## **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 SILCL2 acc. to EN 62061:2005 + A2:2015, and Category 3 / PL d according to EN ISO 13849-1:2015. delivery including infeed element, shield bracket and shield terminal: front connector (screw terminals or push-in) to be ordered separately

Figure similar

Product type designation	General information		
Firmware version FW update possible FW update possible FV yes Froduct function  I &M data Fisch from SSD Frioritized startup Output range scalable Fingineering with STEP 7 TIA Portal configurable/integrated from version FROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision FROFIBUS from GSD version/GSD re	Product type designation	AQ 8xU/I HS	
Product function  I &M data I sochronous mode Prioritized startup Output range scalable Programmetric from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision Final MSO Presampling MSO Pesson Page and Vers Cirl - Configuration in RUN Reparameterization possible in RUN Permissible range, upper limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Input current Current consumption, max. Power loss Power loss Power oss Power oss albeit and so the first of analog outputs Number of analog outputs  Number of analog outputs  Ves (Labla (Lab	HW functional status	From FS01	
Product function  I I&M data Isochronous mode Prioritized startup Output range scalable No  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 ton Spray version PROFIBUS from GSD version/GSD revision ProfIBUS from GSD versio	Firmware version	V2.1.0	
I I I I I I I I I I I I I I I I I I I	<ul> <li>FW update possible</li> </ul>	Yes	
Isochronous mode Prioritized startup 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 PROFINET from GSD version/GSD revision V1.0 / V5.1 Pes  Supply version ProfINET from GSD version/GSD revision V2.3 /- Pes  Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) PROFINET from GSD version/GSD revision ProfINET from GSD version/GSD revision V2.3 /- ProfINET from GSD version/GSD revision V2.3 /- Ves  Supply voltage Rated value (DC) Pes  Supply voltage Rated	Product function		
Prioritized startup Output range scalable  Engineering with STEP 7 TIA Portal configurable/integrated from version STEP 7 TORIGURABLE/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision Pres SUBJECT OF CONTINUE TORION PROFINET FROM SCALABLE TORION PROFINET FROM SCALABLE TORION PROFINET FROM SCALABLE TORION PROFINET SCALABLE TORION PRO	<ul> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3	
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 PROFINET from GSD version/GSD revision Operating mode Oversampling MSO Yes MSO Yes  CIR - Configuration in RUN Reparameterization possible in RUN Reparameterization possible in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Reperameterization possible in RUN  Reperameterization possible in RUN  Supply voltage  Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Power  Power available from the backplane bus Power loss Power loss, typ.  Analog outputs Number of analog outputs  8	<ul> <li>Isochronous mode</li> </ul>	Yes	
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 Operating mode Oversampling MSO Ves MSO Ves CIR - Configuration in RUN Reparameterization possible in RUN Reparameterization possible 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) Reverse polarity protection Yes Input current Current consumption, max. 320 mA; with 19.2 V supply Power Power available from the backplane bus Power loss Power loss Power loss, typ. Analog outputs Number of analog outputs	<ul> <li>Prioritized startup</li> </ul>	No	
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 PV2.3 /-  Operating mode Oversampling MSO Pes  CIR - Configuration in RUN Pes  CIR- Configuration in RUN Pes  Calibration possible in RUN Pes  Supply voltage Rated value (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Pess  Reverse polarity protection Pess  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	Output range scalable	No	
version  STEP 7 configurable/integrated from version PROFIBUS from GSD version/GSD revision PROFIBUS from GSD version/GSD revision V2.3 /-  Operating mode Oversampling MSO Ves  CIR - Configuration in RUN  Reparameterization possible in RUN  Reparameterization possible in RUN  Reparameterization possible 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, upper limit (DC) Reverse polarity protection Ves  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	Engineering with		
PROFIBUS from GSD version/GSD revision PROFINET from GSD version/GSD revision V2.3 / -  Operating mode Oversampling MSO Yes  CIR - Configuration in RUN  Reparameterization possible in RUN  Reparameterization possible 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) 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.  Analog outputs  Number of analog outputs  8		V14 / -	
● PROFINET from GSD version/GSD revision  Operating mode  ● Oversampling	<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -	
Operating mode  Oversampling Yes  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, with 19.2 V Permissible range, with 19.2 V Permissible range, with 19.2 V supply  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	<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	V1.0 / V5.1	
● Oversampling ● 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) 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	PROFINET from GSD version/GSD revision	V2.3 / -	
NSO     Yes  CIR - Configuration in RUN  Reparameterization possible in RUN  Calibration possible in RUN  Yes  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  230 mA; with 19.2 V supply  Power  Power available from the backplane bus  1.15 W  Power loss  Power loss, typ.  Analog outputs  Number of analog outputs  8	Operating mode		
CiR - Configuration in RUN  Reparameterization possible in RUN  Calibration possible in RUN  Yes  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  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.  Analog outputs  Number of analog outputs  8	<ul> <li>Oversampling</li> </ul>	Yes	
Reparameterization possible in RUN  Calibration possible in RUN  Yes  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  230 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	• MSO	Yes	
Calibration possible in RUN  Supply voltage  Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Reverse polarity protection  Current  Current consumption, max.  Power  Power available from the backplane bus  Power loss  Power loss, typ.  Analog outputs  Number of analog outputs  Poss  Poss  Number of analog outputs  Yes  24 V  24 V  28.8 V  28.8 V  320 mA; with 19.2 V supply  Yes  1.15 W  Power loss  7 W  Analog outputs  8	CiR - Configuration in RUN		
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Input current  Current consumption, max.  Current consumption, max.  Power  Power available from the backplane bus  Power loss  Power loss, typ.  Analog outputs  Number of analog outputs  8	Reparameterization possible in RUN	Yes	
Rated value (DC)  permissible range, lower limit (DC)  permissible range, upper limit (DC)  Reverse polarity protection  Input current  Current consumption, max.  Current consumption, max.  Power available from the backplane bus  Power loss  Power loss, typ.  Analog outputs  Number of analog outputs  8	Calibration possible in RUN	Yes	
permissible range, lower limit (DC) permissible range, upper limit (DC) 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	Supply voltage		
permissible range, upper limit (DC)  Reverse polarity protection  Yes  Input current  Current consumption, max.  Power  Power available from the backplane bus  1.15 W  Power loss  Power loss, typ.  Analog outputs  Number of analog outputs  8	Rated value (DC)	24 V	
Reverse polarity protection  Input current  Current consumption, max.  Power  Power available from the backplane bus  1.15 W  Power loss  Power loss, typ.  7 W  Analog outputs  Number of analog outputs  8	permissible range, lower limit (DC)	19.2 V	
Input current Current consumption, max.  Power  Power available from the backplane bus 1.15 W  Power loss  Power loss, typ.  Analog outputs  Number of analog outputs  8	permissible range, upper limit (DC)	28.8 V	
Current consumption, max.  Power  Power available from the backplane bus  1.15 W  Power loss  Power loss, typ.  7 W  Analog outputs  Number of analog outputs  8	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  8	Input current		
Power available from the backplane bus  1.15 W  Power loss  Power loss, typ. 7 W  Analog outputs  Number of analog outputs 8	Current consumption, max.	320 mA; with 19.2 V supply	
Power loss Power loss, typ. 7 W  Analog outputs Number of analog outputs 8	Power		
Power loss, typ. 7 W  Analog outputs  Number of analog outputs 8	Power available from the backplane bus	1.15 W	
Analog outputs  Number of analog outputs  8	Power loss		
Number of analog outputs 8	Power loss, typ.	7 W	
	Analog outputs		
Voltage output, short-circuit protection Yes	Number of analog outputs	8	
	Voltage output, short-circuit protection	Yes	

Voltage subsut short sire it surrent serv	45 0
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
Output ranges, voltage	V
• 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	V.
• 0 to 20 mA	Yes
● -20 mA to +20 mA	Yes
• 4 mA to 20 mA	Yes
Connection of actuators	
<ul> <li>for voltage output two-wire connection</li> </ul>	Yes
<ul> <li>for voltage output four-wire connection</li> </ul>	Yes
for current output two-wire connection	Yes
Load impedance (in rated range of output)	
<ul><li>with voltage outputs, min.</li></ul>	1 kΩ
<ul> <li>with voltage outputs, capacitive load, max.</li> </ul>	100 nF
<ul><li>with current outputs, max.</li></ul>	500 Ω
with current outputs, inductive load, max.	1 mH
Cable length	
• shielded, max.	200 m
Analog value generation for the outputs	
Integration and conversion time/resolution per channel	
<ul> <li>Resolution with overrange (bit including sign), max.</li> </ul>	16 bit
<ul> <li>Conversion time (per channel)</li> </ul>	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	0.02 %
kHz), (+/-)	0.45.0/
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 %
note regarding accuracy	at temperatures below 0 °C, the figures for operating error and
Operational array limit in account to the state of	temperature error are doubled
Operational error limit in overall temperature range	0.2.0/
Voltage, relative to output range, (+/-)	0.3 %
• Current, relative to output range, (+/-)	0.3 %
Basic error limit (operational limit at 25 °C)	
<ul> <li>Voltage, relative to output range, (+/-)</li> </ul>	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	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	Yes
Diagnoses	
Monitoring the supply voltage	Yes
Wire-break	Yes; Only for output type "current"
• Wile-bleak	

Short-circuit	Yes; Only for output type "voltage"	
Overflow/underflow	Yes	
Diagnostics indication LED		
• RUN LED	Yes; green LED	
• ERROR LED	Yes; red LED	
<ul> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>	Yes; green LED	
Channel status display	Yes; green LED	
<ul> <li>for channel diagnostics</li> </ul>	Yes; red LED	
<ul> <li>for module diagnostics</li> </ul>	Yes; red LED	
Potential separation		
Potential separation channels		
<ul> <li>between the channels</li> </ul>	No	
<ul> <li>between the channels, in groups of</li> </ul>	8	
<ul> <li>between the channels and backplane bus</li> </ul>	Yes	
<ul> <li>Between the channels and load voltage L+</li> </ul>	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	
<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	
SILCL according to IEC 62061	SILCL 2	
Ambient conditions		
Ambient temperature during operation		
<ul> <li>horizontal installation, min.</li> </ul>	-30 °C; From FS03	
<ul> <li>horizontal installation, max.</li> </ul>	60 °C	
<ul> <li>vertical installation, min.</li> </ul>	-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	
last modified:	4/29/2021 <b>C</b>	