

## Data sheet

## 6ES7144-6KD50-0AB0



Figure similar

\*\*\* spare part \*\*\* SIMATIC DP, ET 200eco PN, 8 AI RTD/TC; 8x M12, degree of protection IP67

General information	
Vendor identification (VendorID)	002AH
Device identifier (DeviceID)	0306H
Supply voltage	
Rated value (DC)	24 V
Reverse polarity protection	Yes; against destruction
power supply according to NEC Class 2 required	Yes
Input current	
Current consumption, typ.	110 mA
Power loss	
Power loss, typ.	2.8 W
Analog inputs	
Number of analog inputs	8
• For resistance/resistance thermometer measurement	8
• For thermocouple measurement	8
Input ranges (rated values), voltages	
• -80 mV to +80 mV	Yes
Input ranges (rated values), thermocouples	
• Type E	Yes
• Type J	Yes
• Type K	Yes
• Type N	Yes
Input ranges (rated values), resistance thermometer	
• Ni 100	Yes
• Ni 1000	Yes
• Ni 120	Yes
• Ni 200	Yes
• Ni 500	Yes
• Pt 100	Yes
• Pt 1000	Yes
• Pt 200	Yes
• Pt 500	Yes
Input ranges (rated values), resistors	
• 0 to 150 ohms	Yes
• 0 to 300 ohms	Yes
• 0 to 600 ohms	Yes
• 0 to 3000 ohms	Yes
Thermocouple (TC)	

<b>Temperature compensation</b>	
— parameterizable	Yes
— internal temperature compensation	Yes
— external temperature compensation with Pt100	Yes
— external temperature compensation with compensations socket	Yes
— dynamic reference temperature value	Yes
— for definable comparison point temperature	Yes
<b>Cable length</b>	
• shielded, max.	30 m
<b>Analog value generation for the inputs</b>	
Analog value display	SIMATIC S7 format
Measurement principle	integrating
<b>Integration and conversion time/resolution per channel</b>	
• Resolution with overrange (bit including sign), max.	16 bit
• Integration time, parameterizable	Yes
• Integration time (ms)	2/16.67/20/100 ms
• Interference voltage suppression for interference frequency $f_1$ in Hz	500 / 60 / 50 / 10 Hz
• Conversion time (per channel)	4 / 19 / 22 / 102 ms
<b>Smoothing of measured values</b>	
• parameterizable	Yes
• Step: None	Yes; 1x cycle time
• Step: low	Yes; 4x cycle time
• Step: Medium	Yes; 16x cycle time
• Step: High	Yes; 64x cycle time
<b>Encoder</b>	
Number of connectable encoders, max.	8
<b>Connection of signal encoders</b>	
• for resistance measurement with two-wire connection	Yes
• for resistance measurement with three-wire connection	Yes
• for resistance measurement with four-wire connection	Yes
<b>Errors/accuracies</b>	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	RTD: 0.0005%/°C; TC: 0.0035%/°C
Crosstalk between the inputs, min.	-85 dB
Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)	0.008 %
<b>Interference voltage suppression for <math>f = n \times (f_1 \pm 1 \%)</math>, <math>f_1</math> = interference frequency</b>	
• Series mode interference (peak value of interference < rated value of input range), min.	46 dB
• Common mode interference, min.	70 dB
<b>Interfaces</b>	
Transmission procedure	100BASE-TX
Number of PROFINET interfaces	1
<b>1. Interface</b>	
<b>Interface types</b>	
• integrated switch	Yes
<b>PROFINET IO Device</b>	
<b>Services</b>	
— Prioritized startup	Yes
<b>Interface types</b>	
<b>M12 port</b>	
• Autonegotiation	Yes
• Autocrossing	Yes
• Transmission rate, max.	100 Mbit/s
<b>Protocols</b>	
Supports protocol for PROFINET IO	Yes
PROFINET CBA	No
PROFIsafe	No

<b>Redundancy mode</b>	
Media redundancy	
— MRP	Yes
<b>Open IE communication</b>	
• TCP/IP	No
• SNMP	Yes
• DCP	Yes
• LLDP	Yes
• ping	Yes
• ARP	Yes
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Diagnostic information readable	Yes
• Monitoring the supply voltage	Yes; green "ON" LED
• Group error	Yes; Red/yellow "SF/MT" LED
• Overflow/Underflow	Yes
<b>Potential separation</b>	
between the load voltages	Yes
between load voltage and all other switching components	No
between Ethernet and electronics	Yes
<b>Potential separation channels</b>	
• between the channels	No
<b>Permissible potential difference</b>	
Between the inputs and MANA (UCM)	10 Vpp AC
<b>Isolation</b>	
tested with	
• 24 V DC circuits	707 V DC (type test)
• Test voltage for interface, rms value [Vrms]	1 500 V; According to IEEE 802.3
<b>Degree and class of protection</b>	
IP degree of protection	IP65/67
<b>Standards, approvals, certificates</b>	
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
<b>Use in hazardous areas</b>	
• Explosion protection category for gas	ATEX gas explosion protection, Zone 2
• Explosion protection category for dust	ATEX dust explosion protection, Zone 22
<b>Connection method</b>	
Design of electrical connection	4/5-pin M12 circular connectors
<b>Dimensions</b>	
Width	60 mm
Height	175 mm
Depth	49 mm
<b>Weights</b>	
Weight, approx.	930 g

	Version	Classification
eClass	14	27-24-26-01
eClass	12	27-24-26-01
eClass	9.1	27-24-26-01
eClass	9	27-24-26-01
eClass	8	27-24-26-01
eClass	7.1	27-24-26-01
eClass	6	27-24-26-01
ETIM	10	EC001596

ETIM	9	EC001596
ETIM	8	EC001596
ETIM	7	EC001596
IDEA	4	3562
UNSPSC	15	32-15-17-05

**Approvals / Certificates**

**General Product Approval**

[Miscellaneous](#)

[Manufacturer Declaration](#)

[Declaration of Conformity](#)



**General Product Approval** **EMV** **For use in hazardous locations**



[Metrological Approval](#)



**For use in hazardous locations** **Maritime application**



[CCC-Ex](#)



[Miscellaneous](#)

[CCC-Ex](#)



**Maritime application**



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

**Maritime application** **Industrial Communication**

[KR \(Korean Register of Shipping\)](#)

[PROFINET](#)

last modified:

10/23/2025

# TURLL

YOUR GLOBAL AUTOMATION PARTNER

## 6ES7144-6KD50-0AB0

OFFICIAL DATASHEET & QUOTATION

- 100% New & Original Factory Sealed
- Global Express Shipping (DHL/FedEx/UPS)
- 12-Month Warranty Protection
- Professional Technical Support

[CHECK STOCK & PRICE](#)



Need Assistance? Scan to Chat on WhatsApp

[sales@turl.com](mailto:sales@turl.com) | +852 6339 7344