

Technical data

S7-300 digital inputs

Module type	Digital inputs SM 32x					
Special features of this module	Module with programmable input delay and comprehensive diagnostics; suitable for isochronous mode.	Simple, economically priced module for recording frequently required signals	Simple, economically priced module for the acquisition of frequently required signals with high channel density	Simple, economically priced module for recording frequently required signals	Simple, economically priced module for the acquisition of frequently required signals with high channel density	Universal, scalable I/O module; 8-bit channel-specific, programmable as input or output
Type of voltage	Direct voltage DC					
Suitable for	Switches and 2, 3 or 4-wire proximity switches (BEROs)					
Input voltage	24 V					
Diagnostics capability	●					
Interrupt capability	●					
Input delay	0.1 ... 20 ms ¹⁾		Typ. 3 ms (fixed)			
Number of channels	16		32 / 64		8 DI / 8 DO	
Galvanic isolation: Number of groups	1		2 / 4		1	
Order No. group: 6ES7	321-7BH0. ³⁾		321-1BH0. ³⁾		321-1BL0. ³⁾	
			321-1BPO. ²⁾		323-1BH0. ³⁾	
					323-1BL0.	
					327-1BH0.	

Module type	Digital inputs SM 32x					
Special features of this module	Source input module	Very fast module, especially for isochronous applications	NAMUR inputs and other comprehensive control functions, in particular for use in a process-oriented environment	Recording high direct voltages, e.g. as they occur in power plants or engine test stands	16 single-channel isolated channels; possible for recording both direct and alternating voltages	
Type of voltage	Direct voltage DC				Universal voltage UC	
Suitable for	Switches and 2, 3 or 4-wire proximity switches (BEROs)		NAMUR sensor		Switches and 2, 3 or 4-wire proximity switches (BEROs)	
Input voltage	24 V				48 ... 125 V	
Diagnostics capability			●			
Interrupt capability			●			
Input delay	Typ. 3 ms fixed		0.05 ms fixed		3 ms fixed	
Number of channels	16		10 ms fixed		<6 ms fixed	
Galvanic isolation: Number of groups	1		2		8	
Order No. group: 6ES7	321-1BH5.		321-1BH10-.		321-7TH00-. ³⁾	
					321-1CH20-. ³⁾	
					321-1CH00-.	

Module type	Digital inputs SM 32x			
Special features of this module	Direct detection of AC voltages up to 230 V AC; 4-grouping	Direct detection of AC voltages up to 120 V AC at a high channel density	Direct detection of AC voltages up to 230 V AC; 2-grouping	Direct detection of AC voltages up to 230 V AC; isolated single channels
Type of voltage	Alternating voltage AC			
Suitable for	Switches and 2, 3 or 4-wire AC proximity switches			
Input voltage	120 / 230 V		120 V	
Diagnostics capability				
Interrupt capability				
Number of channels	16		32	
Galvanic isolation: Number of groups	4		8	
Order No. group: 6ES7	321-1FH0. ³⁾		321-1EL0.	
			321-1FF0. ³⁾	
			321-1FF1. ³⁾	

¹⁾ Parameterizable

²⁾ Connection with detached terminal block

³⁾ As SIPLUS extreme component also for extended temperature range -40/+25. ... +60/+70 °C and corrosive atmosphere/condensation (for further details, see page 98 or www.siemens.com/siplus-extreme)

S7-300 digital outputs

Module type		Digital outputs SM 32x													
Special features of this module	Simple, economically priced module for standard applications	Very fast module, especially for isochronous applications	Simple, economically priced module for standard applications with high packing density	Simple, economically priced module for recording frequently required signals	Simple, economically priced module for the acquisition of frequently required signals with high channel density	Universal, scalable I/O module; 8-bit channel-specific, programmable as input or output									
Type of voltage	Direct voltage DC														
Suitable for	Solenoid valves, DC contactors and signal lamps														
Output voltage	24 V														
Output current	0.5 A		0.5 A / 0.3 A		0.5 A										
Diagnostics capability															
Interrupt capability															
Number of channels	16		32 / 64		8 DI / 8 DO		16 DI / 16 DO		8 DI / 8 DX						
Galvanic isolation: Number of groups	2		4		1		2		1						
Order No. group: 6ES7	322-1BH0. ²⁾		322-1BH1.		322-1BL0. ²⁾ 322-1BP. ¹⁾		323-1BH0. ²⁾		323-1BL0. ²⁾	327-1BH0. ²⁾					
Module type		Digital outputs SM 32x													
Special features of this module	Comprehensive diagnostics functions; integrated diode for redundant interconnection of the outputs	Comprehensive control functions, in particular for use in a process-oriented environment; integrated diode for redundant interconnection of the outputs	8-channel output module for the switching of high currents (2 A)	Switching of high direct voltages (125 VDC; 1.5 A), as they occur in power plants or engine test stands											
Type of voltage	Direct voltage DC														
Suitable for	Solenoid valves, DC contactors and signal lamps														
Output voltage	24 V			48 ... 125 V											
Output current	0.5 A			2 A		1.5 A									
Diagnostics capability	●														
Interrupt capability	●														
Number of channels	8		16		8										
Galvanic isolation: Number of groups	1		4		2		2								
Order No. group: 6ES7	322-8BF0. ²⁾		322-8BH0. ²⁾		322-1BF0. ²⁾		322-1CF0. ²⁾								
Module type		Digital outputs SM 32x													
Special features of this module	TRIAC module for the electronic switching of high currents and voltages; wear-free compared to relay	8-channel TRIAC module with single-channel isolated outputs; wear-free compared to relay module; diagnostics and substitute values are parameterizable	Switching of high voltages and currents with high channel density	Universal relay output module that covers a broad range of applications	Universal relay output module with up to 2 A at 230 V AC	Universal relay output module with up to 5 A at 230 V AC; switching of higher outputs is thus possible	Relay module with integrated RC quenching circuit; diagnostics and substitute values are parameterizable	16 channels single-channel, electrically isolated; diagnostics and substitute values are parameterizable							
Type of voltage	Alternating voltage AC			UC (relay)											
Suitable for	AC/DC magnetic coils, contactors, motor starters, miniature motors and indicator lights														
Output voltage	120 / 230 V			DC: 24 ... 120 V AC: 24 ... 230 V		24 ... 120 V DC 48 ... 230 V AC		24 V/ 48 V							
Output current	1 A		2 A		1 A	2 A		5 A	0.5 A						
Diagnostics capability	●														
Interrupt capability	●														
Number of channels	16		8		32		16		8	16					
Galvanic isolation: Number of groups	2		8		4		2		4		8	16			
Order No. group: 6ES7	322-1FH0. ²⁾		322-1FF0. ²⁾		322-5FF0. ²⁾		322-1FL0.		322-1HH0. ²⁾		322-1HF0.		322-1HF1. ²⁾	322-5HF0. ²⁾	322-5GH0.

¹⁾ Connected with separate terminal block

²⁾ As SIPLUS extreme component also for extended temperature range -40/+25 ... +60/+70 °C and corrosive atmosphere/condensation (for further details, see page 98 or www.siemens.com/siplus-extreme)