## SIEMENS

## Data sheet

## 6ES7522-1BL01-0AB0



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

Product type designation     DQ 32x24VDC/0.5A HF       HW functional status     From FSQ2       Firmware version     V1.1.0       Product function     V1.1.0       Product function     V1.1.0       Product function     Ves; I&M0 to I&M3       • Isochronous mode     Yes       Prioritized startup     Yes       • STEP 7 TA Portal configurable/integrated from version     V13 SP1 / -       • STEP 7 Ta Portal configurable/integrated from version     V13 SP1 / -       • PROFIBUS from GSD version/GSD revision     V2.3 / -       Operating mode     Ves       • DQ     Yes       • DQ     No       • Carr control (switching at comparison values)     No       • Oversampling     No       • MSO     Yes       Papply voltage     Yes       Pated value (DC)     24 V		
HW functional status     From FS02       Firmware version     V1.10       Product function     ************************************	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     V13 SP1/-       • STEP 7 Configurable/integrated from version     V13 SP1/-       • STEP 7 TIA Portal configurable/integrated from version     V13 SP1/-       • PROFIBUS from CSD version/GSD revision     V1.0 / V5.1       • PROFIBUT from CSD version/GSD revision     V2.3 / -       Operating mode     *       • DQ     Yes       • DQ with energy-saving function     No       • Oversampling     No       • Oversampling     No       • Oversampling     No       • MSO     Yes       • Integrated operating cycle counter     Yes       Supply voltage     *       Reted 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 7 A per group       Input current     *       Current consumption, max.     60 mA       output voltage / header     *       Rated value (DC)     24 V   <		
Product function         Ves           • KM data         Yes; I&M0 to I&M3           • Isochronous mode         Yes           • Prioritized startup         Yes           • STEP 7 TIA Portal configurable/integrated from version         V13 SP1 / -           • STEP 7 orifigurable/integrated from version         V5.5 SP3 / -           • PROFIBUS from GSD version/GSD revision         V1.0 / V5.1           • PROFIBUS from GSD version/GSD revision         V2.3 / -           Operating mode         -           • DQ         Yes           • DQ with energy-saving function         No           • VWM         No           • Output integrated operating cycle counter         Yes           Supply voltage         Yes           Pressenpling         No           • MSO         Yes           • Integrated operating cycle counter         Yes           Supply voltage         -           Rated value (DC)         19.2 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 7 A per group           Ipput current         -           Current consumption, max.         60 m		
• i8M data     Yes; 18M0 to 18M3       • isochronous mode     Yes       • Prioritized startup     Yes       Engineering with		V1.1.0
• Isochronous modeYes• Prioritized startupYesEngineering with• STEP 7 TA Portal configurable/integrated from versionV13 SP1 / -• STEP 7 configurable/integrated from versionV5.5 SP3 / -• PROFIBUS from GSD version/GSD revisionV1.0 / V5.1• PROFINET from GSD version/GSD revisionV2.3 / -Operating mode• DQYes• DQ with energy-saving functionNo• OR off (switching at comparison values)No• OrwersamplingNo• NROFYes• Integrated operating cycle counterYesSupply voltageYesRated value (DC)24 Vpermissible range, uoper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInductorentCurrent consumption, max.60 mAOutput voltage / headerPower loss, typ.3.5 WPower logs (upput)TransistorNumber of digital outputs32Current-sourcingYes		
• Prioritized startup     Yes       Engineering with     V13 SP1 / -       • STEP 7 TIA Portal configurable/integrated from version     V5.5 SP3 / -       • PROFIBUS from GSD version/GSD revision     V1.0 / V5.1       • PROFINET from GSD version/GSD revision     V2.3 / -       Operating mode     -       • DQ     Yes       • DQ with energy-saving function     No       • DQ with energy-saving function     No       • Carm control (switching at comparison values)     No       • MSO     Yes       • Integrated operating cycle counter     Yes       Persible range, lower limit (DC)     19.2 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 7 A per group       Input current     -       Current consumption, max.     60 mA       Output voltage / header     -       Power loss, typ.     3.5 W       Power loss, typ.     3.5 W       Direction     Yes       Power loss, typ.     3.5 W       Direction     Yes	● I&M data	Yes; I&M0 to I&M3
Engineering with       V13 SP1 / -         • STEP 7 Th 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       Ves         • DQ       Yes         • DQ       Ves         • OQ       Ves         • OP       Ves         • No       Ves         • Integrated operating cycle counter       Yes         Supply voltage       ZeV         permissible range, upper 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       Cu	<ul> <li>Isochronous mode</li> </ul>	Yes
• 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       V2.3 / -         • DQ       Yes         • DQ with energy-saving function       No         • PW/M       No         • Cam control (switching at comparison values)       No         • MSO       Yes         • Integrated operating cycle counter       Yes         • Integrated operating cycle counter       Yes         • permissible range, lower limit (DC)       24 V         permissible range, uper limit (DC)       28 V         Reverse polarity protection       Yes; through internal protection with 7 A per group         Input current       Current consumption, max.         Cutput voltage / header       1.1 W         Power loss, typ.       3.5 W         Power loss, typ.       3.5 W         Origital output       Transistor         Number of digital outputs       32         Current-sourcing       Yes	Prioritized startup	Yes
• 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     Ves       • 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       Supply voltage     Rated value (DC)       permissible range, lower limit (DC)     24 V       permissible range, upper limit (DC)     28.8 V       Rated value (DC)     24 V       Perverse polarity protection     Yes; through internal protection with 7 A per group       Input current     Current consumption, max.       Current consumption, max.     60 mA       output voltage / heador     24 V       Power available from the backplane bus     1.1 W       Power loss, typ.     3.5 W       Digital output     Transistor       Number of digital outputs     32       Current.ourcing     Yes	Engineering with	
• PROFIBUS from GSD version/GSD revision       V1.0 / V5.1         • PROFINET from GSD version/GSD revision       V2.3 / -         Operating mode       Version/GSD revision         • DQ       Yes         • DQ with energy-saving function       No         • PWM       No         • Can control (switching at comparison values)       No         • Oversampling       No         • MSO       Yes         • Integrated operating cycle counter       Yes         Supply voltage       Rated value (DC)         Permissible range, lower limit (DC)       19.2 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.         Courrent consumption, max.       60 mA         output voltage / header       Power loss         Power loss       1.1 W         Power loss       1.1 W         Power loss       1.5 W         Digital output       Transistor         Number of digital outputs       32         Current-sourcing       Yees	<ul> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V13 SP1 / -
• 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       • Integrated operating cycle counter     Yes       • Integrated operating cycle counter     Yes       Supply voltage     -       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 7 A per group       Input current     60 mA       output voltage / header     -       Power available from the backplane bus     1.1 W       Power loss, typ.     3.5 W       Dower loss, typ.     3.5 W       Dever of digital output     Transistor       Number of digital outputs     32       Current-sourcing     Yes	<ul> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -
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	<ul> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	V1.0 / V5.1
• DQ       Yes         • DQ with energy-saving function       No         • PWM       No         • Carn control (switching at comparison values)       No         • Oversampling       No         • Oversampting       No         • MSO       Yes         • Integrated operating cycle counter       Yes         Supply voltage       Z4 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.         Current consumption, max.       60 mA         output voltage / header       Z4 V         Power available from the backplane bus       1.1 W         Power loss       3.5 W         Power loss       Jointal outputs         Type of digital output       Transistor         Number of digital outputs       32         Current-sourcing       Yes	<ul> <li>PROFINET from GSD version/GSD revision</li> </ul>	V2.3 / -
• DQ with energy-saving functionNo• PWMNo• Cam control (switching at comparison values)No• OversamplingNo• OversamplingNo• Integrated operating cycle counterYesSupply voltageYesRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.output voltage / header60 mAPower available from the backplane bus1.1 WPower loss1.1 WPower loss, typ.3.5 WDigital outputTransistorNumber of digital outputs32Current-sourcingYes	Operating mode	
• PWM     No       • Cam control (switching at comparison values)     No       • Oversampling     No       • MSO     Yes       • Integrated operating cycle counter     Yes       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 7 A per group       Input current     Current consumption, max.       Current consumption, max.     60 mA       output voltage / header     24 V       Power available from the backplane bus     1.1 W       Power loss, typ.     3.5 W       Digital outputs     Transistor       Type of digital outputs     32       Current-sourcing     Yes	• DQ	Yes
• Cam control (switching at comparison values)No• OversamplingNo• MSOYes• Integrated operating cycle counterYesSupply voltage24 VRated value (DC)24 Vpermissible range, lower limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.60 mA0utput voltage / headerRated value (DC)24 VPower available from the backplane bus1.1 WPower loss3.5 WDigital outputTransistorNumber of digital outputs32Current-sourcingYes	<ul> <li>DQ with energy-saving function</li> </ul>	No
OversamplingNo• MSOYes• Integrated operating cycle counterYesSupply voltageYesRated value (DC)24 Vpermissible range, lower limit (DC)19.2 Vpermissible range, upper limit (DC)28.8 VReverse polarity protectionYes; through internal protection with 7 A per groupInput currentCurrent consumption, max.Current consumption, max.60 mAoutput voltage / header24 VPower available from the backplane bus1.1 WPower lossPower lossType of digital outputTransistorNumber of digital outputs32Current-sourcingYes	• PWM	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 / header 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 Type of digital output Transistor Number of digital outputs 32 Current-sourcing Yes	<ul> <li>Cam control (switching at comparison values)</li> </ul>	No
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       60 mA         Current consumption, max.       60 mA         output voltage / header       24 V         Power       24 V         Power loss       1.1 W         Power loss, typ.       3.5 W         Digital output       Transistor         Number of digital outputs       32         Current-sourcing       Yes	Oversampling	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 7 A per group         Input current       60 mA         Current consumption, max.       60 mA         output voltage / header       24 V         Power       24 V         Power loss       1.1 W         Power loss, typ.       3.5 W         Digital outputs       Transistor         Type of digital outputs       32         Current-sourcing       Yes	• 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 7 A per group         Input current       60 mA         Current consumption, max.       60 mA         output voltage / header       24 V         Power       24 V         Power loss       1.1 W         Power loss, typ.       3.5 W         Digital output       Transistor         Number of digital outputs       32         Current-sourcing       Yes	<ul> <li>Integrated operating cycle counter</li> </ul>	Yes
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       60 mA         Current consumption, max.       60 mA         output voltage / header       24 V         Power       24 V         Power loss       1.1 W         Power loss, typ.       3.5 W         Digital outputs       Transistor         Type of digital outputs       32         Current-sourcing       Yes	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 / header       60 mA         Rated value (DC)       24 V         Power       1.1 W         Power loss       1.1 W         Power loss, typ.       3.5 W         Digital outputs       Transistor         Type of digital output       Transistor         Number of digital outputs       32         Current-sourcing       Yes	Rated value (DC)	24 V
Reverse polarity protection       Yes; through internal protection with 7 A per group         Input current       60 mA         Current consumption, max.       60 mA         output voltage / header       24 V         Rated value (DC)       24 V         Power       1.1 W         Power available from the backplane bus       1.1 W         Power loss       90 Wer loss, typ.         Solution outputs       3.5 W         Digital outputs       Transistor         Number of digital outputs       32         Current-sourcing       Yes	permissible range, lower limit (DC)	19.2 V
Input current       60 mA         Output voltage / header       60 mA         Rated value (DC)       24 V         Power       24 V         Power available from the backplane bus       1.1 W         Power loss       1.1 W         Power loss, typ.       3.5 W         Digital outputs       Transistor         Number of digital outputs       32         Current-sourcing       Yes	permissible range, upper limit (DC)	28.8 V
Current consumption, max.       60 mA         output voltage / header       60 mA         Rated value (DC)       24 V         Power       24 V         Power available from the backplane bus       1.1 W         Power loss       1.1 W         Power loss       3.5 W         Digital outputs       Transistor         Number of digital outputs       32         Current-sourcing       Yes	Reverse polarity protection	Yes; through internal protection with 7 A per group
output voltage / headerRated value (DC)24 VPowerPower available from the backplane bus1.1 WPower loss1.1 WPower loss, typ.3.5 WDigital outputsTransistorType of digital outputs32Number of digital outputs32Current-sourcingYes	Input current	
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         Number of digital outputs       32         Current-sourcing       Yes	Current consumption, max.	60 mA
Power         Power available from the backplane bus       1.1 W         Power loss       3.5 W         Power loss, typ.       3.5 W         Digital outputs       Transistor         Type of digital outputs       32         Current-sourcing       Yes	output voltage / header	
Power available 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	Rated value (DC)	24 V
Power loss       Power loss, typ.     3.5 W       Digital outputs       Type of digital output     Transistor       Number of digital outputs     32       Current-sourcing     Yes	Power	
Power loss, typ.     3.5 W       Digital outputs       Type of digital output     Transistor       Number of digital outputs     32       Current-sourcing     Yes	Power available from the backplane bus	1.1 W
Power loss, typ.     3.5 W       Digital outputs       Type of digital output     Transistor       Number of digital outputs     32       Current-sourcing     Yes		
Digital outputs       Type of digital output     Transistor       Number of digital outputs     32       Current-sourcing     Yes		3.5 W
Type of digital output     Transistor       Number of digital outputs     32       Current-sourcing     Yes		
Number of digital outputs     32       Current-sourcing     Yes		Transistor
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	
<ul> <li>with resistive load, max.</li> </ul>	0.5 A
<ul> <li>on lamp load, max.</li> </ul>	5 W
Load resistance range	
lower limit	48 Ω
• upper limit	12 kΩ
Output voltage	
● for signal "1", min.	L+ (-0.8 V)
Output current	
<ul> <li>for signal "1" rated value</li> </ul>	0.5 A
<ul> <li>for signal "1" permissible range, max.</li> </ul>	0.5 A
<ul> <li>for signal "0" residual current, max.</li> </ul>	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
<ul> <li>for redundant control of a load</li> </ul>	Yes
Switching frequency	
<ul> <li>with resistive load, max.</li> </ul>	100 Hz
<ul> <li>with inductive load, max.</li> </ul>	0.5 Hz; According to IEC 60947-5-1, DC-13
<ul> <li>on lamp load, max.</li> </ul>	10 Hz
Total current of the outputs	
Current per channel, max.	0.5 A; see additional description in the manual
<ul> <li>Current per group, max.</li> </ul>	4 A; see additional description in the manual
Current per module, max.	16 A; see additional description in the manual
	16 A; see additional description in the manual
Current per module, max.	16 A; see additional description in the manual 1 000 m
Current per module, max. Cable length	
Current per module, max. Cable length     shielded, max.	1 000 m
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode	1 000 m
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> </ul>	1 000 m 600 m
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min.	1 000 m 600 m 70 μs
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min.	1 000 m 600 m 70 μs
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information	1 000 m 600 m 70 μs 250 μs
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Diagnostics function	1 000 m 600 m 70 μs 250 μs Yes
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable	1 000 m 600 m 70 μs 250 μs Yes
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms	1 000 m 600 m 70 μs 250 μs Yes Yes
Current per module, max. Cable length     shielded, max.     unshielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms     Diagnostic alarm	1 000 m 600 m 70 μs 250 μs Yes Yes
Current per module, max. Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>sunshielded, max.</li> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information         <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                 <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> </ul> </li>	1 000 m 600 m 70 μs 250 μs Yes Yes
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms     Diagnostic alarm     Maintenance interrupt Diagnoses	1 000 m 600 m 70 μs 250 μs Yes Yes Yes
Current per module, max. Cable length     shielded, max.     unshielded, max. Isochronous mode Execution and activation time (TCO), min. Bus cycle time (TDP), min. Interrupts/diagnostics/status information Diagnostics function Substitute values connectable Alarms     Diagnostic alarm     Maintenance interrupt Diagnoses     Monitoring the supply voltage	1 000 m 600 m 70 μs 250 μs 70 μs 250 μs 70 μs 250 μs 70 μs
Current per module, max.     Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>unshielded, max.</li> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information         <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                 <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses                     <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> </ul> </li> </ul> </li>	1 000 m 600 m 70 μs 250 μs 70 μs 250 μs 70 μs 250 μs 70 μs
Current per module, max.     Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information     <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses                     <ul> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> </ul> </li>	1 000 m 600 m 70 μs 250 μs 70 μs 250 μs 70 μs 250 μs 70 μs
Current per module, max.     Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>unshielded, max.</li> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information         <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                 <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses                     <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> </ul> </li> </ul> </li>	1 000 m 600 m 70 μs 250 μs 78 Yes Yes Yes Yes Yes Yes Yes
Current per module, max.     Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information     <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses                     <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> <li>Diagnostics indication LED</li> </ul> </li> </ul> </li>	1 000 m 600 m 70 μs 250 μs Yes Yes Yes Yes Yes Yes Yes
Current per module, max.     Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information     <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses                     <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> <li>Diagnostics indication LED                     <ul> <li>RUN LED</li> <li>Statistication LED</li> </ul></li> <li>RUN LED</li></ul></li></ul></li>	1 000 m 600 m 70 μs 250 μs 78 Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes
Current per module, max.     Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> <li>Isochronous mode         <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information     <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms                <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses                     <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> <li>Diagnostics indication LED                     <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> </ul> </li> </ul> </li> </ul></li>	1 000 m 600 m 70 μs 250 μs 72 yes 7es 7es 7es 7es 7es 7es 7es 7es 7es 7
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>Instruct and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> <li>Interrupts/diagnostics/status information <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> <li>Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul> </li> </ul></li>	1 000 m 600 m 70 μs 250 μs 72 μs 78 s 78 s 79 s 79 s 79 s 79 s 79 s 79 s 79 s 79
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>Instead of the supply voltage (PWR-LED)</li> <li>Konitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> </ul>	1 000 m 600 m 70 μs 250 μs 250 μs Yes Yes Yes Yes Yes Yes Yes Ye
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>Instruct and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> <li>Interrupts/diagnostics/status information <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> <li>Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> </ul> </li> </ul></li>	1 000 m 600 m 70 μs 250 μs 78 Yes Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>Inschronous mode <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> </ul> </li> <li>Alarms <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> <li>Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>for module diagnostics</li> </ul> </li> </ul>	1 000 m 600 m 70 μs 250 μs 70 μs 250 μs Yes Yes Yes Yes Yes Yes Yes Ye
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>sochronous mode <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> <li>Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>for module diagnostics</li> </ul> </li> </ul></li></ul>	1 000 m 600 m 70 μs 250 μs 78 Yes Yes Yes Yes Yes Yes Yes Yes
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>sochronous mode <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> <li>Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>for module diagnostics</li> </ul> </li> <li>Potential separation channels</li> </ul></li></ul>	1 000 m 600 m 70 μs 250 μs Yes Yes Yes Yes Yes Yes Yes Ye
<ul> <li>Current per module, max.</li> <li>Cable length <ul> <li>shielded, max.</li> <li>unshielded, max.</li> </ul> </li> <li>sochronous mode <ul> <li>Execution and activation time (TCO), min.</li> <li>Bus cycle time (TDP), min.</li> </ul> </li> <li>Interrupts/diagnostics/status information <ul> <li>Diagnostics function</li> <li>Substitute values connectable</li> <li>Alarms <ul> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul> </li> <li>Diagnoses <ul> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> <li>Group error</li> </ul> </li> <li>Diagnostics indication LED <ul> <li>RUN LED</li> <li>ERROR LED</li> <li>MAINT LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>for module diagnostics</li> </ul> </li> </ul></li></ul>	1 000 m 600 m 70 μs 250 μs 78 Yes Yes Yes Yes Yes Yes Yes Yes

<ul> <li>between the channels and backplane bus</li> </ul>	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 standa	Highest safety class achievable for safety-related tripping of standard modules		
<ul> <li>Performance level according to ISO 13849-1</li> </ul>	PL d		
<ul> <li>Category according to ISO 13849-1</li> </ul>	Cat. 3		
• SIL acc. to IEC 62061	SIL 2		
<ul> <li>remark on safety-oriented shutdown</li> </ul>	https://support.industry.siemens.com/cs/de/en/view/39198632		
product functions / security / header			
signed firmware update	No		
data integrity	No		
Ambient conditions			
Ambient temperature during operation			
<ul> <li>horizontal installation, min.</li> </ul>	-30 °C; From FS03		
<ul> <li>horizontal installation, max.</li> </ul>	60 °C		
<ul> <li>vertical installation, min.</li> </ul>	-30 °C; From FS03		
<ul> <li>vertical installation, max.</li> </ul>	40 °C		
Altitude during operation relating to sea level			
<ul> <li>Installation altitude above sea level, max.</li> </ul>	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:	3/12/2024 🖸		