

SIMATIC S7-1500 Digital output module, DQ16x24 V DC/0.5A BA, 16 channels in groups of 8, 4 A per group; Delivery incl. front connector Push-in



General information	
Product type designation	DQ 16x24VDC/0.5A BA
HW functional status	FS01
Firmware version	V1.0.0
<ul style="list-style-type: none"> FW update possible 	Yes
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No
<ul style="list-style-type: none"> Prioritized startup 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V13 / V13
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	V2.3 / -
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes
<ul style="list-style-type: none"> DQ with energy-saving function 	No
<ul style="list-style-type: none"> PWM 	No

- Oversampling
- MSO

No
Yes

Supply voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes; through internal protection with 7 A per group

Input current

Current consumption, max.	30 mA
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Output voltage

Rated value (DC)	24 V
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Power

Power available from the backplane bus	1.15 W
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Power loss

Power loss, typ.	2.2 W
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Digital outputs

Type of digital output	Transistor
Number of digital outputs	16
Current-sourcing	Yes
Digital outputs, parameterizable	No
Short-circuit protection	Yes
<ul style="list-style-type: none"> • Response threshold, typ. 	1 A
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes

Switching capacity of the outputs

- with resistive load, max. 0.5 A
- on lamp load, max. 5 W

Load resistance range

- lower limit 48 Ω
- upper limit 12 kΩ

Output voltage

- for signal "1", min. L+ (-0.8 V)

Output current

- for signal "1" rated value 0.5 A
- for signal "1" permissible range, max. 0.5 A
- for signal "0" residual current, max. 0.5 mA

Output delay with resistive load

- "0" to "1", max. 100 μs
- "1" to "0", max. 500 μs

Parallel switching of two outputs

• for logic links	Yes
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz; According to IEC 60947-5-1, DC-13
• on lamp load, max.	10 Hz
Total current of the outputs	
• Current per channel, max.	0.5 A; see additional description in the manual
• Current per group, max.	4 A; see additional description in the manual
• Current per module, max.	8 A; see additional description in the manual
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
• Diagnostic alarm	No
• Maintenance interrupt	No
Diagnoses	
• Monitoring the supply voltage	No
• Wire-break	No
• Short-circuit	No
• Group error	No
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green LED
• Channel status display	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	No
Potential separation	
Potential separation channels	
• between the channels	No
• between the channels, in groups of	8
• between the channels and backplane bus	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	

Suitable for safety functions	No
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Ambient conditions

Altitude during operation relating to sea level	
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- Installation altitude above sea level, max. 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual

Dimensions

Width	25 mm
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Height	147 mm
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Depth	129 mm
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Weights

Weight, approx.	230 g
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Other

Note:	Supplied incl. 40-pole push-in front connectors
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last modified:	09/03/2020
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