



SIMATIC S7-1500, digital output module DQ 32x24V DC/0.5A HF; 32 channels in groups of 8; 4 A per group; single-channel diagnostics; substitute value, switching cycle counter for connected actuators. 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. front connector (screw terminals or push-in) to be ordered separately

Figure similar

General information	
Product type designation	DQ 32x24VDC/0.5A HF
HW functional status	From FS02
Firmware version	V1.1.0
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	Yes
• Prioritized startup	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 SP1 / -
• 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
• Cam control (switching at comparison values)	No
• Oversampling	No
• MSO	Yes
• Integrated operating cycle counter	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	
Rated value (DC)	24 V
Power	
Power consumption from the backplane bus	1.1 W
Power loss	
Power loss, typ.	3.5 W
Digital outputs	

Type of digital output	Transistor
Number of digital outputs	32
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
output type acc. to IEC 61131, type 0.5	Yes
Short-circuit protection	Yes; Clocked electronically
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
<b>Load resistance range</b>	
• lower limit	48 Ω
• upper limit	12 kΩ
<b>Output voltage</b>	
• for signal "1", min.	L+ (-0.8 V)
<b>Output current</b>	
• 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
<b>Output delay with resistive load</b>	
• "0" to "1", max.	100 μs
• "1" to "0", max.	500 μs
<b>Parallel switching of two outputs</b>	
• for logic links	Yes
• for uprating	No
• for redundant control of a load	Yes
<b>Switching frequency</b>	
• 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
<b>Total current of the outputs</b>	
• 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.	16 A; see additional description in the manual
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Isochronous mode</b>	
Execution and activation time (TCO), min.	70 μs
Bus cycle time (TDP), min.	250 μs
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
• Maintenance interrupt	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire break	Yes
• Short-circuit	Yes
• Group error	Yes
<b>Diagnostics indication LED</b>	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green LED
• Channel status display	Yes; green LED

• for channel diagnostics	Yes; red LED	
• for module diagnostics	Yes; red LED	
<b>Potential separation</b>		
Potential separation channels		
• between the channels	No	
• between the channels, in groups of	8	
• between the channels and backplane bus	Yes	
<b>Isolation</b>		
Isolation tested with	707 V DC (type test)	
<b>Standards, approvals, certificates</b>		
Siemens Eco Profile (SEP)	Siemens EcoTech	
Suitable for safety functions	No	
Suitable for safety-related tripping of standard modules	Yes; From FS02	
<b>Ecological footprint</b>		
• environmental product declaration	Yes	
Global warming potential		
— global warming potential, (total) [CO2 eq]	43.8 kg	
— global warming potential, (during production) [CO2 eq]	9.5 kg	
— global warming potential, (during operation) [CO2 eq]	34.5 kg	
— global warming potential, (after end of life cycle) [CO2 eq]	-0.231 kg	
Highest safety class achievable for safety-related tripping of standard modules		
• Performance level according to ISO 13849-1	PL d	
• Category according to ISO 13849-1	Cat. 3	
• SIL acc. to IEC 62061	SIL 2	
• remark on safety-oriented shutdown	<a href="https://support.industry.siemens.com/cs/de/en/view/39198632">https://support.industry.siemens.com/cs/de/en/view/39198632</a>	
<b>Security</b>		
signed firmware update	No	
data integrity	No	
<b>Ambient conditions</b>		
Ambient temperature during operation		
• horizontal installation, min.	-30 °C; From FS03	
• horizontal installation, max.	60 °C	
• vertical installation, min.	-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	
<b>Dimensions</b>		
Width	35 mm	
Height	147 mm	
Depth	129 mm	
<b>Weights</b>		
Weight, approx.	280 g	
<b>Classifications</b>		
	<b>Version</b>	<b>Classification</b>
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419

ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Manufacturer Declaration](#)

[China RoHS](#)

[Miscellaneous](#)



General Product Approval

For use in hazardous locations



[EM](#)



[CCC-Ex](#)

For use in hazardous locations

[EM](#)



[Type Examination Certificate](#)



IECEX

[Miscellaneous](#)

[CCC-Ex](#)

Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application

Environment



[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



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