SIEMENS

Data sheet

6ES7522-5FH00-0AB0

SIMATIC S7-1500, digital output module DQ 16x230 V AC/1 A ST; TRIAC; 16 channels in groups of 2; 2 A per group; Substitute value: Front connector (screw terminals or push-in) to be ordered separately



General information	
Product type designation	DQ 16x230VAC/1A ST (Triac)
HW functional status	FS01
Firmware version	V1.0.0
 FW update possible 	Yes
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	
• DQ	Yes
 DQ with energy-saving function 	No
• PWM	No
 Oversampling 	No
• MSO	Yes

Power Power loss Power loss Power loss, typ. 230 V; 120/230 V AC, 50/60 Hz 230 V; 120/230 V AC, 50/60 Hz 1.2 W	Output voltage	
Power loss Power loss, typ. 11.1 W Digital outputs Type of digital output 16 Current-sinking Yes Current-sourcing Yes Short-circuit protection		230 V; 120/230 V AC, 50/60 Hz
Power loss Power loss, typ. 11.1 W Digital outputs Type of digital output 16 Current-sinking Yes Current-sourcing Yes Short-circuit protection	Dawar	
Power loss Power loss, typ. 11.1 W Digital outputs Type of digital output 16.2 Type of digital outputs 16.2 Current-sourcing Yes Short-circuit protection No • built-in fuse 6.3 A melting fuse, slow-blow 9.2 Size of motor starters according to NEMA, max. 9.3 Switching capacity of the outputs 9.3 • with resistive load, max. 1 A 50 W Output voitage • for signal "1", min. 17.3 • for signal "1" rated value 17.4 • for signal "1" permissible range, min. 10 mA 1		12 W
Power loss, typ. 11.1 W Digital outputs Type of digital output 16 Number of digital outputs 16 Current-sinking Yes Current-sourcing Yes Short-circuit protection No • built-in fuse 6.3 A melting fuse, slow-blow Size of motor starters according to NEMA, max. 4 Switching capacity of the outputs • with resistive load, max. 50 W Output voitage • for signal "1", min. 0.1 (1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current • for signal "1" rated value 1 A		
Type of digital outputs Type of digital outputs 16 Current-sinking Yes Current-sourcing Yes Short-circuit protection • built-in fuse 6.3 A melting fuse, slow-blow Size of motor starters according to NEMA, max. 4 Switching capacity of the outputs • with resistive load, max. • for signal "1", min. Cutput current • for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, max. • for signal "1" permissible load • for signal "1" permissible load • for signal "0" residual current, max. Cutput delay with resistive load • "1" to "0", max. 1 AC cycle • "1" to "0", max	Power loss	
Type of digital outputs Number of digital outputs 16 Current-sinking Yes Current-sourcing Yes Short-circuit protection • built-in fuse Size of motor starters according to NEMA, max. Switching capacity of the outputs • with resistive load, max. • on lamp load, max • for signal "1", min. Output vortage • 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 "1" max. • for logic links • for uprating • for redundant control of a load Yes Switching frequency • with resistive load, max. • with inductive load, max. • with inductive load, max. • on lamp load, max. • on lamp load, max. • on lamp load, max. • Current per channel, max. • Current per channel, max. • Current per soup, max. • Current per module, max. • Current per module, max.	Power loss, typ.	11.1 W
Number of digital outputs Current-sinking Yes Current-sourcing Yes Short-circuit protection • built-in fuse Size of motor starters according to NEMA, max. **with resistive load, max. • on lamp load, max. • for signal "1" permissible range, mix. • for logic links • "0" to "1", max. • for upratting • for redundant control of a load **Yes **With resistive load **No **Output current **Output current **Output current **Or signal "1" permissible range, mix. • for signal "1" permissible range, max. • for signal "0" residual current, max. **Output delay with resistive load **Output delay wi	Digital outputs	
Current-sinking Yes Current-sourcing Yes Short-circuit protection No • built-in fuse Size of motor starters according to NEMA, max. 4 Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • for signal "1", min. • for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, max. • for signal "0" residual current, max. • for logic links • "0" to "1", max. • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • for logic max. • for logic max. • for logic links • for uprating • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • in large frequency • with resistive load, max. • for large frequency • with resistive load, max	Type of digital output	Triac
Current-sourcing Yes Short-circuit protection No • built-in fuse 6.3 A melting fuse, slow-blow Size of motor starters according to NEMA, max. • with resistive load, max. • on lamp load, max. • for signal "1", min. • for signal "1" permissible range, min. • for signal "1" permissible range, min. • for signal "0" residual current, max. • 1 A • "1" to "0", max. • for logic links • "1" to "0", max. • "1" to "0", max. • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • on lamp load, max. • 1 D Hz • with inductive load, max. • 1 D Hz • Current per channel, max. • 1 A; see additional description in the manual • Current per module, max. • Current per module, max.	Number of digital outputs	16
Short-circuit protection • built-in fuse 6.3 A melting fuse, slow-blow Size of motor starters according to NEMA, max. 4 Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 1 A on lamp load, max. 1 A 1 A 1 A 0 on lamp load, max. 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1	Current-sinking	Yes
Size of motor starters according to NEMA, max.	Current-sourcing	Yes
Size of motor starters according to NEMA, max. with resistive load, max. on lamp load, max. for signal "1", min. Cutput voltage for signal "1" rated value for signal "1" permissible range, min. for signal "1" permissible range, max. for signal "0" residual current, max. L1 A L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current L1 A for signal "1" permissible range, min. for signal "1" permissible range, max. for signal "0" residual current, max. L2 MA Cutput delay with resistive load "0" to "1", max. "1 AC cycle "1" to "0", max. AC cycle "1" to "0", max. for logic links for uprating for redundant control of a load Yes Switching frequency with resistive load, max. with inductive load, max. owith inductive load, max. owith inductive load, max. Total current of the outputs Current per channel, max. Current per group, max. Current per group, max. Current per module, max. Current per module, max. L1 A; see additional description in the manual L2 A; see additional description in the manual	Short-circuit protection	No
Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • for signal "1", min. Cutput voltage • for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, max. • for signal "0" residual current, max. 2 mA Cutput delay with resistive load • "0" to "1", max. • "1" to "0", max. 1 AC cycle • "1" to "0", max. 1 AC cycle Parallel switching of two outputs • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • with inductive load, max. • with inductive load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max. 10 A; see additional description in the manual	• built-in fuse	6.3 A melting fuse, slow-blow
• with resistive load, max. • on lamp load, max. 50 W Cutput voltage • for signal "1", min. 11 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current 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 "0" residual current, max. • for signal "0" residual current, max. • "0" to "1", max. • "1" to "0", max. • 1 AC cycle • "1" to "0", max. • for loici links • for uprating • for redundant control of a load Yes Switching frequency • with resistive load, max. • with inductive load, max. • with inductive load, max. • on lamp load, max. • 1 Hz Total current of the outputs • Current per channel, max. • Current per group, max. • Current per module, max. • 10 A; see additional description in the manual	Size of motor starters according to NEMA, max.	4
on lamp load, max. Output voltage for signal "1", min. L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current Utput current for signal "1" rated value for signal "1" permissible range, min. for signal "1" permissible range, min. for signal "1" permissible range, max. for signal "0" residual current, max. L1 AC cycle for signal "0" residual current, max. L1 AC cycle "1" to "0", max. L1 AC cycle "1" to "0", max. for logic links for uprating for uprating for redundant control of a load Switching frequency with resistive load, max. on lamp load, max. L1 AC cycle L2 AC cycle With resistive load L3 C cycle No Switching frequency with resistive load, max. L1 AC cycle L2 C cycle Switching frequency with resistive load, max. L2 AC cycle L3 C cycle L4 C cycle L5 C cycle L6 C cycle L7 C cycle L8	Switching capacity of the outputs	
Output voltage • for signal "1", min. L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current Output current • for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, max. • for signal "0" residual current, max. 0 toput delay with resistive load • "0" to "1", max. • "1" to "0", max. 1 AC cycle 1 AC cycle 1 AC cycle 1 AC cycle Parallel switching of two outputs • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • with inductive load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per group, max. • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual	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 current Output current • for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, min. • for signal "0" residual current, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 1 AC cycle Parallel switching of two outputs • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • with inductive load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max. • Current per module, max. • Current per module, max. • 10 A; see additional description in the manual	● 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 "0" residual current, max. • for signal "0" residual current, max. • "0" to "1", max. • "1" to "0", max. • "1" to "0", max. • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • with inductive load, max. • Output logic max. • Total current of the outputs • Current per channel, max. • Current per group, max. • Current per module, max.	Output voltage	
Output current • for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, max. • for signal "0" residual current, max. • for signal "0" residual current, max. Output delay with resistive load • "0" to "1", max. • "1" to "0", max. • "1" to "0", max. • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max.	● for signal "1", min.	
• for signal "1" permissible range, min. • for signal "0" residual current, max. • for signal "0" residual current, max. 2 mA Output delay with resistive load • "0" to "1", max. • for logic links • for logic links • for uprating • for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max.	Output current	
 for signal "1" permissible range, max. for signal "0" residual current, max. 2 mA Output delay with resistive load "0" to "1", max. 1 AC cycle "1" to "0", max. 1 AC cycle Parallel switching of two outputs for logic links for uprating for redundant control of a load Yes Switching frequency with resistive load, max. with inductive load, max. on lamp load, max. 1 Hz Total current of the outputs Current per channel, max. Current per group, max. Current per group, max. Current per module, max. 10 A; see additional description in the manual Current per module, max. 	• for signal "1" rated value	1 A
for signal "0" residual current, max. Output delay with resistive load "0" to "1", max. "1" to "0", max. for logic links No for uprating for redundant control of a load Switching frequency with resistive load, max. with inductive load, max. on lamp load, max. On lamp load, max. Current per channel, max. Current per group, max. Current per module, max. 10 A; see additional description in the manual Current per module, max. 10 A; see additional description in the manual	• for signal "1" permissible range, min.	10 mA
Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 1 AC cycle Parallel switching of two outputs • for logic links • for uprating • for redundant control of a load Yes Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual	• for signal "1" permissible range, max.	15 A; max. 1 AC cycle
Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 1 AC cycle Parallel switching of two outputs • for logic links • for uprating • for redundant control of a load Yes Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max. 10 A; see additional description in the manual • Current per module, max. 10 A; see additional description in the manual	• for signal "0" residual current, max.	2 mA
 "1" to "0", max. Parallel switching of two outputs for logic links for uprating for redundant control of a load Switching frequency with resistive load, max. with inductive load, max. 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 module, max. 10 A; see additional description in the manual Current per module, max. 	Output delay with resistive load	
Parallel switching of two outputs • for logic links • for uprating • for redundant control of a load Yes Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per group, max. • Current per module, max. • Current per module, max. 10 A; see additional description in the manual • Current per module, max.	• "0" to "1", max.	1 AC cycle
 for logic links for uprating No for redundant control of a load Yes Switching frequency with resistive load, max. with inductive load, max. on lamp load, max. 1 Hz Total current of the outputs Current per channel, max. Current per group, max. Current per group, max. Current per module, max. 10 A; see additional description in the manual Current per module, max. 	• "1" to "0", max.	1 AC cycle
 for uprating for redundant control of a load Switching frequency with resistive load, max. with inductive load, max. on lamp load, max. 1 Hz Total current of the outputs Current per channel, max. Current per group, max. Current per group, max. Current per module, max. 1 A; see additional description in the manual Current per module, max. 10 A; see additional description in the manual 	Parallel switching of two outputs	
• for redundant control of a load Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. • on lamp load, max. • Current per channel, max. • Current per group, max. • Current per module, max.	• for logic links	No
Switching frequency • with resistive load, max. • with inductive load, max. • on lamp load, max. 1 Hz Total current of the outputs • Current per channel, max. • Current per group, max. • Current per module, max. 10 Hz 1 Hz	• for uprating	No
 with resistive load, max. with inductive load, max. on lamp load, max. 1 Hz Total current of the outputs Current per channel, max. Current per group, max. Current per group, max. Current per module, max. 10 A; see additional description in the manual 	• for redundant control of a load	Yes
 with inductive load, max. 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 	Switching frequency	
 on lamp load, max. 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 	• with resistive load, max.	10 Hz
Total current of the outputs • Current per channel, max. • Current per group, max. • Current per group, max. • Current per module, max. 1 A; see additional description in the manual 10 A; see additional description in the manual	• with inductive load, max.	0.5 Hz
 Current per channel, max. Current per group, max. Current per module, max. 1 A; see additional description in the manual 2 A; see additional description in the manual 10 A; see additional description in the manual 	• on lamp load, max.	1 Hz
 Current per group, max. Current per module, max. 2 A; see additional description in the manual 10 A; see additional description in the manual 	Total current of the outputs	
 Current per module, max. 10 A; see additional description in the manual 	Current per channel, max.	1 A; see additional description in the manual
• Current per module, max. 10 A; see additional description in the manual	Current per group, max.	2 A; see additional description in the manual
		10 A; see additional description in the manual

• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Isochronous operation (application synchronized up	No
to terminal)	
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	No
Diagnostic messages	
Monitoring the supply voltage	No
Wire-break	No
Short-circuit	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
G	
Potential separation	
_	
Potential separation	No
Potential separation Potential separation channels	No 2
Potential separation Potential separation channels • between the channels	
Potential separation Potential separation channels • between the channels • between the channels, in groups of	2
Potential separation Potential separation channels • between the channels • between the channels, in groups of • between the channels and backplane bus	2
Potential separation Potential separation channels • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits	2 Yes 250 V AC between the channels and the backplane bus; 500 V
Potential separation Potential separation channels • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference	2 Yes 250 V AC between the channels and the backplane bus; 500 V
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with	Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels
Potential separation Potential separation channels • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits	Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with Ambient conditions	Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with Ambient conditions Ambient temperature during operation	2 Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels 3 100 V DC
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with Ambient conditions Ambient temperature during operation • horizontal installation, min.	2 Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels 3 100 V DC
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max.	2 Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels 3 100 V DC 0 °C 60 °C
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, max. • vertical installation, min.	Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels 3 100 V DC 0 °C 60 °C 0 °C
Potential separation Potential separation channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Isolation Isolation tested with Ambient conditions Ambient temperature during operation • horizontal installation, min. • horizontal installation, min. • vertical installation, min. • vertical installation, max.	Yes 250 V AC between the channels and the backplane bus; 500 V AC between the channels 3 100 V DC 0 °C 60 °C 0 °C

Dimensions		
Width	35 mm	
Height	147 mm	
Depth	129 mm	
Weights		
Weight, approx.	310 g	
last modified:	10/22/2018	