SIEMENS

Data sheet

6ES7523-1BP50-0AA0



SIMATIC S7-1500 digital input/output module, DI 32x24VDC BA SNK / SRC, 32 channels in groups of 16, input delay typ. 3.2 ms input type 3 (IEC 61131), sinking/sourcing input, DQ 32XDC 24V/0.3A SNK BA; 32 channels in groups of 16; 2 A per group at 60 °C; sourcing output; 35 mm wide; cables and terminal blocks to be ordered separately as accessories

Product type designation D1 32 x24 V DC / DQ 32 x24 V DC/0.3 A SNK BA HW functional status From FS01 Filtware version V1.0.0 - FW update possible Yes Product function Yes - Fild data No - Isld data No - Isld data No - Isld function Yes - Frontitized starup No - Fortized starup No - Fortized starup Yes - Fortized Starup V16 with HSP 0319 / V17 - FORFIEDS from CSD version/CSD revision V17 / V5.1 - PROFINED from CSD version/CSD revision V10 / V5.1 - Counter No - DD Yes - DQ Yes - Counter No - DQ Yes - Counter No - DQ Yes - Counter No - SUP of With energy-saving function No - Word (switching at comparison values) No - Oversampting No - Overs	General information	
Firmware version V1.0.0 • FW update possible Yes Product function * • it&M data Yes; it&M0 to 1&M3 • Isochronous mode No • Prioritized startup No • STEP 7 TIA Portal configurable/integrated from version V16 with HSP 0319 / V17 • STEP 7 transpation V25 SP3 / - • PROFINET from GSD version/GSD revision V1.0./V5.1 • PROFINET from GSD version/GSD revision V2.35 / - • DI Yes • DI Yes • DQ No • Counter No • DQ Yes • DQ Yes • DQ No • Counter No • DQ No • DQ Yes • DQ No • DQ Yes • MSO Yes • Integrated operating cycle counter No • No Ye	Product type designation	DI 32 x 24 V DC / DQ 32 x 24 V DC/0.3A SNK BA
• FW update possibleYesProduct function• IsM dataYes; I&M0 to I&M3• IsBo chronous modeNo• IsBo chronous modeNo• IsBo chronous modeNo• Profitized startupNoEngineering with• STEP 7 Th A Portal configurable/integrated from versionV16 with HSP 0319 / V17• STEP 7 configurable/integrated from versionV5.5 SP3 / -• PROF IBUS from GSD version/GSD revisionV2.35 / -• PROF IBUS from GSD version/GSD revisionV2.35 / -• DIYes• CounterNo• COunterNo• DQYes• DDNo• DQYes• DQYes• DQYes• DQYes• DQYes• DQNo• CounterNo• DQYes• DQYes• DQYes• DQYes• DA wishYes• STAPYes• MSOYes• MSOYes• MSOYes• MSOYes• Dupt voltage24 V• permissible range, lower limit (DC)19.2 V• permissible range, upper limit (DC)24 S• permissible range, upper limit (DC)Yes Through internal protection with 4 A per group• external protection for power supply lines (recommendation)Yes Through internal protection with 4 Aper group• current consumption, max.45 mA; without load• current consumption, max.	HW functional status	From FS01
Product function Yes; I&M0 to I&M3 • I&M data Yes; I&M0 to I&M3 • Isochronous mode No • Prioritized startup No • STEP 7 TIA Portal configurable/integrated from version V16 with HSP 0319 / V17 • STEP 7 TIA Portal configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V2.35 / - • DI Yes • Counter No • DQ Yes • Counter No • DQ Yes • DQ Yes • DQ Yes • DQ Yes • Oversampling No • MSO Yes • Integrated operating cycle counter No Supply voltage Yes Rated value (DC) 24 V Permissible range, upper Imit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group input side: 24 V DC/A A ministure cincult breaker wit	Firmware version	V1.0.0
• I&M dataYes; I&M0 to I&M3• Isochronous modeNo• Prioritized startupNoEngineering with• STEP 7 TIA Portal configurable/integrated from versionV16 with HSP 0319 / V17• STEP 7 configurable/integrated from versionV5.5 SP3 / -• PROFIBUS from GSD version/GSD revisionV1.0 / V5.1• PROFIBUS from GSD version/GSD revisionV2.35 / -• DYes• CounterNo• DQYes• DAYes• DAYes<	FW update possible	Yes
Istorthonous mode No Prioritized startup No Engineering with V16 with HSP 0319 / V17 • STEP 7 TA Portal configurable/integrated from version V5.5 SP3 / - • PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFIBUS from GSD version/GSD revision V2.35 / - • Degrating mode V6 • DI Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • PWM No • Counter No • DQ Yes • DQ with energy-saving function No • Oversampling No • Oversampling No • MSO Yes • Integrated operating cycle counter No Supply voltage Zet V Rated value (DC) 24 V permissible range, uoper limit (DC) 28 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) Input side: 24 V DC/6 A miniature cincut breaker with type B or C tri	Product function	
• Prioritized startup No Engineering with	I&M data	Yes; I&M0 to I&M3
Engineering with V16 with HSP 0319 / V17 • STEP 7 TA Portal 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 V16 • DI Yes • DQ Yes • DQ Yes • DQ with energy-saving function No • PWM No • Carn control (switching at comparison values) No • MSO Yes • MSO Yes • Integrated operating cycle counter No • Dup versampling No • MSO Yes • Integrated operating cycle counter No • Supply voltage Yes Reted value (DC) 24 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes returnet protection for power supply lines (recommendation) Yes returnet consumption, max. 45 mA; without load Output voltage / hader Yes / DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker wi	 Isochronous mode 	No
• 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 • PROFIBUT from GSD version/GSD revision V2.35 / - • Operating mode V2.35 / - • DI Yes • Counter No • 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 No • Integrated operating cycle counter No • Retor Value (DC) 24 V • Permissible range, lower limit (DC) 28.8 V • Reverse polarity protection Yes; Through internal protection with 4 A per group • external protection for power supply lines (recommendation) Yes; Through internal protection with 4 A per group • premissible range, lower limit (DC) 28.8 V • reverse polarity protection Yes; Through internal protection with 4 A per group • transport of power supply lines (recommendation) Yes; Through internal protection with 4 A per group • transport of power supply lines (recommendation) Yes; Through internal protection with 4 A per group <td>Prioritized startup</td> <td>No</td>	Prioritized startup	No
• 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 / - • Doreating mode Ves • DI Yes • DQ Yes • DQ with energy-saving function No • WM No • Carm control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter No • MSO Yes • Integrated operating cycle counter No • Poptivoltage Yes Rated value (DC) 24 V permissible range, lower limit (DC) 19.2 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or Carteping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or Carteping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V D	Engineering with	
• PROFIBUS from GSD version/GSD revision V1.0 / V5.1 • PROFINET from GSD version/GSD revision V2.35 / - • Operating mode Ves • DI Yes • Counter No • DQ Yes • DQ with energy-saving function No • WM No • Can control (switching at comparison values) No • Oversampling No • MSI Yes • MSO Yes • Integrated operating cycle counter No Supply voltage 24 V permissible range, uper limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic uitput side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic uitput side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic uitput side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Verting threader Rated value (DC) 24 V V Power available from the backplane bus 0.6 W<	 STEP 7 TIA Portal configurable/integrated from version 	V16 with HSP 0319 / V17
• PROFINET from GSD version/GSD revision V2.35 / - • DI Yes • DI No • DQ Yes • DQ Yes • DQ Yes • DQ No • DQ No • PWM No • Cam control (switching at comparison values) No • Oversampling No • MSO Yes • Integrated operating cycle counter No Supply voltage Yes Permissible range, lower limit (DC) 24 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) ingu side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; cut	 STEP 7 configurable/integrated from version 	V5.5 SP3 / -
Operating mode Yes • DI Yes • Counter No • DQ Yes • DQ with energy-saving function No • PWM No • Can control (switching at comparison values) No • Carm control (switching at comparison values) No • Oversampling No • MSI Yes • Integrated operating cycle counter Yes • Integrated operating cycle counter No Supply voltage Rated value (DC) permissible range, lower limit (DC) 24 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic: Input current Current consumption, max. 45 mA; without load output voltage / header 24 V Power Power vailable from the backplane bus 0.6 W	 PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
• DI Yes • Counter No • DQ Yes • DQ with energy-saving function No • PWM No • Cam control (switching at comparison values) No • Oversampling No • MSI Yes • MSO Yes • MSO Yes • MSO Yes • MSO Yes • Integrated operating cycle counter No Supply voltage Yes 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 4 A per group external protection for power supply lines (recommendation) Input side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic current consumption, max. </td <td> PROFINET from GSD version/GSD revision </td> <td>V2.35 / -</td>	 PROFINET from GSD version/GSD revision 	V2.35 / -
Counter No DQ Yes DQ with energy-saving function No PWM No Cam control (switching at comparison values) No Oversampling No Oversampling Yes MSO Yes Integrated operating cycle counter No MSO Yes Integrated operating cycle counter No Supply voltage 24 V Permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 24.8 V Reverse polarity protection Yes; Through internal protection with 4 Ap erg group extermal protection for power supply lines (recommendation) Input side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; current consumption, max. 45 mA; without load output voltage / heador <td< td=""><td>Operating mode</td><td></td></td<>	Operating mode	
• DQ Yes • DQ with energy-saving function No • PWM No • Cam control (switching at comparison values) No • Oversampling No • Oversampling No • MSI Yes • MSO Yes • Integrated operating cycle counter No Supply voltage 24 V Rated value (DC) 19.2 V permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristic; outpu	• DI	Yes
• DQ with energy-saving function No • PWM No • Cam control (switching at comparison values) No • Oversampling No • Oversampling No • MSI Yes • MSO Yes • Integrated operating cycle counter No Supply voltage Ves 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 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B	Counter	No
• PWM No • Cam control (switching at comparison values) No • Oversampling No • MSI Yes • MSO Yes • Integrated operating cycle counter No Supply voltage No 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 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic: Input current 24 V Current consumption, max. 45 mA; without load output voltage / header 24 V Power 0.6 W <td>• DQ</td> <td>Yes</td>	• DQ	Yes
• Cam control (switching at comparison values)No• OversamplingNo• MSIYes• MSOYes• Integrated operating cycle counterNoSupply voltage24 VRated value (DC)9.2 Vpermissible range, lower limit (DC)9.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; Through internal protection with 4 A per groupexternal protection for power supply lines (recommendation)input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type BInput currentCurrent consumption, max.output voltage / header45 mA; without loadoutput voltage / header24 VPower available from the backplane bus0.6 W	 DQ with energy-saving function 	No
• OversamplingNo• MSIYes• MSOYes• Integrated operating cycle counterNoSupply voltage24 VRated value (DC)19.2 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; Through internal protection with 4 A per groupexternal protection for power supply lines (recommendation)input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic output side: 24 V DC/6 A miniature circuit breaker with type B or C tripping characteristicInput currentVCurrent consumption, max.45 mA; without loadoutput voltage / header24 VRated value (DC)24 VPower0.6 W	• PWM	No
MSI Yes Yes MSO Yes No Integrated operating cycle counter No No 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 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic utput current Current consumption, max. 45 mA; without load output voltage / header Rated value (DC) 24 V Power Power available from the backplane bus 0.6 W	 Cam control (switching at comparison values) 	No
• MSOYes• Integrated operating cycle counterNoSupply voltageRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; Through internal protection with 4 A per groupexternal protection for power supply lines (recommendation)input side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/A A miniature circuit breaker with type B or C tripping characteristicInput currentVCurrent consumption, max.45 mA; without loadoutput voltage / header24 VRated value (DC)24 VPower0.6 W	Oversampling	No
Integrated operating cycle counter No 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 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B bripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B Input current Current consumption, max. 45 mA; without load output voltage / header 24 V Rated value (DC) 24 V Power 0.6 W	• MSI	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 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input current Current consumption, max. 45 mA; without load output voltage / header 24 V Rated value (DC) 24 V Power 0.6 W	• MSO	Yes
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 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input current Current consumption, max. Qutput voltage / header 24 V Rated value (DC) 24 V Power 0.6 W	 Integrated operating cycle counter 	No
permissible range, lower limit (DC) 19.2 V permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input current Current consumption, max. 45 mA; without load output voltage / header 24 V Rated value (DC) 24 V Power 0.6 W	Supply voltage	
permissible range, upper limit (DC) 28.8 V Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input current Current consumption, max. 45 mA; without load output voltage / header 24 V Rated value (DC) 24 V Power 0.6 W	Rated value (DC)	24 V
Reverse polarity protection Yes; Through internal protection with 4 A per group external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input current Current consumption, max. 45 mA; without load output voltage / header 24 V Rated value (DC) 24 V Power 0.6 W	permissible range, lower limit (DC)	19.2 V
external protection for power supply lines (recommendation) input side: 24 V DC/4 A miniature circuit breaker with type B or C tripping characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B Input current Current consumption, max. 45 mA; without load output voltage / header Rated value (DC) 24 V Power 0.6 W	permissible range, upper limit (DC)	28.8 V
Input current characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B tripping characteristic Input current 45 mA; without load Output voltage / header 45 mA; without load Rated value (DC) 24 V Power 0.6 W	Reverse polarity protection	Yes; Through internal protection with 4 A per group
Current consumption, max. 45 mA; without load output voltage / header 45 mA; without load Rated value (DC) 24 V Power 0.6 W	external protection for power supply lines (recommendation)	characteristic; output side: 24 V DC/6 A miniature circuit breaker with type B
output voltage / header Rated value (DC) Power Power available from the backplane bus 0.6 W	Input current	
Rated value (DC) 24 V Power 24 V Power available from the backplane bus 0.6 W	Current consumption, max.	45 mA; without load
Power 0.6 W	output voltage / header	
Power available from the backplane bus 0.6 W	Rated value (DC)	24 V
	Power	
Power loss	Power available from the backplane bus	0.6 W
	Power loss	

Subject to change without notice © Copyright Siemens

Power loss two	4.7 \\
Power loss, typ.	4.7 W
Digital inputs	
Number of digital inputs	32
Digital inputs, parameterizable	No
Source/sink input	Yes
Input characteristic curve in accordance with IEC 61131, type 3	Yes
Number of simultaneously controllable inputs	
Number of simultaneously controllable inputs	32
horizontal installation	
— up to 60 °C, max.	32
vertical installation	10
— up to 40 °C, max.	16
Input voltage	24.14
Rated value (DC)	24 V
• for signal "0"	-5 +5 V (reference potential is COM)
• for signal "1"	-1130 V; +11 +30 V (reference potential is COM)
Input current	0.7
• for signal "1", typ.	2.7 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— parameterizable	No
— at "0" to "1", min.	3 ms
— at "0" to "1", max.	4 ms
— at "1" to "0", min.	3 ms
— at "1" to "0", max.	4 ms
for interrupt inputs	
— parameterizable	No
for technological functions	
— parameterizable	No
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	32
Current-sinking	Yes
Current-sourcing	No
Digital outputs, parameterizable	No
Short-circuit protection	No; external fusing necessary, max. 4 A per group, tripping characteristic type B or C
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
 on lamp load, max. 	5 W
Load resistance range	
lower limit	80 Ω
• upper limit	10 kΩ
Output voltage	
• for signal "1", min.	M+ (0.5 V)
Output current	
• 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" to "1", max.	100 µs
• "1" to "0", max.	500 μs
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
 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.	4 A
Total current of the outputs (per module)	
horizontal installation	
— up to 60 °C, max.	4 A
vertical installation	
— up to 40 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
	600 m
• unshielded, max.	800 III
Encoder	
Connectable encoders	
• 2-wire sensor	Yes
 permissible quiescent current (2-wire sensor), max. 	1.5 mA
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
Diagnostic alarm	No
Maintenance interrupt	No
Hardware interrupt	No
Diagnoses	
 Monitoring the supply voltage 	No
• Wire-break	No
Short-circuit	No
Group error	No
Diagnostics indication LED	
RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	No
Monitoring of the supply voltage (PWR-LED)	Yes; via SIMATIC TOP connect connection module
Channel status display	Yes; via SIMATIC TOP connect connection module
for channel diagnostics	No
for module diagnostics	
	No
Potential separation	
Potential separation channels	
between the channels	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)
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	
	25 mm
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	123 1111

Weight, approx.	250 g
Other	
Note:	Please order cable and connection modules separately
last modified:	8/16/2023 🖸

6ES75231BP500AA0 Page 4/4

8/17/2023