6ES7532-5NB00-0AB0

Data sheet



SIMATIC S7-1500, analog output module AQ 2x U/I ST, 16-bit resolution accuracy 0.3%. 2 channels in groups of 2, diagnostics; substitute value; the module supports the safety-oriented shutdown of load groups up to SILCL1 according to EN 62061:2005 + A2:2015, and Category 2 / PL c according to EN ISO 13849-1:2015. delivery including front connector push-in, infeed element, shield bracket and shield terminal

Product type designation AQ 2xU/I ST HW functional status FS01 Firmware version V1.0.0 FW update possible Yes Product function I M data Vers. I&M0 to I&M3 I sochronous mode No Prioritized startup No Output range scalable No Engineering with STEP 7 TIA Portal configurable/integrated from version FROFIBUS from GSD version/GSD revision V1.0 / V5.1 PROFIBUS from GSD version/GSD revision V2.3 / - Oversampling No MSO PROFIBUS from GSD version No STEP Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes Input current Current consumption, max. 110 mA; with 24 V DC supply Power Loss, typ. Power Loss, typ. Power Loss, typ. Power Loss, typ. Voltage output, short-circuit protection Yes Voltage output, short-circuit protection Version No Ves Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 24 mA	General information		
Firmware version FV update possible FV update possible FV update possible FV yes FV update possible FV yes; I&M0 to I&M3 Isochronous mode Prioritized startup Output range scalable No Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version FV 37 / V13.0.2 FV yes FV Configurable/integrated from version FV 55 SP3 / FV CONFINET from GSD version/GSD revision PROFIBUS from GSD version/GSD revision V2.3 /- Operating mode Oversampling MSO CIR - Configuration in RUN Reparameterization possible in RUN Yes Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range vuper limit (DC) Pess Input current Current consumption, max. 110 mA; with 24 V DC supply Power Power Power vauilable from the backplane bus O.65 W Power loss Power loss, typ. Analog outputs Number of analog outputs V1.0 / V1	Product type designation	AQ 2xU/I ST	
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 Output range scalable Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Oversampling Mo MSO Yes Calibration possible in RUN Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 28.8 V Reverse polarity protection Input current Current consumption, max. Power loss, typ. Analog outputs No V13 / V13.0.2 V13 / V13.0.2 V15 / SP3 / - V10 / V5.1 V2.3 / - V2.3 / - V2.3 / - V2.3 / - Ves Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes Ves Ves Devent loss, typ. 2.7 W Analog outputs Number of analog outputs V13 / V13.0.2 V13 / V13.0.2 V13 / V13.0.2 V15 / V15 / V15	 Isochronous mode 	No	
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Reverse polarity protection Input current Current consumption, max. Power Power available from the backplane bus Power loss Power loss, typ. Analog outputs Number of analog outputs Voltage output, short-circuit protection Yes 110 mA; with 24 V DC supply 0.65 W 2.7 W Analog outputs Yes	permissible range, lower limit (DC)	19.2 V	
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Current consumption, max. 110 mA; with 24 V DC supply Power Power available from the backplane bus Power loss Power loss, typ. 2.7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Yes	Reverse polarity protection	Yes	
Power available from the backplane bus Power loss Power loss, typ. 2.7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Yes	Input current		
Power available from the backplane bus Power loss Power loss, typ. 2.7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Yes	Current consumption, max.	110 mA; with 24 V DC supply	
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Power loss, typ. 2.7 W Analog outputs Number of analog outputs 2 Voltage output, short-circuit protection Yes	Power available from the backplane bus	0.65 W	
Analog outputs Number of analog outputs Voltage output, short-circuit protection Yes	Power loss		
Number of analog outputs 2 Voltage output, short-circuit protection Yes	Power loss, typ.	2.7 W	
Voltage output, short-circuit protection Yes	Analog outputs		
Voltage output, short-circuit protection Yes	Number of analog outputs	2	
		Yes	
		24 mA	

Current output, no load valtage, may	22 V
Current output, no-load voltage, max. Cycle time (all channels), min.	3.2 ms; independent of number of activated channels
Output ranges, voltage	3.2 ms, independent of number of activated charmers
• 0 to 10 V	Yes
• 1 V to 5 V	Yes
• -5 V to +5 V	No
• -10 V to +10 V	Yes
	1 es
Output ranges, current • 0 to 20 mA	Voo
• -20 mA to +20 mA	Yes Yes
• 4 mA to 20 mA	Yes
	res
Connection of actuators	Voo
for voltage output two-wire connection for voltage output four wire connection	Yes
for voltage output four-wire connection	Yes
for current output two-wire connection Load impodence (in roted rongs of output)	Yes
Load impedance (in rated range of output)	4 kO 0.5 kOhm at 4 to 5 V
with voltage outputs, min.	1 kΩ; 0.5 kOhm at 1 to 5 V
with voltage outputs, capacitive load, max.	1 µF
with current outputs, max.	750 Ω
with current outputs, inductive load, max.	10 mH
Cable length	
• shielded, max.	800 m; for current, 200 m for voltage
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
 Resolution with overrange (bit including sign), max. 	16 bit
Conversion time (per channel)	0.5 ms
Settling time	
 for resistive load 	1.5 ms
for capacitive load	2.5 ms
for inductive load	2.5 ms
Errors/accuracies	
Output ripple (relative to output range, bandwidth 0 to 50 kHz), (+/-)	0.02 %
Linearity error (relative to output range), (+/-)	0.15 %
Temperature error (relative to output range), (+/-)	0.002 %/K
Crosstalk between the outputs, max.	-100 dB
Repeat accuracy in steady state at 25 °C (relative to output range), (+/-)	0.05 %
Operational error limit in overall temperature range	
 Voltage, relative to output range, (+/-) 	0.3 %
 Current, relative to output range, (+/-) 	0.3 %
Basic error limit (operational limit at 25 °C)	
 Voltage, relative to output range, (+/-) 	0.2 %
Current, relative to output range, (+/-)	0.2 %
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	100
Diagnostic alarm	Yes
Diagnoses	100
Monitoring the supply voltage	Yes
Wire-break	
■ VVIIE-DIEdK	Yes; Only for output type "current"
Short circuit	Voc: ()nly for output type "voltage"
Short-circuit Overflow(underflow)	Yes; Only for output type "voltage"
Overflow/underflow	Yes; Only for output type "voltage" Yes
Overflow/underflow Diagnostics indication LED	Yes
 Overflow/underflow Diagnostics indication LED RUN LED 	Yes Yes; green LED
Overflow/underflow Diagnostics indication LED	Yes

Channel status display	Yes; green LED	
for channel diagnostics	Yes; red LED	
for module diagnostics	Yes; red LED	
Potential separation		
Potential separation channels		
between the channels	No	
 between the channels, in groups of 	2	
 between the channels and backplane bus 	Yes	
 Between the channels and load voltage L+ 	Yes	
Permissible potential difference		
between S- and MANA (UCM)	8 V DC	
Isolation		
Isolation tested with	707 V DC (type test)	
Standards, approvals, certificates		
Suitable for safety-related tripping of standard modules	Yes; From FS02	
Highest safety class achievable for safety-related tripping of standard modules		
 Performance level according to ISO 13849-1 	PL d	
 Category according to ISO 13849-1 	Cat. 3	
 SILCL according to IEC 62061 	SILCL 2	
Ambient conditions		
Altitude during operation relating to sea level		
 Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual	
Dimensions		
Width	25 mm	
Height	147 mm	
Depth	129 mm	
Weights		
Weight, approx.	200 g	
Other		
Note:	Supplied incl. 40-pole push-in front connectors	

4/29/2021

last modified: