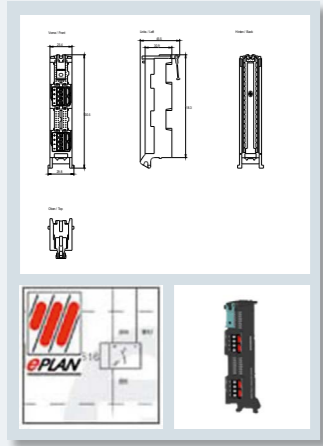
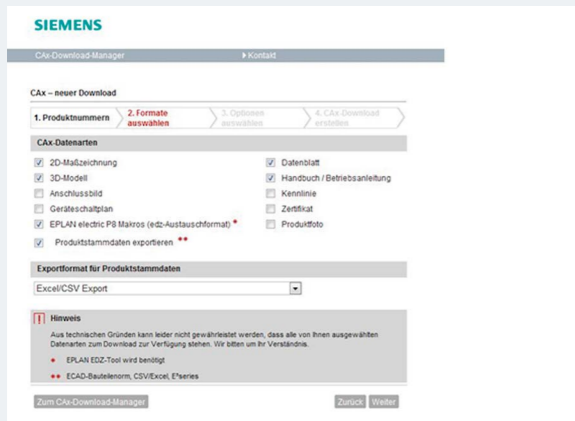


Everything for project planning

Request and download CAx data for SIMATIC TOP connect free of charge



Support for efficient project planning
Additional information such as 3D data, circuit diagram macros, certificates, and operating instructions are available at the click of a mouse. Configuration data can be downloaded in DXF, STEP, and EPLAN formats ready for your configuration use.



These are all also available via the CAx Download Manager and can be individually selected and downloaded as required.

Find out more:
[siemens.com/simatic-tc](https://www.siemens.com/simatic-tc)

Further information on SIMATIC TOP connect:

- > TIA Selection Tool:
[siemens.com/tia-selection-tool](https://www.siemens.com/tia-selection-tool)
- > CAx data
(2D, 3D, circuit diagram macro):
[siemens.com/cax](https://www.siemens.com/cax)
- > Tender specification texts
[siemens.com/specifications](https://www.siemens.com/specifications)

SIMATIC TOP connect – animated clip



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SIEMENS
Ingenuity for life



SIMATIC TOP connect – system cabling for SIMATIC S7

Innovative and efficient system cabling for control cabinets

[siemens.com/simatic-tc](https://www.siemens.com/simatic-tc)



Cabling made easy: SIMATIC TOP connect

To ensure constant functionality and availability of your electronic equipment, the connections linking your individual components must be reliable and fault-free. SIMATIC TOP connect offers an alternative solution to conventional single wiring with terminal blocks, which is often complex, time-consuming and fault-prone.

SIMATIC TOP connect provides you with an innovative connection system for the SIMATIC S7-1500 and S7-300 as well as for distributed I/Os SIMATIC ET 200MP and ET 200M, in two versions: the fully modular connection using the building block principle and the flexible connection with pre-wired front connectors. The benefit for you: both standardized cabling solutions lead to considerable time savings of up to 80% and ensure a high wiring quality in a well-structured control cabinet. Simply a TOP connection.

Fully modular connection – fast field connections

Modular “building block” provides the fastest and most efficient system cabling

The fully modular connections link sensors and actuators in the field to a SIMATIC S7 simply, quickly, and securely. The connection consists of front connector modules for the S7-1500 and S7-300, connecting cables and connection modules to replace conventional terminal blocks with additional functions for voltage and performance adaptation.

- Reduces wiring errors and testing times
- Uniform, clear connections
- No mix-up of individual wires
- Individual components can be replaced more quickly and easily
- Up to 80% less wiring outlay



The flexible connection: simple wiring in the control cabinet

Clearly bundled individual wires ensure full flexibility

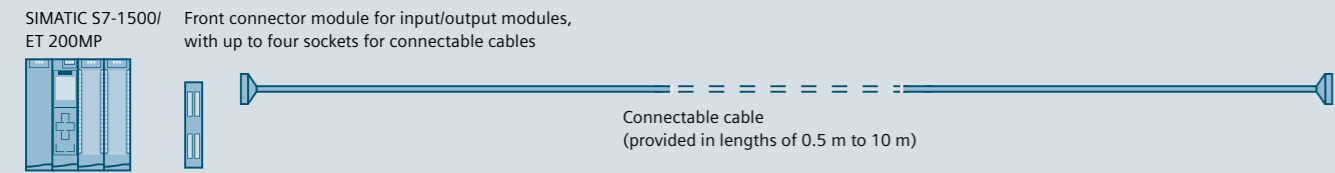
The flexible connection enables sensors and actuators mounted in the control cabinet to be connected to the SIMATIC S7 more quickly and easily. To achieve this, the front connector is prewired for connection to the digital I/O assembly with 20 or 40 individual wires. The clearly labeled individual cores at the other end of the wire bundle can be routed to any element in the control cabinet.

- Bundled individual wires ensure clarity
- Connection security thanks to matching numbers printed on wires and connecting points on the front connector
- Large cross sections make higher currents possible
- Up to 50% less wiring outlay



Ordering data for SIMATIC TOP connect for SIMATIC S7-1500/ET 200MP

The fully modular connection for SIMATIC S7-1500/ET 200MP for fast and clear connection to sensors and actuators in the field



Front connector modules

Front connector module for digital modules to connect 16-pole connecting cables

	Terminals for input voltage	Article no. 6ES7921...
	Screw terminals	-5AB20-0AA0
	Push-in	-5AH20-0AA0

Front connector module for digital modules to connect 50-pole connecting cables

	Terminals for input voltage	Article no. 6ES7921...
	Screw terminals	-5CB20-0AA0
	Push-in	-5CH20-0AA0

Front connector module for 2 A digital output to connect 16-pole connecting cables

	Terminals for input voltage	Article no. 6ES7921...
	Screw terminals	-5AD00-0AA0
	Push-in	-5AJ00-0AA0

Front connector module for analog modules to connect 16-pole connecting cables

	Article no. 6ES7921...
	-5AK20-0AA0

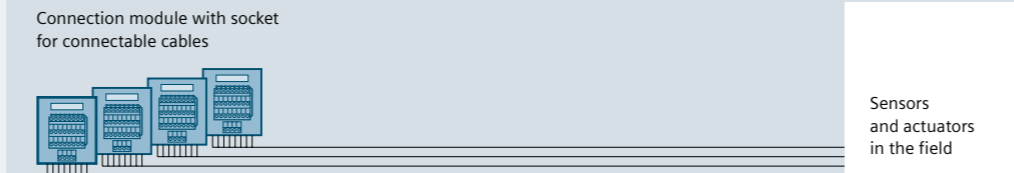
Front connector module for analog modules to connect 50-pole connecting cables

	Article no. 6ES7921...
	-5CK20-0AA0

Connecting cables

Round cable, pre-assembled

Length	Article no. 6ES7923	Article no. 6ES7923
	unshielded 16-pole	unshielded 50-pole
0.5 m	-0BA50-0CB0	-5BA50-0CB0
1.0 m	-0BB00-0CB0	-5BB00-0CB0
1.5 m	-0BB50-0CB0	-5BB50-0CB0
2.0 m	-0BC00-0CB0	-5BC00-0CB0
2.5 m	-0BC50-0CB0	-5BC50-0CB0
3.0 m	-0BD00-0CB0	-5BD00-0CB0
4.0 m	-0BE00-0CB0	-5BE00-0CB0
5.0 m	-0BF00-0CB0	-5BF00-0CB0
6.5 m	-0BG50-0CB0	-5BG50-0CB0
8.0 m	-0BJ00-0CB0	-5BJ00-0CB0
10 m	-0CB00-0CB0	-5CB00-0CB0
	shielded 16-pole	shielded 50-pole
1.0 m	-0BB00-0DB0	-5BB00-0DB0
2.0 m	-0BC00-0DB0	-5BC00-0DB0
2.5 m	-0BC50-0DB0	-5BC50-0DB0
3.0 m	-0BD00-0DB0	-5BD00-0DB0
4.0 m	-0BE00-0DB0	-5BE00-0DB0
5.0 m	-0BF00-0DB0	-5BF00-0DB0
6.5 m	-0BG50-0DB0	-5BG50-0DB0
8.0 m	-0BJ00-0DB0	-5BJ00-0DB0
10 m	-0CB00-0DB0	-5CB00-0DB0



Connection modules

Connection module for digital modules

Terminals	Signal-ing	Article no. 6ES7924	Article no. 6ES7924	Label for connection module
TP1 for 1-wire connection		8 I/O	32 I/O	Version
Screw		-0AA20-0AA0	-2AA20-0AA0	Article no.
Push-in		-0AA20-0ACO	-2AA20-0ACO	for connection modules in S7-1500 design (6ES7924-0...20-0..0)
Screw	LED	-0AA20-0BA0	-2AA20-0BA0	plug-in, 340 pcs.
Push-in	LED	-0AA20-0BC0	-2AA20-0BC0	3RT1900-1SB20
TP3 for 3-wire connection		8 I/O	32 I/O	Accessories for shielding analog signals
Screw		-0CA20-0AA0	-2CA20-0AA0	Packaging quantity
Push-in		-0CA20-0ACO	-2CA20-0ACO	Article no.
Screw	LED	-0CA20-0BA0	-2CA20-0BA0	Shield sheet for TPA 16-pole
Push-in	LED	-0CA20-0BC0	-2CA20-0BC0	4 pieces
Screw switch	LED	-0CH20-0BA0		6ES7928-1AA20-4AA0
Push-in, switch	LED	-0CH20-0BC0		Shield sheet for TPA 50-pole
Screw, fuse	LED	-0CL20-0BA0		4 pieces
Push-in, fuse	LED	-0CL20-0BC0		6ES7928-1BA20-4AA0
TPRo ¹ relay, NO contact		for 8 outputs		Terminal element for shield sheet SIMATIC side
Screw	LED	-0BD20-0BA0		10 pieces
Push-in	LED	-0BD20-0BC0		6ES7590-5BA00-0AA0
TPRi ² relay, NO contact		for 8 inputs, 230 V AC	for 8 inputs, 110 V AC	Terminal element for shield sheet field side
Screw	LED	-0BE20-0BA0	-0BG20-0BA0	6ES7390...
Push-in	LED	-0BE20-0BC0	-0BG20-0BC0	2 pieces
TPOo ³ optocoupler module		for 8 outputs		-5BA00-0AA0 (Ø 2x 2...6 mm)
Screw	LED	-0BF20-0BA0		2 pieces
Push-in	LED	-0BF20-0BC0		-5AB00-0AA0 (Ø 3...8 mm)
				2 pieces
				-5CA00-0AA0 (Ø 4...13 mm)

Connection module for 2 A digital modules

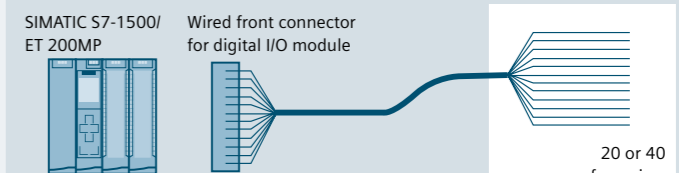
	TP2 for 2-wire initiators	for 8 outputs
	Screw	-0BB20-0AA0
	Push-in	-0BB20-0ACO

Connection module for analog modules (for S7-1500 only)

	TPA for analog modules	16-pole connection	50-pole connection
	Screw	-0CC20-0AA0	-2CC20-0AA0
	Push-in	-0CC20-0ACO	-2CC20-0ACO

Ordering data for SIMATIC TOP connect for SIMATIC S7-1500/ET 200MP

The flexible connection for SIMATIC S7-1500/ET 200MP: simple wiring for the control cabinet



S7-1500 front connector with single cores

for 32 digital I/O modules



Front connector completely pre-assembled (from pin 1 to 40)

Article no. 1 piece 6ES7922...

Core type H05V-K (0.5 mm ² with screwed connection)	Article no.	Article no.
2.5 m	-5BC50-0ACO	-5BC50-0AB0
3.2 m	-5BD20-0ACO	-5BD20-0AB0
5.0 m	-5BF00-0ACO	-5BF00-0AB0
6.5 m	-5BG50-0ACO	-5BG50-0AB0
8.0 m	-5BJ00-0ACO	-5BJ00-0AB0
10.0 m	-5CB00-0ACO	-5CB00-0AB0

Core type H05Z-K halogen-free (0.5 mm² with screwed connection)

Core type H05Z-K halogen-free (0.5 mm ² with screwed connection)	Article no.	Article no.
2.5 m	-5BC50-0HCO	-5BC50-0HB0
3.2 m	-5BD20-0HCO	-5BD20-0HB0
5.0 m	-5BF00-0HCO	-5BF00-0HB0
6.5 m	-5BG50-0HCO	-5BG50-0HB0
8.0 m	-5BJ00-0HCO	-5BJ00-0HB0
10.0 m	-5CB00-0HCO	-5CB00-0HB0

Core type UL/CSA-certified (0.5 mm² with screwed connection)

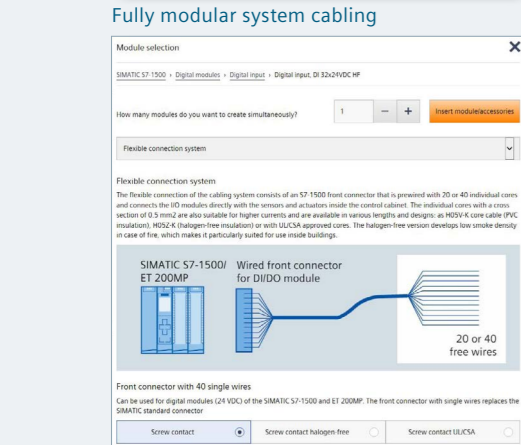
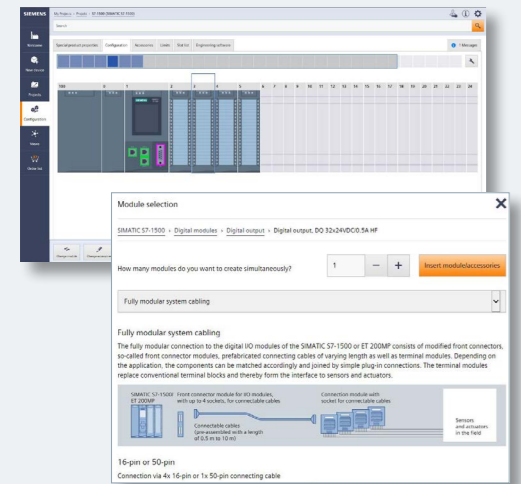
Core type UL/CSA-certified (0.5 mm ² with screwed connection)	Article no.	Article no.
3.2 m	-5BD20-0UCO	-5BD20-0UB0
5.0 m	-5BF00-0UCO	-5BF00-0UB0
6.5 m	-5BG50-0UCO	-5BG50-0UB0

TIA Selection Tool

The fast and accurate choice for your system cabling

TIA Selection Tool – simple, helpful, and for free

- Fast, simple selection and configuration of all necessary controllers and input/output modules
- Automatic preselection of the appropriate system cabling in accordance with the selected input/output module
- The compatible connection components in each case can be displayed simply by clicking on "Fully modular system cabling" or "Flexible connection system"
- Automatic generation of a product list containing all the components of your SIMATIC system, including system cabling
 - Can be saved, e.g. as PDF or as CSV
 - Can be exported to the CAx Download Manager for further use
 - Can be directly imported into the Siemens Industry Mall shopping cart



Flexible connection system

Ordering data for SIMATIC TOP connect for SIMATIC S7-300/ET 200M

The fully modular connection for SIMATIC S7-300/ET 200M for fast and clear connection to sensors and actuators in the field

SIMATIC S7-300/ET 200M Front connector module for I/O modules, with up to four sockets for connectable cables

Connectable cables (provided in lengths of 0.5 m to 10 m)

Front connector modules	
Front connector module for SIMATIC S7-300 compact CPU 31 and digital modules	
Terminals for input voltage	Article no. 6ES7921
For SIMATIC S7-300 compact CPU 312C	
Screw terminals	-3AK20-0AA0
For SIMATIC S7-300 compact CPU 313C; CPU 314C-2PtP; CPU 314C-2DP	
Screw terminals	-3AM20-0AA0
For SIMATIC S7-300, 2 x 8 I/O digital	
Screw terminals	-3AB00-0AA0
Spring-loaded terminals	-3AA00-0AA0
For SIMATIC S7-300, 4 x 8 I/O digital	
Screw terminals	-3AB20-0AA0
Spring-loaded terminals	-3AA20-0AA0
Front connector module for 2 A digital output	
Terminals for input voltage	Article no. 6ES7921
For SIMATIC S7-300, 8 DA	
Screw terminals	-3AD00-0AA0
Spring-loaded terminals	-3AC00-0AA0
Front connector module I/O for analog modules	
For SIMATIC S7-300 (20-pole)	
Screw terminals	-3AG00-0AA0
Spring-loaded terminals	-3AF00-0AA0
For SIMATIC S7-300 (40-pole)	
Screw terminals	-3AG20-0AA0
Spring-loaded terminals	-3AF20-0AA0

Connecting cables			
Round cable, pre-assembled			
Length	Article no. 6ES7923...	Article no. 6ES7923...	
	unshielded 16-pole	Adapter cable unshielded, 4 x 16-pole (front connector module 2x or 4x 8 I/O digital) to 50-pole (connection module)	
0.5 m	-0BA50-0CB0	-5BA50-0EB0	
1.0 m	-0BB00-0CB0	-5BB00-0EB0	
1.5 m	-0BB50-0CB0	-5BB50-0EB0	
2.0 m	-0BC00-0CB0	-5BC00-0EB0	
2.5 m	-0BC50-0CB0	-5BC50-0EB0	
3.0 m	-0BD00-0CB0	-5BD00-0EB0	
4.0 m	-0BE00-0CB0	-5BE00-0EB0	
5.0 m	-0BF00-0CB0	-5BF00-0EB0	
6.5 m	-0BG50-0CB0	-5BG50-0EB0	
8.0 m	-0BJ00-0CB0	-5BJ00-0EB0	
10 m	-0CB00-0CB0	-5CB00-0EB0	
shielded 16-pole			
1.0 m	-0BB00-0DB0		
2.0 m	-0BC00-0DB0		
2.5 m	-0BC50-0DB0		
3.0 m	-0BD00-0DB0		
4.0 m	-0BE00-0DB0		
5.0 m	-0BF00-0DB0		
6.5 m	-0BG50-0DB0		
8.0 m	-0BJ00-0DB0		
10 m	-0CB00-0DB0		

Connection module with socket for connectable cables

Sensors and actuators in the field

Connection modules					
Sensors and actuators in the field					
Terminals	Signal-ing	Article no. 6ES7924	Article no. 6ES7924	Label for connection module	Version Article no.
TP1 for 1-wire connection		8 I/O	32 I/O		for connection modules in S7-1500 design (6ES7924-0..20-0..0)
Screw		-0AA20-0AA0	-2AA20-0AA0		plug-in, 340 pcs.
Push-in		-0AA20-0ACO	-2AA20-0ACO		
Screw	LED	-0AA20-0BA0	-2AA20-0BA0		Accessories for shielding analog signals
Push-in	LED	-0AA20-0BC0	-2AA20-0BC0		Packaging quantity Article no.
TP3 for 3-wire connection		8 I/O	32 I/O		Shield sheet for TPApolig
Screw		-0CA20-0AA0	-2CA20-0AA0		4 pieces 6ES7928-1AA20-4AA0
Push-in		-0CA20-0ACO	-2CA20-0ACO		Terminal element for shield sheet SIMATIC side
Screw	LED	-0CA20-0BA0	-2CA20-0BA0		5 pieces 6ES7590-5BA00-0AA0
Push-in	LED	-0CA20-0BC0	-2CA20-0BC0		Terminal element for shield sheet field side
Screw, switch		-0CH20-0BA0			2 pieces 6ES7390...
Push-in, switch	LED	-0CH20-0BC0			2 pieces -5BA00-0AA0 (Ø 2x 2...6 mm)
Screw, fuse	LED	-0CL20-0BA0			2 pieces -5AB00-0AA0 (Ø 3...8 mm)
Push-in, fuse	LED	-0CL20-0BC0			2 pieces -5CA00-0AA0 (Ø 4...13 mm)
TPRo ¹⁾ relay, NO contact		for 8 outputs			
Screw	LED	-0BD20-0BA0			
Push-in	LED	-0BD20-0BC0			
TPRi ²⁾ relay, NO contact		for 8 outputs			
Screw, 230 V AC	LED	-0BE20-0BA0			
Push-in, 230 V AC	LED	-0BE20-0BC0			
Screw, 110 V AC	LED	-0BG20-0BA0			
Push-in, 110 V AC	LED	-0BG20-0BC0			
TPO ³⁾ optocoupler module		for 8 outputs			
Screw	LED	-0BF20-0BA0			
Push-in	LED	-0BF20-0BC0			
Connection module for 2 A digital modules					
TP2 for 2-wire initiators		for 8 outputs			
Screw		-0BB20-0AA0			
Push-in		-0BB20-0ACO			
Connection module for analog modules (for S7-300 only)					
TPA for analog modules					
Screw		-0CC21-0AA0			
Push-in		-0CC21-0ACO			

¹⁾ o = output, for 24 V output module with switching power > 24 V / 0.5 A, outputs 230 V AC / 4 A, 6 cycles/min.
²⁾ i = input, for 24 V input module with 230 V or 110 V – input signal AC, outputs 24 V DC
³⁾ o = output, for 24 V output module with switching power > 24 V / 0.5 A, outputs 24 V DC / 4 A, 500 cycles/sec.

The flexible connection for SIMATIC S7-300/ET 200M/S7-400: simple wiring for the control cabinet

SIMATIC S7-1500/ET 200MP Wired front connector for digital I/O module

20 or 40 free wires

Front connector with single cores for S7-300/ET 200M		for S7-400	
		for 32 digital I/O modules	for 16 digital I/O modules
Version / length	Packaging unit	Front connector completely pre-assembled (from pin 1 to 40)	Front connector partly pre-assembled (from pin 1 to 20)
		Article no. 6ES7922	Article no. 6ES7922
Core type H05V-K (0.5 mm ² with screwed connection)			
2.5 m	1 unit	-3BC50-0ACO	-3BC50-0AB0
3.2 m	1 unit	-3BD20-0ACO	-3BD20-0AB0
5.0 m	1 unit	-3BF00-0ACO	-3BF00-0AB0
2.5 m	5 unit	-3BC50-5ACO	-3BC50-5AB0
3.2 m	5 unit	-3BD20-5ACO	-3BD20-5AB0
5.0 m	5 unit	-3BF00-5ACO	-3BF00-5AB0
Core type H05V-K (0.5 mm ² with crimp connection)			
2.5 m	1 unit	-3BC50-0A0G	-3BC50-0AF0
3.2 m	1 unit	-3BD20-0A0G	-3BD20-0AF0
5.0 m	1 unit	-3BF00-0A0G	-3BF00-0AF0
Core type UL/CSA-certified (0.5 mm ² with screwed connection)			
3.2 m	1 unit	-3BD20-0UC0	-3BD20-0UB0
5.0 m	1 unit	-3BF00-0UC0	-3BF00-0UB0
			-4BD20-0UD0
			-4BF00-0UD0