



SIMATIC S7-1500, digital output module, DQ32xDC 24V/0.5A BA, 32 channels in groups of 8, 4 A per group; 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 incl. front connector push-in

General information	
Product type designation	DQ 32x24VDC/0.5A BA
HW functional status	From FS01
Firmware version	V1.0.0
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• Prioritized startup	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 / V13
• STEP 7 configurable/integrated from version	V5.5 SP3 / -
• PROFIBUS from GSD version/GSD revision	V1.0 / V5.1
• PROFINET from GSD version/GSD revision	V2.3 / -
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	Yes
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; through internal protection with 7 A per group
Input current	
Current consumption, max.	60 mA
output voltage / header	
Rated value (DC)	24 V
Power	
Power available from the backplane bus	1.15 W
Power loss	
Power loss, typ.	3.8 W
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	32
Current-sourcing	Yes
Digital outputs, parameterizable	No
Short-circuit protection	Yes
• Response threshold, typ.	1 A

Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> with resistive load, max. 	0.5 A
<ul style="list-style-type: none"> on lamp load, max. 	5 W
Load resistance range	
<ul style="list-style-type: none"> lower limit 	48 Ω
<ul style="list-style-type: none"> upper limit 	12 kΩ
Output voltage	
<ul style="list-style-type: none"> for signal "1", min. 	L+ (-0.8 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value 	0.5 A
<ul style="list-style-type: none"> for signal "1" permissible range, max. 	0.5 A
<ul style="list-style-type: none"> for signal "0" residual current, max. 	0.5 mA
Output delay with resistive load	
<ul style="list-style-type: none"> "0" to "1", max. 	100 μs
<ul style="list-style-type: none"> "1" to "0", max. 	500 μs
Parallel switching of two outputs	
<ul style="list-style-type: none"> for logic links 	Yes
<ul style="list-style-type: none"> for uprating 	No
<ul style="list-style-type: none"> for redundant control of a load 	Yes
Switching frequency	
<ul style="list-style-type: none"> with resistive load, max. 	100 Hz
<ul style="list-style-type: none"> with inductive load, max. 	0.5 Hz; According to IEC 60947-5-1, DC-13
<ul style="list-style-type: none"> on lamp load, max. 	10 Hz
Total current of the outputs	
<ul style="list-style-type: none"> Current per channel, max. 	0.5 A; see additional description in the manual
<ul style="list-style-type: none"> Current per group, max. 	4 A; see additional description in the manual
<ul style="list-style-type: none"> Current per module, max. 	16 A; see additional description in the manual
Cable length	
<ul style="list-style-type: none"> shielded, max. 	1 000 m
<ul style="list-style-type: none"> unshielded, max. 	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	No
<ul style="list-style-type: none"> Maintenance interrupt 	No
Diagnoses	
<ul style="list-style-type: none"> Monitoring the supply voltage 	No
<ul style="list-style-type: none"> Wire-break 	No
<ul style="list-style-type: none"> Short-circuit 	No
<ul style="list-style-type: none"> Group error 	No
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED 	Yes; green LED
<ul style="list-style-type: none"> ERROR LED 	Yes; red LED
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) 	Yes; green LED
<ul style="list-style-type: none"> Channel status display 	Yes; green LED
<ul style="list-style-type: none"> for channel diagnostics 	No
<ul style="list-style-type: none"> for module diagnostics 	No
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> between the channels 	No
<ul style="list-style-type: none"> between the channels, in groups of 	8
<ul style="list-style-type: none"> between the channels and backplane bus 	Yes
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; From FS02

Highest safety class achievable for safety-related tripping of standard modules	
<ul style="list-style-type: none"> • Performance level according to ISO 13849-1 • Category according to ISO 13849-1 • SIL acc. to IEC 62061 • remark on safety-oriented shutdown 	PL d Cat. 3 SIL 2 https://support.industry.siemens.com/cs/de/en/view/39198632
product functions / security / header	
signed firmware update	No
data integrity	No
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. 	-30 °C; from FS04 60 °C -30 °C; from FS04 40 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> • Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Dimensions	
Width	25 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	280 g
Other	
Note:	Supplied incl. 40-pole push-in front connectors

last modified: 2/15/2024 