Data sheet 6ES7322-1BL00-0AA0



SIMATIC S7-300, Digital output SM 322, isolated, 32 DO, 24 V DC, 0.5A, 1x 40-pole, Total current 4 A/group (16 A/module)

Supply voltage	
Load voltage L+	
Rated value (DC)	24 V
 permissible range, lower limit (DC) 	20.4 V
 permissible range, upper limit (DC) 	28.8 V
Input current	
from load voltage L+ (without load), max.	160 mA
from backplane bus 5 V DC, max.	110 mA
Power loss	
Power loss, typ.	6.6 W
Digital outputs	
Number of digital outputs	32
Short-circuit protection	Yes; Electronic
Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	4 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 for 0 to 40 °C, min.	5 mA
• for signal "1" permissible range for 0 to 40 °C, max.	0.6 A
• for signal "1" permissible range for 40 to 60 °C, min.	5 mA
 for signal "1" permissible range for 40 to 60 °C, max. 	0.6 A
for signal "1" minimum load current	5 mA
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 uprating	No
for redundant control of a load	Yes; only outputs of the same group
Switching frequency	
 with resistive load, max. 	100 Hz
with inductive load, max.	0.5 Hz

on lamp load, max. Total current of the outputs (per group) horizontal installation — up to 40 °C, max. — up to 60 °C, max. — up to 40 °C, max. 2 A Cable length • shielded, max. • unshielded, max. • unshielded, max. • unshielded, max. 0 Interrupts/diagnostics/status Information Alarms No Diagnostics function No Alarms • Diagnostic alarm No Diagnostic information readable • Wire-break • Short-circuit • missing load voltage Diagnostics indication LED • Rated load voltage PWR (green) • Rated rough indicator F (red) • Channel fault indicator F (red)	• with inductive load (acc. to IEC 60947-5-1, DC13), max.	0.5 Hz
Total current of the outputs (per group) horizontal installation — up to 40 °C, max.		
horizontal installation - up to 40 °C, max up to 60 °C, max up to 60 °C, max. - up to 40 °C, max. 2 A Cable length • shielded, max. • unshielded, max. • unshielded, max. • unshielded, max. • one max. • Diagnostics function Alarms • Diagnostics function No Diagnostic alarm No Diagnostic information readable • Wire-break • Diagnostic information readable • Wire-break • Short-circuit • No • missing load voltage No Diagnostics indication LED • Rated load voltage PWR (green) • Fuse OK FSG (green) • Group error SF (red) • Status indicator f (red) • Channel fault indicator F (red)		10112
up to 40 °C, max up to 60 °C, max. 3 A vertical installation up to 40 °C, max. 2 A Cable length • shielded, max. • unshielded, max. • unshielded, max. 600 m Interrupts/diagnostics/status information Alarms No Diagnostics function Alarms • Diagnostic alarm Diagnoses • Diagnostic information readable • Wire-break • Short-circuit • No • missing load voltage No Diagnostics indication LED • Rated load voltage PWR (green) • Fuse OK FSG (green) • Group error SF (red) • Status indicator F (red) • Channel fault indicator F (red)		
- up to 60 °C, max. vertical installation - up to 40 °C, max. 2 A Cable length • shielded, max. • unshielded, max. • unshielded, max. 600 m Interrupts/diagnostics/status information Alarms No Diagnostics function Alarms • Diagnostic alarm No Diagnostic information readable • Wire-break • Short-circuit • Short-circuit • Rated load voltage No Diagnostics indication LED • Rated load voltage PWR (green) • Fuse OK FSG (green) • Group error SF (red) • Status indicator digital output (green) • Channel fault indicator F (red)		4 A
vertical installation — up to 40 °C, max. Cable length • shielded, max. • unshielded, max. • 1000 m • unshielded, max. • 600 m Interrupts/diagnostics/status information Alarms No Diagnostics function Alarms • Diagnostic alarm No Diagnoses • Diagnostic information readable • Wire-break • Short-circuit • missing load voltage Piagnostics indication LED • Rated load voltage PWR (green) • Fuse OK FSG (green) • Group error SF (red) • Status indicator digital output (green) • Channel fault indicator F (red) • Channel fault indicator F (red)		
— up to 40 °C, max. 2 A Cable length ● shielded, max. 1000 m ● unshielded, max. 600 m Interrupts/diagnostics/status information Alarms No Diagnostics function No Alarms ● Diagnostic alarm No Diagnoses ● Diagnostic information readable No ● Wire-break No ● Short-circuit No ● insising load voltage No Diagnostics indication LED ● Rated load voltage PWR (green) No ● Fuse OK FSG (green) No ● Group error SF (red) No ● Status indicator f (red) No		
Cable length • shielded, max. • unshielded, max. 600 m Interrupts/diagnostics/status information Alarms No Diagnostics function Alarms • Diagnostic alarm No Diagnoses • Diagnostic information readable • Wire-break • Short-circuit • missing load voltage Diagnostics indication LED • Rated load voltage PWR (green) • Fuse OK FSG (green) • Group error SF (red) • Status indicator digital output (green) • Channel fault indicator F (red) 1000 m 6000 m No 1000 m No No No No No No Puse OK FSG (green) No No Puse Channel Puse OK FSG (green) No No Puse OK FSG (green) No No Puse Channel fault indicator F (red)		2 A
unshielded, max. 600 m Interrupts/diagnostics/status information Alarms No Diagnostics function No Alarms Diagnostic alarm No Diagnoses Diagnostic information readable No Wire-break No Short-circuit No missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) No Fuse OK FSG (green) No Group error SF (red) No Status indicator digital output (green) Yes; per channel Channel fault indicator F (red) No Channel fault indicator F (red)		
Interrupts/diagnostics/status information Alarms Diagnostics function No Alarms Diagnostic alarm No Diagnoses Diagnostic information readable Wire-break Short-circuit No missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Status indicator F (red) No Channel fault indicator F (red) No	shielded, max.	1 000 m
Alarms Diagnostics function Alarms Diagnostic alarm No Diagnoses Diagnostic information readable Wire-break Short-circuit Singli load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No	• unshielded, max.	600 m
Diagnostics function Alarms Diagnostic alarm No Diagnoses Diagnostic information readable Wire-break No Short-circuit No missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No	Interrupts/diagnostics/status information	
Alarms Diagnostic alarm No Diagnoses Diagnostic information readable Wire-break Short-circuit No missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No	Alarms	No
Diagnostic alarm Diagnoses Diagnostic information readable Wire-break No Short-circuit No missing load voltage No Pated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No No No No No No No No No N	Diagnostics function	No
Diagnoses Diagnostic information readable Wire-break Short-circuit Mo missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No No No No No Yes; per channel No		
Diagnostic information readable Wire-break Short-circuit Mo missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No No No No No No No No No N	Diagnostic alarm	No
Wire-break Short-circuit No missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No	Diagnoses	
Short-circuit In missing load voltage No Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No No No	 Diagnostic information readable 	No
 missing load voltage Diagnostics indication LED Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No 	Wire-break	No
Diagnostics indication LED • Rated load voltage PWR (green) • Fuse OK FSG (green) • Group error SF (red) • Status indicator digital output (green) • Channel fault indicator F (red) No	 Short-circuit 	No
 Rated load voltage PWR (green) Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No 	missing load voltage	No
 Fuse OK FSG (green) Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No 	Diagnostics indication LED	
 Group error SF (red) Status indicator digital output (green) Channel fault indicator F (red) No 	 Rated load voltage PWR (green) 	No
 Status indicator digital output (green) Channel fault indicator F (red) No 	 Fuse OK FSG (green) 	No
Channel fault indicator F (red) No	 Group error SF (red) 	No
	 Status indicator digital output (green) 	Yes; per channel
Potential separation	 Channel fault indicator F (red) 	No
	Potential separation	
Potential separation digital outputs	Potential separation digital outputs	
• between the channels Yes	 between the channels 	Yes
• between the channels, in groups of 8	 between the channels, in groups of 	8
• between the channels and backplane bus Yes; Optocoupler	between the channels and backplane bus	Yes; Optocoupler
Isolation	Isolation	
Isolation tested with 500 V DC	Isolation tested with	500 V DC
connection method	connection method	
required front connector 40-pin	required front connector	40-pin
Dimensions	Dimensions	
Width 40 mm	Width	40 mm
Height 125 mm	Height	125 mm
Depth 120 mm		120 mm
Weights	Weights	
Weight, approx. 260 g	Weight, approx.	260 g

last modified:

8/16/2023