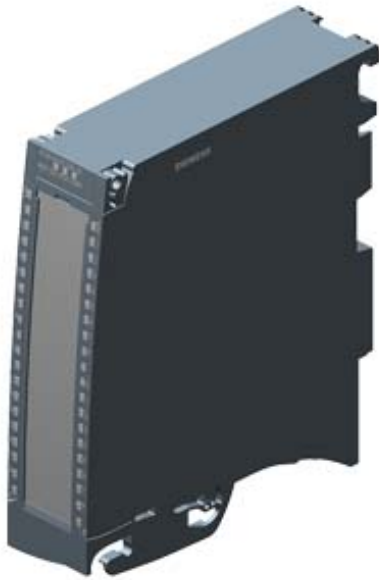


SIMATIC S7-1500, DIGITAL OUTPUT MODULE DQ 32 X 24V DC/0.5A; 32 CHANNELS IN GROUPS OF 8, 4 A PER GROUP; SINGLE-CHANNEL DIAGNOSIS; SUBSTITUTE VALUE



General information	
Product type designation	DQ 32x24VDC/0.5A HF
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 / -
• 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
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.	60 mA
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#### Output voltage

Rated value (DC)	24 V
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#### Power

Power available from the backplane bus	1.1 W
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#### Power loss

Power loss, typ.	3.5 W
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#### Digital outputs

Number of digital outputs	32
Current-sourcing	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

#### Switching capacity of the outputs

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

#### Load resistance range

• lower limit	48 $\Omega$
• upper limit	12 k $\Omega$

#### Output voltage

• for signal "1", min.	L+ (-0.8 V)
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#### 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 $\mu$ s
• "1" to "0", max.	500 $\mu$ s

#### 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
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<ul style="list-style-type: none"> <li>• with inductive load, max.</li> </ul>	0.5 Hz; According to IEC 60947-5-1, DC-13
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	10 Hz
<b>Total current of the outputs</b>	
<ul style="list-style-type: none"> <li>• Current per channel, max.</li> </ul>	0.5 A; see additional description in the manual
<ul style="list-style-type: none"> <li>• Current per group, max.</li> </ul>	4 A; see additional description in the manual
<ul style="list-style-type: none"> <li>• Current per module, max.</li> </ul>	16 A; see additional description in the manual
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	1 000 m
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	600 m
<b>Isochronous mode</b>	
Isochronous operation (application synchronized up to terminal)	Yes
Execution and activation time (TCO), min.	70 µs
Bus cycle time (TDP), min.	250 µs
<b>Interrupts/diagnostics/status information</b>	
Diagnostics	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes
<b>Diagnostic messages</b>	
<ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Short-circuit</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Group error</li> </ul>	Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• RUN LED</li> </ul>	Yes; Green LED
<ul style="list-style-type: none"> <li>• ERROR LED</li> </ul>	Yes; Red LED
<ul style="list-style-type: none"> <li>• Monitoring of the supply voltage (PWR-LED)</li> </ul>	Yes; Green LED
<ul style="list-style-type: none"> <li>• Channel status display</li> </ul>	Yes; Green LED
<ul style="list-style-type: none"> <li>• for channel diagnostics</li> </ul>	Yes; Red LED
<ul style="list-style-type: none"> <li>• for module diagnostics</li> </ul>	Yes; Red LED
<b>Potential separation</b>	
<b>Potential separation channels</b>	
<ul style="list-style-type: none"> <li>• between the channels</li> </ul>	No
<ul style="list-style-type: none"> <li>• between the channels, in groups of</li> </ul>	8
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	Yes
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Decentralized operation</b>	
Prioritized startup	Yes

## Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

## Weights

Weight, approx.	280 g
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**last modified:** 23.03.2016