SIEMENS

Data sheet

6ES7522-1BL01-0AB0



SIMATIC S7-1500, digital output module DQ 32x24 V DC/0.5 A HF; 32 channels in groups of 8; 4 A per group; Single-channel diagnostics; Substitute value: Front connector (screw terminals or push-in) to be ordered separately

| Product type designation DQ 32x24VDC/0.5A HF HW functional status From FS02 Firmware version V1.1.0 Product function Vision FS02 • Isochronous mode Yes; I&M0 to I&M3 • Isochronous mode Yes • Prioritized startup Yes Engineering with V13 SP1 / - • STEP 7 TA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Ves • DQ Yes • Integrated operating cycle counter Yes Supply voltage Rated value (DC) permissible range, upper limit (DC) 26 V permissible range, upper limit (DC) 28 V PReverse polarity protection Yes; through internal protection with 7 A per group hput current Current consumption, max. 60 mA Curper voltage Rated value (DC) 24 V< | General information | |
|--|--|---|
| 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 V1.3 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode • • DQ Yes • No No • Carn control (switching at comparison values) No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Zes Rated value (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity pro | Product type designation | DQ 32x24VDC/0.5A HF |
| 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 / - • 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 • PROFINET from GSD version values) No • Cam control (switching at comparison values) No • Orersampling No • Integrated operating cycle counter Yes Supply voltage Yes Rated value (DC) 24 V permissible range, lower 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 loss Power loss Power loss | HW functional status | From FS02 |
| • I&M data Yes; I&M0 to I&M3 • Isochronous mode Yes • Prioritized startup Yes Engineering with Yes • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • PWM No • Carn control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Suppty voltage Rated value (DC) 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. Output voltage Rated value (DC) Rated value (DC) 24 V Power loss 1.1 W Power loss 55 W | Firmware version | V1.1.0 |
| • Isochronous mode Yes • Prioritized startup Yes Engineering with • • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V2.3 /- Operating mode V2.3 / - • DQ Yes • DQ with energy-saving function No • PWWM No • Cam control (switching at comparison values) No • Oversampling No • Integrated operating cycle counter Yes Supply voltage Z4 V Rated value (DC) 24.4 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes, through internal protection with 7 A per group Input current 60 mA Output voltage 24.V Power loss 1.1 W Power loss 5.5 W Power loss, typ. 3.5 W Poingtale from the backplane bus 1.1 W | Product function | |
| • Prioritized startup Yes Engineering with V13 SP1 / - • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V2.3 / - • DPATE from GSD version/GSD revision V2.3 / - • Operating mode • • DQ Yes • DQ with energy-saving function No • DQ versampling No • Oversampling No • Oversampling No • Integrated operating cycle counter Yes Supply voltage 24 V permissible range, lower 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 24 V Power available from the backplane bus 1.1 W Power loss 1.1 W | • I&M data | Yes; I&M0 to I&M3 |
| Engineering with STEP 7 TIA Portal configurable/integrated from version PROFIBUS from GSD version/GSD revision V1.0 / V5.1 PROFINET from GSD version/GSD revision V2.3 / - Operating mode • DQ Yes • DQ No • Cam control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter Yes Supply voltage Integrated operating cycle counter Permissible range, uower limit (DC) 24 V permissible range, uower limit (DC) 26.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current Input current Current consumption, max. 60 mA Output v | Isochronous mode | Yes |
| • STEP 7 TIA Portal configurable/integrated from version V13 SP1 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.3 / - Operating mode V2.3 / - • DQ Yes • DQ Yes • DQ Yes • DQ with energy-saving function 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, upper limit (DC) 28.8 V Reverse polarity protection Preverse polarity protection Yes, through internal protection with 7 A per group Input current Current consumption, max. 60 mA Output voltage 24 V Power loss 1.1 W Power loss, typ. 3.5 W Digital outputs Transistor | Prioritized startup | Yes |
| version V1.0 / V5.1 • PROFIBUS from GSD version/GSD revision V2.3 / - Operating mode V2.3 / - • DQ Yes • 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 Z4 V Rated value (DC) 24 V permissible range, lower 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 Z4 V Rated value (DC) 24 V Power loss 1.1 W Power loss 9.0 mA Output voltage 24 V Rated value (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 0.0 mA Output voltage 24 V Power loss 1.1 W | Engineering with | |
| 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 Supply voltage Rated value (DC) 24 V Perver se polarity protection Tansistor Power loss Power loss Power loss Power loss typ. 3.5 W Digital output Transistor | | V13 SP1 / - |
| Operating mode Yes 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 Permissible range, lower limit (DC) permissible range, lower limit (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Cutput voltage 1.1 W Power loss 1.1 W Power loss 9.5 W Power loss, typ. 3.5 W Digital outputs Transistor | PROFIBUS from GSD version/GSD revision | V1.0 / V5.1 |
| • DQYes• DQ with energy-saving functionNo• PWMNo• Carn control (switching at comparison values)No• OversamplingNo• OversamplingYes• Integrated operating cycle counterYesSupply voltage24 VPermissible range, lower limit (DC)20.4 Vpermissible range, upper limit (DC)20.4 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.Output voltage24 VPower available from the backplane bus1.1 WPower loss1.1 WPower loss, typ.3.5 WDigital outputTransistor | PROFINET from GSD version/GSD revision | V2.3 / - |
| DQ with energy-saving functionNo• PWMNo• Cam control (switching at comparison values)No• OversamplingNo• MSOYes• Integrated operating cycle counterYesSupply voltage24 VRated value (DC)24 Vpermissible range, lower limit (DC)20.4 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput current60 mAOutput voltage24 VPower available from the backplane bus1.1 WPower loss1.1 WPower loss, typ.3.5 WDigital outputTransistor | Operating mode | |
| • 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) 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. Current consumption, max. 60 mA Output voltage 24 V Power Power toss 1.1 W Power loss 1.1 W Power loss 3.5 W Digital outputs Transistor | • DQ | Yes |
| Cam control (switching at comparison values) Oversampling No Oversampling NSO Yes Integrated operating cycle counter 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 Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss Power loss, typ. 3.5 W Digital output Transistor | DQ with energy-saving function | No |
| Oversampling MSO Yes Integrated operating cycle counter 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 Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss Power loss, typ. 3.5 W Digital output Transistor | • PWM | No |
| • MSO Yes • Integrated operating cycle counter Yes Supply voltage 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 60 mA Output voltage 24 V Power 24 V Power available from the backplane bus 1.1 W Power loss 1.1 W Power loss 3.5 W Pigital outputs Transistor | Cam control (switching at comparison values) | No |
| Integrated operating cycle counter 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 Output voltage Rated value (DC) 24 V Power Power Power v Power loss 1.1 W Power loss Power loss, typ. 3.5 W Digital output Transistor | Oversampling | No |
| 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. Current consumption, max. 60 mA Output voltage Rated value (DC) Rated value (DC) 24 V Power 1.1 W Power loss 1.1 W Power loss, typ. 3.5 W Digital outputs Transistor | • MSO | Yes |
| 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. Output voltage 60 mA Rated value (DC) 24 V Power 24 V Power available from the backplane bus 1.1 W Power loss 3.5 W Digital outputs Transistor | Integrated operating cycle counter | Yes |
| 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. Current consumption, max. 60 mA Output voltage Rated value (DC) Power 24 V Power available from the backplane bus 1.1 W Power loss 9.5 W Power loss, typ. 3.5 W Digital outputs Transistor | Supply voltage | |
| permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 1.1 W Power loss 90 wer loss Power loss 3.5 W Digital outputs Transistor | Rated value (DC) | 24 V |
| Reverse polarity protection Yes; through internal protection with 7 A per group Input current 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 21 V Power available from the backplane bus 1.1 W Power loss 3.5 W Digital outputs Transistor | permissible range, lower limit (DC) | 20.4 V |
| Input current 60 mA Output voltage 60 mA Rated value (DC) 24 V Power 24 V Power available from the backplane bus 1.1 W Power loss 9000000000000000000000000000000000000 | permissible range, upper limit (DC) | 28.8 V |
| Current consumption, max. 60 mA Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss Power loss, typ. 3.5 W Digital outputs Type of digital output Transistor | Reverse polarity protection | Yes; through internal protection with 7 A per group |
| Output voltage Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss 1.1 W Power loss, typ. 3.5 W Digital outputs Transistor | Input current | |
| Rated value (DC) 24 V Power Power available from the backplane bus 1.1 W Power loss 1.1 W Power loss 3.5 W Digital outputs Transistor | Current consumption, max. | 60 mA |
| Power Power available from the backplane bus 1.1 W Power loss 9000000000000000000000000000000000000 | Output voltage | |
| Power available from the backplane bus 1.1 W Power loss 3.5 W Digital outputs Transistor | Rated value (DC) | 24 V |
| Power loss Power loss, typ. 3.5 W Digital outputs Type of digital output Transistor | Power | |
| Power loss, typ. 3.5 W Digital outputs Transistor | Power available from the backplane bus | 1.1 W |
| Digital outputs Transistor | Power loss | |
| Type of digital output Transistor | Power loss, typ. | 3.5 W |
| | Digital outputs | |
| Number of digital outputs 32 | Type of digital output | Transistor |
| | Number of digital outputs | 32 |

| Current-sourcing | Yes |
|--|---|
| Digital outputs, parameterizable | _ 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 | 165 |
| with resistive load, max. | 0.5 A |
| on lamp load, max. | 5 W |
| Load resistance range | 5 77 |
| 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 | 0.5 MA |
| • "0" to "1", max. | 100 με |
| • "1" to "0", max. | 100 µs |
| | 500 µs |
| Parallel switching of two outputs | Vaa |
| for logic links for uproting | Yes No |
| • for uprating | |
| for redundant control of a load | Yes |
| Switching frequency | 100 H- |
| 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. | 16 A; see additional description in the manual |
| Cable length | 4 000 |
| • shielded, max. | 1 000 m |
| • unshielded, max. | 600 m |
| Isochronous mode | |
| Execution and activation time (TCO), min. | 70 µs |
| Bus cycle time (TDP), min. | 250 µs |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Substitute values connectable | Yes |
| Alarms | |
| Diagnostic alarm | Yes |
| Maintenance interrupt | Yes |
| Diagnoses | |
| Monitoring the supply voltage | Yes |
| Wire-break | Yes |
| Short-circuit | Yes |
| Group error | Yes |
| Diagnostics indication LED | |
| 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 |
| 0 | |

| 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 | |
| Suitable for safety-related tripping of standard modules | Yes; From FS02 | |
| Highest safety class achievable for safety-related tripping of s | standard modules | |
| Performance level according to ISO 13849-1 | PL d | |
| Category according to ISO 13849-1 | Cat. 3 | |
| SILCL according to IEC 62061 | SILCL 2 | |
| Ambient conditions | | |
| 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 | |
| Dimensions | | |
| Width | 35 mm | |
| Height | 147 mm | |
| Depth | 129 mm | |
| Weights | | |
| Weight, approx. | 280 g | |
| last modified: | 12/19/2020 🖸 | |