Data sheet

6ES7522-1BP00-0AA0



SIMATIC S7-1500, digital output module, DQ 64xDC 24V/0,3A BA, 64 channels in groups of 16, 2 A per group at 60 °C, sinking output, 35 mm wide, 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. cables and terminal blocks to be ordered separately as accessories

General information	
Product type designation	DQ 64x24VDC/0.3A 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	No
Engineering with	
 STEP 7 TIA Portal configurable/integrated from version 	V16 with HSP 0319 / V17
 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 	V2.35 / -
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	No
Supply voltage	<u>_</u>
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
external protection for power supply lines (recommendation)	24 V DC/6 A miniature circuit breaker with type B tripping characteristic
Input current	
Current consumption, max.	90 mA; without load
output voltage / header	
Rated value (DC)	24 V
Power	
Power available from the backplane bus	0.6 W
Power loss	
Power loss, typ.	3.5 W
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	64

Current ainking	No
Current sourcing	No You
Current-sourcing	Yes
Digital outputs, parameterizable	No You
Short-circuit protection	Yes
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs • with resistive load, max.	0.3 A
with resistive load, max. on lamp load, max.	5 W
Load resistance range	5 VV
lower limit	80 Ω
• upper limit	10 kΩ
Output voltage	10 K22
• for signal "1", min.	L+ (-0.8 V)
Output current	L1 (-0.0 V)
• for signal "1" rated value	0.3 A
• for signal "1" permissible range, max.	0.3 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	0.0 11# (
• "0" to "1", max.	100 μs
• "1" to "0", max.	500 μs
Parallel switching of two outputs	ουσ μο
• 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.	0.3 A
Current per group, max.	2 A
Current per module, max.	8 A
Total current of the outputs (per module)	
Total current of the outputs (per module) horizontal installation	
horizontal installation	8 A
	8 A
horizontal installation — up to 60 °C, max. vertical installation	8 A
horizontal installation — up to 60 °C, max.	
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max.	
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length	8 A
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max.	8 A 1 000 m
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information	8 A 1 000 m 600 m
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function	8 A 1 000 m 600 m
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable	8 A 1 000 m 600 m
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms	8 A 1 000 m 600 m No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm	8 A 1 000 m 600 m No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt	8 A 1 000 m 600 m No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses	8 A 1 000 m 600 m No No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage	8 A 1 000 m 600 m No No No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break	8 A 1 000 m 600 m No No No No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit	8 A 1 000 m 600 m No No No No No No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error	8 A 1 000 m 600 m No No No No No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED	8 A 1 000 m 600 m No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED	8 A 1 000 m 600 m No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED	8 A 1 000 m 600 m No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED	8 A 1 000 m 600 m No No No No No Ves; green LED Yes; red LED No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED)	8 A 1 000 m 600 m No No No No No Ves; green LED Yes; red LED No Yes; via SIMATIC TOP connect connection module
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Channel status display	8 A 1 000 m 600 m No No No No No No Ves; green LED Yes; red LED No Yes; via SIMATIC TOP connect connection module Yes; via SIMATIC TOP connect connection module
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics	8 A 1 000 m 600 m No No No No No No No Ves; green LED Yes; red LED No Yes; via SIMATIC TOP connect connection module Yes; via SIMATIC TOP connect connection module No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics	8 A 1 000 m 600 m No Yes; green LED Yes; red LED No Yes; via SIMATIC TOP connect connection module Yes; via SIMATIC TOP connect connection module
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics Potential separation	8 A 1 000 m 600 m No No No No No No No Ves; green LED Yes; red LED No Yes; via SIMATIC TOP connect connection module Yes; via SIMATIC TOP connect connection module No
horizontal installation — up to 60 °C, max. vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms • Diagnostic alarm • Maintenance interrupt Diagnoses • Monitoring the supply voltage • Wire-break • Short-circuit • Group error Diagnostics indication LED • RUN LED • ERROR LED • MAINT LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics	8 A 1 000 m 600 m No No No No No No No Ves; green LED Yes; red LED No Yes; via SIMATIC TOP connect connection module Yes; via SIMATIC TOP connect connection module No

• between the channels, in groups of	16; 32 when using SIMATIC TOP connect connection module	
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 FS01	
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	
Ambient conditions		
Ambient temperature during operation		
 horizontal installation, min. 	-30 °C	
 horizontal installation, max. 	60 °C	
 vertical installation, min. 	-30 °C	
 vertical installation, max. 	40 °C	
Altitude during operation relating to sea level		
 Installation altitude above sea level, max. 	5 000 m	
Dimensions		
Width	35 mm	
Height	147 mm	
Depth	129 mm	
Weights		
Weight, approx.	270 g	
Other		
Note:	Please order cable and connection modules separately	
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