SIEMENS

Data sheet

6ES7532-5HF00-0AB0



SIMATIC S7-1500, analog output module AQ8xU/I HS, 16-bit resolution accuracy 0.3%, 8 channels in groups of 8, diagnostics; substitute value 8 channels in 0.125 ms oversampling; the module supports the safety-oriented shutdown of load groups up to SIL2 according to EN IEC 62061:2021 and Category 3 / PL d according to EN ISO 13849-1:2015. delivery including infeed element, shielding bracket and shield terminal: front connector (screw terminals or push-in) to be ordered separately

Figure similar

General Information Product type designation Product type designation Firmware version Firm	riguresinina		
HW functional status From FS01 Firmware version VZ.1.0 • FW update possible Yes Product function • I&M data Yes; I&M0 to I&M3 • Isochronous mode • Prioritized startup No • Output range scalable No Engineering with • STEP 7 TIA Portal configurable/integrated from version • STEP 7 configurable/integrated from version • PROFIBUS from GSD version/GSD revision • PROFINET from GSD version/GSD revision • PROFINET from GSD version/GSD revision • PROFINET from SSD version/GSD revision • Oversampling • MSO • Oversampling • MSO • Yes • Ofter - Configuration in RUN Reparameterization possible in RUN Reparameterization possible in RUN Reparameterization possible in RUN Yes Calibration possible range, lower limit (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) 28.8 V Reverse polarity protection Tyes Current consumption, max. 320 mA, with 19.2 V supply Power Power available from the backplane bus Power loss, typ. Analog outputs 8 Voltage output, short-circuit current, max. Voltage output, short-circuit current, max. Current connections in min. 125 µs; independent of number of activated channels	General information		
Firmware version Firm Wupdate possible Froduct function Fix Middat Froduct function Fix Middat F	Product type designation	AQ 8xU/I HS	
Product function RAM data Yes; I&M0 to I&M3	HW functional status	From FS01	
Product function IMM data Isochronous mode Prioritized startup Output range scalable No Engineering with STEP 7 In Portal configurable/integrated from version FROFINET from GSD version/GSD revision PROFINET from GSD version/GSD revision Operating mode Oversampling MSO Ves CIR - Configuration in RUN Reparameterization 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. 320 mA; with 19.2 V supply Power Power of analog outputs Number of analog outputs Voltage output, short-circuit current, max. 45 mA Current output, chold-violage, max. 20 V Cycle time (all channels) min.	Firmware version	V2.1.0	
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Output range scalable Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3/- Operating mode Oversampling Yes MSO CIR - Configuration in RUN Reparameterization possible in RUN Calibration possible in RUN Yes Supply voltage Rated value (DC) permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. Power Power loss Power loss Power loss, typ. Analog outputs Number of analog outputs Number of analog outputs V14 /- V14 /- V14 /- V15, SP3 /- V14 /- V15, SP3 /- V14 /- V15, SP3 /- V14 /- V16, V15, In V16, V2, SP3 /- V18 /	 Isochronous mode 	Yes	
Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 configurable/integrated from version V5.5 SP3 /- PROFIBUS from GSD version/GSD revision V7.0 / V5.1 PROFIBUS from GSD version/GSD revision V2.3 /- Operating mode Oversampling MSO Yes CIR - Configuration in RUN Reparameterization possible in RUN Reparameterization possible in RUN Yes Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Yes Current consumption, max. 320 mA; with 19.2 V supply Power Power loss Power loss, typ. Analog outputs Number of analog outputs Number of analog outputs Number of analog outputs Number of analog output, short-circuit protection Yes Current conjunt, no-load voltage, max. 20 V Cycle time (all channels), min. 125 µs; independent of number of activated channels	 Prioritized startup 	No	
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• STEP 7 configurable/integrated from version • PROFIBUS from GSD version/GSD revision • PROFIBUS from GSD version/GSD revision • Oversampling • Oversampling • MSO • MSO • MSO • MSO • MSO • PROFIBUS in RUN Reparameterization possible in RUN Yes Supply voltage Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, tower limit (DC) permissible range, super limit	Engineering with		
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PROFINET from GSD version/GSD revision Operating mode Oversampling MSO MSO Yes 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, upper limit (DC) Permissible range version Reverse polarity protection Yes Current consumption, max. 320 mA; with 19.2 V supply Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. Current output, no-load voltage, max. 20 V Cycle time (all channels), min. 125 µs; independent of number of activated channels	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -	
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Calibration possible in RUN Supply voltage Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes Input current Current consumption, max. 320 mA; with 19.2 V supply Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs 8 Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. 20 V Cycle time (all channels), min. 125 µs; independent of number of activated channels	CiR - Configuration in RUN		
Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes Input current Current consumption, max. 320 mA; with 19.2 V supply Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs 8 Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. 20 V Cycle time (all channels), min. 125 µs; independent of number of activated channels	Reparameterization possible in RUN	Yes	
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Current consumption, max. Current consumption, max. 320 mA; with 19.2 V supply Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Voltage output, short-circuit current, max. Voltage output, no-load voltage, max. Current output, no-load voltage, max. Cycle time (all channels), min. 320 mA; with 19.2 V supply 7 W Analog voltage 7 W 20 V Cycle time (all channels), min.	permissible range, upper limit (DC)	28.8 V	
Current consumption, max. 320 mA; with 19.2 V supply Power Power available from the backplane bus 1.15 W Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Voltage output, short-circuit current, max. Current output, no-load voltage, max. Cycle time (all channels), min. 320 mA; with 19.2 V supply 1.15 W Power loss 7 W 45 W 20 V Cycle time (all channels), min.	Reverse polarity protection	Yes	
Power available from the backplane bus 1.15 W Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs Voltage output, short-circuit protection Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. Cycle time (all channels), min. 125 µs; independent of number of activated channels	Input current		
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Power loss Power loss, typ. 7 W Analog outputs Number of analog outputs 8 Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. 20 V Cycle time (all channels), min. 125 µs; independent of number of activated channels	Power		
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Analog outputs 8 Number of analog outputs 8 Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. 20 V Cycle time (all channels), min. 125 μs; independent of number of activated channels	Power loss		
Number of analog outputs 8 Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. 20 V Cycle time (all channels), min. 125 μs; independent of number of activated channels	Power loss, typ.	7 W	
Voltage output, short-circuit protection Yes Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. Cycle time (all channels), min. 125 μs; independent of number of activated channels	Analog outputs		
Voltage output, short-circuit current, max. 45 mA Current output, no-load voltage, max. Cycle time (all channels), min. 125 μs; independent of number of activated channels	Number of analog outputs	8	
Current output, no-load voltage, max. Cycle time (all channels), min. 20 V 125 µs; independent of number of activated channels	Voltage output, short-circuit protection	Yes	
Cycle time (all channels), min. 125 µs; independent of number of activated channels	Voltage output, short-circuit current, max.	45 mA	
	Current output, no-load voltage, max.	20 V	
Output ranges, voltage	Cycle time (all channels), min.	125 μs; independent of number of activated channels	
	Output ranges, voltage		

• 0 to 10 V	Yes
• 1 V to 5 V	Yes
• -5 V to +5 V	No
• -10 V to +10 V	Yes
Output ranges, current	
• 0 to 20 mA	Yes
• -20 mA to +20 mA	Yes
• 4 mA to 20 mA	Yes
Connection of actuators	
 for voltage output two-wire connection 	Yes
for voltage output four-wire connection	Yes
 for current output two-wire connection 	Yes
Load impedance (in rated range of output)	
with voltage outputs, min.	1 kΩ
with voltage outputs, capacitive load, max.	100 nF
with voltage datputs, capability load, max. with current outputs, max.	500 Ω
•	1 mH
with current outputs, inductive load, max. Cable length	I IIIN
Cable length	200 m
• shielded, max.	200 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	10.17
Resolution with overrange (bit including sign), max.	16 bit
Conversion time (per channel)	50 μs; independent of number of activated channels
Settling time	
for resistive load	30 μs; see additional description in the manual
 for capacitive load 	100 μs; see additional description in the manual
for inductive load	100 μs; see additional description in the manual
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	0.05 %
range), (+/-)	
note regarding accuracy	at temperatures below 0 °C, the figures for operating error and temperature error are doubled
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 %
Isochronous mode	
Execution and activation time (TCO), min.	100 μs
Bus cycle time (TDP), min.	250 μs
Interrupts/diagnostics/status information	p-
Diagnostics function	Yes
Substitute values connectable	Yes
	1 00
Alarms • Diagnostic clarm	Voc
Diagnostic alarm	Yes
Diagnoses	Voc
 Monitoring the supply voltage 	Yes
	Y GET LIGHT FOR CHITCHE TYPE "CHITCHE"
Wire-break	Yes; Only for output type "current"
Wire-breakShort-circuit	Yes; Only for output type "voltage"
Wire-breakShort-circuitOverflow/underflow	
Wire-break Short-circuit	Yes; Only for output type "voltage" Yes
Wire-breakShort-circuitOverflow/underflow	Yes; Only for output type "voltage"
Wire-break Short-circuit Overflow/underflow Diagnostics indication LED	Yes; Only for output type "voltage" Yes
Wire-break Short-circuit Overflow/underflow Diagnostics indication LED RUN LED	Yes; Only for output type "voltage" Yes Yes; green LED
Wire-break Short-circuit Overflow/underflow Diagnostics indication LED RUN LED ERROR LED	Yes; Only for output type "voltage" Yes Yes; green LED Yes; red LED

for channel diagnostics	Yes; red LED
for module diagnostics	Yes: red LED
Potential separation	100,100 LLD
Potential separation channels	
between the channels	No
 between the channels, in groups of 	8
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 FS04
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
 SIL acc. to IEC 62061 	SIL 2
Ambient conditions	
Ambient temperature during operation	
 horizontal installation, min. 	-30 °C; From FS03
 horizontal installation, max. 	60 °C
 vertical installation, min. 	-30 °C; From FS03
vertical installation, max.	40 °C
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	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	325 g
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