoothing of measured values</li> <li>• parameterizable</li> <li>• Step: None</li> <li>• Step: low</li> <li>• Step: Medium</li> <li>Yes; 16x cycle time</li> <li>Yes; 16x cycle time</li> </ul>	Integration and conversion time/resolution per channel	
<ul> <li>Integration time (ms)</li> <li>Basic conversion time, including integration time (ms)</li> <li>— additional conversion time for wire-break monitoring</li> <li>— additional conversion time for resistance measurement</li> <li>Interference voltage suppression for interference frequency f1 in Hz</li> <li>Smoothing of measured values</li> <li>Parameterizable</li> <li>Step: None</li> <li>Step: low</li> <li>Step: Medium</li> <li>16.7 / 20 / 60</li> <li>18 / 21 / 61 ms</li> <li>4 ms</li> <li>2 ms</li> <li>60 / 50 / 16.7</li> <li>Fes</li> <li>Yes</li> <li>Yes</li> <li>Yes; 1x cycle time</li> <li>Yes; 4x cycle time</li> <li>Yes; 4x cycle time</li> <li>Yes; 16x cycle time</li> </ul>	Resolution with overrange (bit including sign), max.	16 bit
Basic conversion time, including integration time (ms)  — additional conversion time for wire-break monitoring — additional conversion time for resistance measurement  Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  Parameterizable Step: None Step: None Step: low Step: Medium  18 / 21 / 61 ms  4 ms  2 ms  60 / 50 / 16.7  Fes  4 ms  60 / 50 / 16.7  Fes  4 ms  7 ms	<ul> <li>Integration time, parameterizable</li> </ul>	Yes; channel by channel
<ul> <li>— additional conversion time for wire-break monitoring</li> <li>— additional conversion time for resistance measurement</li> <li>• Interference voltage suppression for interference frequency f1 in Hz</li> <li>Smoothing of measured values</li> <li>• parameterizable</li> <li>• Step: None</li> <li>• Step: low</li> <li>• Step: Medium</li> <li>Yes; 1x cycle time</li> <li>• Step: Medium</li> <li>Yes; 16x cycle time</li> </ul>	<ul><li>Integration time (ms)</li></ul>	16.7 / 20 / 60
<ul> <li>— additional conversion time for resistance measurement</li> <li>Interference voltage suppression for interference frequency f1 in Hz</li> <li>Smoothing of measured values</li> <li>parameterizable</li> <li>Step: None</li> <li>Step: low</li> <li>Step: Medium</li> <li>Yes; 1x cycle time</li> <li>Yes; 4x cycle time</li> <li>Step: Medium</li> <li>Yes; 16x cycle time</li> </ul>	<ul> <li>Basic conversion time, including integration time (ms)</li> </ul>	18 / 21 / 61 ms
measurement  Interference voltage suppression for interference frequency f1 in Hz  Smoothing of measured values  parameterizable  Step: None  Step: low  Step: low  Step: Medium  Medium  Fig. 100 / 50 / 16.7  Fig. 100 / 50 / 10.7  Fig. 100 / 5	— additional conversion time for wire-break monitoring	4 ms
<ul> <li>Interference voltage suppression for interference frequency f1 in Hz</li> <li>Smoothing of measured values</li> <li>parameterizable</li> <li>Step: None</li> <li>Step: low</li> <li>Step: low</li> <li>Yes; 4x cycle time</li> <li>Step: Medium</li> <li>Yes; 16x cycle time</li> </ul>		2 ms
frequency f1 in Hz  Smoothing of measured values  • parameterizable  • Step: None  • Step: low  • Step: low  • Step: Medium  Yes; 4x cycle time  Yes; 4x cycle time  Yes; 16x cycle time		
<ul> <li>parameterizable</li> <li>Step: None</li> <li>Step: low</li> <li>Step: low</li> <li>Step: Medium</li> <li>Yes</li> <li>Yes</li> <li>1x cycle time</li> <li>Yes</li> <li>4x cycle time</li> <li>Yes</li> <li>16x cycle time</li> </ul>	frequency f1 in Hz	60 / 50 / 16.7
<ul> <li>Step: None</li> <li>Step: low</li> <li>Step: Medium</li> <li>Yes; 1x cycle time</li> <li>Yes; 4x cycle time</li> <li>Yes; 16x cycle time</li> </ul>	Smoothing of measured values	
<ul> <li>Step: low</li> <li>Step: Medium</li> <li>Yes; 4x cycle time</li> <li>Yes; 16x cycle time</li> </ul>	parameterizable	Yes
• Step: Medium  Yes; 16x cycle time	Step: None	Yes; 1x cycle time
	Step: low	Yes; 4x cycle time
Step: High     Yes; 32x cycle time	Step: Medium	Yes; 16x cycle time
	Step: High	Yes; 32x cycle time

Encoder	
Connection of signal encoders	
for resistance measurement with two-wire connection	Yes
• for resistance measurement with three-wire connection	Yes
• for resistance measurement with four-wire connection	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.025 %
Temperature error (relative to input range), (+/-)	0.01 %/K
Crosstalk between the inputs, max.	-70 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.01 %; 0.02% for Pt1000
Temperature error of internal compensation	±4 °C
Operational error limit in overall temperature range	
<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	0.35 %
<ul> <li>Resistance, relative to input range, (+/-)</li> </ul>	0.25 %
<ul> <li>Resistance thermometer, relative to input range, (+/-)</li> </ul>	0.25 %
<ul> <li>Thermocouple, relative to input range, (+/-)</li> </ul>	TC type E, J, K, N, C, U, L: 0.35 %; TC type R, S, T: 0.4 %; TC type B: 0.45 %
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to input range, (+/-)</li> </ul>	0.25 %
<ul> <li>Resistance, relative to input range, (+/-)</li> </ul>	0.15 %
• Resistance thermometer, relative to input range, (+/-)	0.15 %
• Thermocouple, relative to input range, (+/-)	0.25 %
Interference voltage suppression for f = n x (f1 +/- 0.5 %), f1 = interference	erference frequency
<ul> <li>Series mode interference (peak value of interference &lt; rated value of input range), min.</li> </ul>	40 dB
Interrupts/diagnostics/status information	
Alarms	
Diagnostic alarm	Yes; Parameterizable
Limit value alarm	Yes; Parameterizable
Diagnoses	
Wire-break	Yes; Not for ±80 mV
Overflow/underflow	Yes
Diagnostics indication LED	
<ul> <li>Channel status display</li> </ul>	Yes; green LED
<ul> <li>for module diagnostics</li> </ul>	Yes; green/red LED
Potential separation	
between the load voltages	Yes
Potential separation channels	
<ul> <li>between the channels</li> </ul>	No
<ul> <li>between the channels and backplane bus</li> </ul>	Yes
<ul> <li>between the channels and the power supply of the</li> </ul>	No
electronics	
Isolation	
Isolation tested with	707 V DC (type test)
Degree and class of protection	
IP degree of protection	IP65/67
Standards, approvals, certificates	
Suitable for safety-related tripping of standard modules	Yes; From FS01
Suitable for applications according to AMS 2750	Yes; Declaration of Conformity, see online support entry 109757262
Suitable for applications according to CQI-9	Yes; Based on AMS 2750 E
Highest safety class achievable for safety-related tripping of stand	dard modules
<ul> <li>Performance level according to ISO 13849-1</li> </ul>	PL d
<ul> <li>Category according to ISO 13849-1</li> </ul>	Cat. 3
• SIL acc. to IEC 62061	SIL 2
Ambient conditions	
Ambient temperature during operation	
• min.	-30 °C
• max.	55 °C
connection method	
Design of electrical connection for the inputs and outputs	M12, 5-pole
Design of electrical connection for supply voltage	M8, 4-pole
2001git of Gloothout confliction for Supply Voltage	ιτιο, τ μοιο

ET-Connection		
• ET-Connection	M8, 4-pin, shielded	
Dimensions		
Width	30 mm	
Height	159 mm	
Depth	40 mm	
Weights		
Weight, approx.	168 g	

3/7/2022

last modified: