SIEMENS

Data sheet

6ES7522-5FH00-0AB0

SIMATIC S7-1500, DIGITAL OUTPUT MODULE DQ 16 X 230VAC / 1A,TRIAC; 16 CHANNELS IN GROUPS OF 2, 2A PER GROUP; SUBSTITUTE VALUE



General information	
Product type designation	DQ 16x230VAC/1A ST (Triac)
HW functional status	FS01
Firmware version	V1.0.0
Product function	
● I&M data	Yes; I&M0 to I&M3
Engineering with	
 STEP 7 TIA Portal configurable/integrated as of version 	V13 SP1 / -
 STEP 7 configurable/integrated as of version 	V5.5 SP3 / -
 PROFIBUS as of GSD version/GSD revision 	V1.0 / V5.1
 PROFINET as of GSD version/GSD revision 	V2.3 / -
Operating mode	
• MSO	Yes
Output voltage	
Rated value (AC)	120/230V AC, 50/60 Hz
Power	
Power available from the backplane bus	1.2 W

Power loss, typ. 11.1 W Digital outputs 16 Current-sourcing Yes Short-circuit protection No Switching capacity of the outputs	Power loss	
Number of digital outputs 16 Current-sinking Yes Current-sourcing Yes Sourciarizity protection No Switching capacity of the outputs 1A • with resistive load, max. 1A • on lamp load, max. 50 W Output voitage - • for signal "1", min. L1 (-1.5 V) at maximum output current; L1 (-3.5 V) at minimum output current; 2.1 (-3.5 V) at minimum output current Output voitage - • for signal "1" permissible range, min. 10 mA • for signal "1" permissible range, max. 1.5 A; max. 1 AC cycle • for vignal "1" permissible range, max. 1.4 C cycle • for '0 ", max. 1.4 C cycle • for '0 ", max. 1.4 C cycle • '0 " to ", max. 1.4 C cycle • for uprating No • for uprating No • for redundant control of a load Yes Switching frequency - • with resistive load, max. 0.5 Hz • on lamp load, max. 1.6 A; see additional description in the manual • Current per channet, max.	Power loss, typ.	11.1 W
Number of digital outputs 16 Current-sinking Yes Current-sourcing Yes Sourciarizity protection No Switching capacity of the outputs 1A • with resistive load, max. 1A • on lamp load, max. 50 W Output voitage - • for signal "1", min. L1 (-1.5 V) at maximum output current; L1 (-3.5 V) at minimum output current; 2.1 (-3.5 V) at minimum output current Output voitage - • for signal "1" permissible range, min. 10 mA • for signal "1" permissible range, max. 1.5 A; max. 1 AC cycle • for vignal "1" permissible range, max. 1.4 C cycle • for '0 ", max. 1.4 C cycle • for '0 ", max. 1.4 C cycle • '0 " to ", max. 1.4 C cycle • for uprating No • for uprating No • for redundant control of a load Yes Switching frequency - • with resistive load, max. 0.5 Hz • on lamp load, max. 1.6 A; see additional description in the manual • Current per channet, max.	Digital outputs	
Current-sourcing Yes Short-circuit protection No Switching capacity of the outputs I • with resistive load, max. 50 W Output voltage I (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current; L1 (-6.5 V) Parallel switching of two outputs I AC cycle • for logic links No • for logic links No • for logic links I D HZ • w	Number of digital outputs	16
Short-circuit protection No Switching capacity of the outputs IA on lamp load, max. 1A on lamp load, max. 50 W Output voltage I1 (1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current; C1 (-8.5 V) at minimum output current Output current I1 (1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current; C1 (-8.5 V) at minimum output current; C1 (-8.5 V) at minimum output current; C1 (-8.5 V) at minimum output current Output current I1 (1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current; C1 (-8.5 V) at minimum output current Output current I1 (1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current; C1 (-8.5 V) at maximum output current; C1 (-8.5 V) at maxim output	Current-sinking	Yes
Switching capacity of the outputs 1 A • on lamp load, max. 50 W Output voltage 1 A • for signal "1", min. L 1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current Output current 1 A • for signal "1" rated value 1 A • for signal "1" permissible range, min. 10 mA • for signal "1" permissible range, max. 15 A; max. 1 AC cycle • for signal "1" permissible range, max. 2 A; max. 1 AC cycle • for signal "0" residual current, max. 2 mA Output delay with resistive load 2 mA Output delay with resistive load, max. 1 AC cycle • for logic links No • for logic links No • for redundant control of a load Yes Switching frequency 1 Hz • with resistive load, max. 0.5 Hz <tr< td=""><td>Current-sourcing</td><td>Yes</td></tr<>	Current-sourcing	Yes
• with resistive load, max.1 A 50 WOutput voltageL1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current• for signal "1", min.L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output currentOutput current10 mA• for signal "1" permissible range, min.10 mA• for signal "1" permissible range, max.15 A; max. 1 AC cycle• for signal "0" residual current, max.1 AC cycle• for signal "0" residual current, max.1 AC cycle• for signal "0" residual current, max.1 AC cycle• "0" to "1", max.1 AC cycle• "0" to "1", max.1 AC cycle• "1" to "0", max.1 AC cycle• for logic linksNo• for logic linksNo• for upratingNo• for upratingNo• for upratingNo• or in amp load, max.1 A! see additional description in the manual• with resistive load, max.1 A! see additional description in the manual• current per channel, max.1 A! see additional description in the manual• current per channel, max.1 A! see additional description in the manual• Current per channel, max.4• Current per module, max.4• Current per module, max.4• Size of motor starters according to NEMA, max.4• Cable length	Short-circuit protection	No
on lamp load, max. 50 W Output voltage L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current Output current L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current Output current IA of or signal "1" rated value 1A of or signal "1" permissible range, min. 10 mA of or signal "1" permissible range, max. 15 A; max. 1 AC cycle of or signal "0" residual current, max. 2 mA Output delay with resistive load I AC cycle or or "0" to "1", max. 1 AC cycle of or logic links No of or logic links No of or uprating No of or uprating No of or uprating No of namp load, max. 0.5 Hz on lamp load, max. 0.5 Hz on lamp load, max. 1 A; see additional description in the manual current per channel, max. 1 A; see additional description in the manual current per group, max. 2 A; see additional description in the manual current per group, max. 4 Current per module, max.	Switching capacity of the outputs	
Contraction of the output voltage • for signal "1", min, L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current Output durrent 1 A • for signal "1" rated value 1 A • for signal "1" permissible range, min. 10 mA • for signal "1" permissible range, max. 2 mA • for signal "0" residual current, max. 2 mA Output delay with resistive load 1 AC cycle • "0" to "1", max. 1 AC cycle • "0" to "1", max. 1 AC cycle • "1" to "0", max. 1 AC cycle Parallel switching of two outputs 1 AC cycle • for logic links No • for redundant control of a load Yes Switching frequency 10 HZ • with inductive load, max. 0.5 Hz • on lamp load, max. 0.5 Hz • on lamp load, max. 1 A, see additional description in the manual • Current per group, max. 1 A; see additional description in the manual • Current per group, max. 1 A; see additional description in the manual • Current per module, max. 4 Catle current per module, max.	 with resistive load, max. 	1 A
• for signal "1", min.L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output currentOutput currentOutput current• for signal "1" retrained value1 A• for signal "1" permissible range, min.10 mA• for signal "1" permissible range, max.16 A; max. 1 AC cycle• for signal "0" residual current, max.2 mAOutput delay with resistive load• "0" to "1", max.1 AC cycle• "0" to "1", max.1 AC cycle• "1" to "0", max.1 AC cycle• "1" to "0", max.1 AC cycle• for logic linksNo• for logic linksNo• for redundant control of a loadYesSwitching frequency1 Hz• with resistive load, max.10 Hz• with resistive load, max.10 Hz• on lamp load, max.1 AC spee additional description in the manual• Current per channel, max.1 A; see additional description in the manual• Current per group, max.2 A; see additional description in the manual• Current per group, max.4• Size of motor starters according to NEMA, max.4• Size of motor starters according to NEMA, max.4• shielded, max.100 m• unshielded, max.600 m	• on lamp load, max.	50 W
output current for signal "1" rated value for signal "1" permissible range, min. for signal "1" permissible range, max. for signal "1" permissible range, max. for signal "1" permissible range, max. for signal "0" residual current, max. 2 mA Output delay with resistive load maA of or ignal "0" residual current, max. for AC cycle for of to "1", max. fAC cycle for 10" to "1", max. fAC cycle for logic links fAC cycle for logic links No for redundant control of a load Yes Switching frequency fult Hz with resistive load, max. fult Hz on lamp load, max. fult Hz fult current per channel, max. fult A; see additional description in the manual Current per module, max. fult A; see additional description in the manual	Output voltage	
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• for signal "0" residual current, max. 2 mA Output delay with resistive load 1 AC cycle • "0" to "1", max. 1 AC cycle • "1" to "0", max. 1 AC cycle Parallel switching of two outputs 1 AC cycle • for logic links No • for or dundant control of a load Ves Switching frequency 1 HZ • with resistive load, max. 10 HZ • with nductive load, max. 0.5 HZ • on lamp load, max. 1 HZ • Current of the outputs 1 AC see additional description in the manual • Current per channel, max. 1 A; see additional description in the manual • Current per group, max. 2 A; see additional description in the manual • Current per module, max. 1 A; see additional description in the manual • Current per module, max. 1 A; see additional description in the manual • Current per module, max. 1 A; see additional description in the manual • Current per module, max. 1 OM ; see additional description in the manual • Current per module, max. 60 m	 for signal "1" permissible range, min. 	10 mA
Output delay with resistive load 1 AC cycle • "0" to "1", max. 1 AC cycle Parallel switching of two outputs 1 AC cycle Parallel switching of two outputs No • for logic links No • for uprating No • for redundant control of a load Yes Switching frequency 1 HZ • with resistive load, max. 0.5 Hz • on lamp load, max. 1 HZ • Current of the outputs 2 A; see additional description in the manual • Current per channel, max. 1 A; see additional description in the manual • Current per channel, max. 1 A; see additional description in the manual • Current per group, max. 2 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 1 A; see additional description in the manual • Current per module, max. 4 • Size of motor starters according to NEMA, max. 4 • Size of motor starters according to NEMA, max. 600 m • unshielded, max. 600 m	 for signal "1" permissible range, max. 	15 A; max. 1 AC cycle
• "0" to "1", max.1 AC cycle• "1" to "0", max.1 AC cycleParallel switching of two outputsI AC cycle• for logic linksNo• for logic linksNo• for upratingVes• for redundant control of a loadYesSwitching frequency10 Hz• with resistive load, max.0.5 Hz• on lamp load, max.10 Hz• on lamp load, max.1 Hz• Current per channel, max.1 A; see additional description in the manual• Current per channel, max.10 A; see additional description in the manual• Current per group, max.2 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Size of motor starters according to NEMA, max.4• Size of motor starters according to NEMA, max.600 m	 for signal "0" residual current, max. 	2 mA
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• for logic linksNo• for upratingNo• for redundant control of a loadYesSwitching frequency10 Hz• with resistive load, max.10 Hz• with inductive load, max.0.5 Hz• on lamp load, max.1 Hz• on lamp load, max.1 Hz• Current per channel, max.1 A; see additional description in the manual• Current per channel, max.1 A; see additional description in the manual• Current per group, max.2 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Current per module, max.4• Size of motor starters according to NEMA, max.4• Size of motor starters according to NEMA, max.1000 m• shielded, max.1000 m• unshielded, max.600 m	• "1" to "0", max.	1 AC cycle
• for uprating No • for redundant control of a load Yes Switching frequency 10 Hz • with resistive load, max. 10 Hz • with inductive load, max. 0.5 Hz • on lamp load, max. 1 Hz Total current of the outputs 2 A; see additional description in the manual • Current per channel, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Size of motor starters according to NEMA, max. 4 Cable length 1000 m • shielded, max. 600 m	Parallel switching of two outputs	
• for redundant control of a load Yes Switching frequency 10 Hz • with resistive load, max. 10 Hz • with inductive load, max. 0.5 Hz • on lamp load, max. 1 Hz Total current of the outputs 1 A; see additional description in the manual • Current per channel, max. 1 A; see additional description in the manual • Current per group, max. 2 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Size of motor starters according to NEMA, max. 4 Cable length 1 000 m • shielded, max. 1 000 m • unshielded, max. 600 m	• for logic links	No
Switching frequency 10 Hz • with resistive load, max. 0.5 Hz • on lamp load, max. 1 Hz Total current of the outputs 1 Hz • Current per channel, max. 1 A; see additional description in the manual • Current per group, max. 2 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 4 • Size of motor starters according to NEMA, max. 4 • Shielded, max. 1 000 m • unshielded, max. 600 m	• for uprating	No
• with resistive load, max.10 Hz• with inductive load, max.0.5 Hz• on lamp load, max.1 Hz• Total current of the outputs• Current per channel, max.1 A; see additional description in the manual• Current per group, max.2 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Size of motor starters according to NEMA, max.4• Shielded, max.1 000 m• unshielded, max.600 m	 for redundant control of a load 	Yes
• with inductive load, max.0.5 Hz• on lamp load, max.1 Hz• Current of the outputs• Current per channel, max.1 A; see additional description in the manual• Current per group, max.2 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manual• Size of motor starters according to NEMA, max.4Cable length1 000 m• unshielded, max.600 m	Switching frequency	
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Total current of the outputs • Current per channel, max. • Current per group, max. • Current per module, max. • Size of motor starters according to NEMA, max. • Size of motor starters according to NEMA, max. • Size of motor starters according to NEMA, max. • Shielded, max. • unshielded, max. • Stochronous mode	• with inductive load, max.	0.5 Hz
• Current per channel, max.1 A; see additional description in the manual• Current per group, max.2 A; see additional description in the manual• Current per module, max.10 A; see additional description in the manualTriac outputs-• Size of motor starters according to NEMA, max.4Cable length-• shielded, max.1 000 m• unshielded, max.600 m	• on lamp load, max.	1 Hz
 Current per group, max. Current per module, max. Current per module, max. 10 A; see additional description in the manual 10 A; see additional description in the manual Triac outputs • Size of motor starters according to NEMA, max. • Size of motor starters according to NEMA, max. • Shielded, max. • unshielded, max. • Coordinate of the maximum of the manual • Size of motor starters according to NEMA, max. • Shielded, max. • Sochronous mode • Sochronous mode	Total current of the outputs	
 Current per module, max. 10 A; see additional description in the manual Triac outputs Size of motor starters according to NEMA, max. Size of motor starters according to NEMA, max. Cable length shielded, max. unshielded, max. 000 m Usochronous mode 	Current per channel, max.	1 A; see additional description in the manual
Triac outputs 4 • Size of motor starters according to NEMA, max. 4 Cable length 1 000 m • shielded, max. 600 m • unshielded, max. 600 m	 Current per group, max. 	2 A; see additional description in the manual
 Size of motor starters according to NEMA, max. Cable length shielded, max. unshielded, max. Sochronous mode 	• Current per module, max.	10 A; see additional description in the manual
Cable length	Triac outputs	
shielded, max. unshielded, max. buncheded, max. Sochronous mode	 Size of motor starters according to NEMA, max. 	4
• unshielded, max. 600 m	Cable length	
Isochronous mode	• shielded, max.	1 000 m
	• unshielded, max.	600 m
Isochronous operation (application synchronized up No	Isochronous mode	
to terminal)		No

Interrupts/diagnostics/status information	
Diagnostics	No
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	No
Diagnostic messages	
 Monitoring the supply voltage 	No
Wire-break	No
Short-circuit	No
Fuse blown	No
Diagnostics indication LED	
• RUN LED	Yes; Green LED
• ERROR LED	Yes; Red LED
 Monitoring of the supply voltage (PWR-LED) 	No
Channel status display	Yes; Green LED
 for channel diagnostics 	No
• 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
Permissible potential difference	
between different circuits	250 V AC between the channels and the backplane bus; 500 V AC between the channels
Isolation	
Isolation tested with	2500 V DC
Decentralized operation	
Prioritized startup	Yes
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	310 g
last modified:	22.01.2016