CABLE-FCN40/.../...M/S7...



System cables for Simatic S7-300, 64-channel I/O boards

INTERFACE

Data sheet
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1 Description

These system cables are plugged into Simatic S7-300 I/O boards, which are connected via Fujitsu connectors.

Two connection options are available:

CABLE-FCN40/1X50/...M/S7...

– Signal transfer of 32 channels
(two cables are required per board)

CABLE-FCN40/4X14/...M/S7...

– Splitting of 32 channels into 4 x 8 channels
(two cables are required per board)

The following I/O boards can be connected:

– 6ES7 322-1BP00-0AA0
– 6ES7 322-1BP50-0AA0
– 6ES7 321-1BP00-0AA0

Make sure you always use the latest documentation.
It can be downloaded at www.phoenixcontact.net/download.

This data sheet is valid for all products listed on the following page:

2 Ordering data

System cables

Description	Cable length	Type	Order No.	Pcs./Pkt.
Assembled round cable, 40-pos. Fujitsu strip on 50-pos. FLK strip (for connection to 6ES7 322-1BP00-0AA0 and 6ES7 322-1BP50-0AA0 output modules)	0.5 m	CABLE-FCN40/1X50/0,5M/S7-OUT	2321017	1
	1.0 m	CABLE-FCN40/1X50/1,0M/S7-OUT	2321020	1
	2.0 m	CABLE-FCN40/1X50/2,0M/S7-OUT	2321033	1
	3.0 m	CABLE-FCN40/1X50/3,0M/S7-OUT	2321046	1
	4.0 m	CABLE-FCN40/1X50/4,0M/S7-OUT	2321059	1
	6.0 m	CABLE-FCN40/1X50/6,0M/S7-OUT	2321062	1
	8.0 m	CABLE-FCN40/1X50/8,0M/S7-OUT	2321075	1
	10.0 m	CABLE-FCN40/1X50/10,0M/S7-OUT	2321088	1
Assembled round cable, 40-pos. Fujitsu strip on 50-pos. FLK strip (for connection to 6ES7 321-1BP00-0AA0 input module) Positive reading mode (sinking mode) of the module	0.5 m	CABLE-FCN40/1X50/0,5M/S7-IN	2321091	1
	1.0 m	CABLE-FCN40/1X50/1,0M/S7-IN	2321101	1
	2.0 m	CABLE-FCN40/1X50/2,0M/S7-IN	2321114	1
	3.0 m	CABLE-FCN40/1X50/3,0M/S7-IN	2321127	1
	4.0 m	CABLE-FCN40/1X50/4,0M/S7-IN	2321130	1
	6.0 m	CABLE-FCN40/1X50/6,0M/S7-IN	2321143	1
	8.0 m	CABLE-FCN40/1X50/8,0M/S7-IN	2321156	1
	10.0 m	CABLE-FCN40/1X50/10,0M/S7-IN	2321169	1
Assembled round cable, 40-pos. Fujitsu strip on four 14-pos. FLK strips (for connection to 6ES7 322-1BP00-0AA0 and 6ES7 322-1BP50-0AA0 output modules)	0.5 m	CABLE-FCN40/4X14/0,5M/S7-OUT	2321172	1
	1.0 m	CABLE-FCN40/4X14/1,0M/S7-OUT	2321185	1
	2.0 m	CABLE-FCN40/4X14/2,0M/S7-OUT	2321198	1
	3.0 m	CABLE-FCN40/4X14/3,0M/S7-OUT	2321208	1
	4.0 m	CABLE-FCN40/4X14/4,0M/S7-OUT	2321211	1
	6.0 m	CABLE-FCN40/4X14/6,0M/S7-OUT	2321224	1
	8.0 m	CABLE-FCN40/4X14/8,0M/S7-OUT	2321237	1
	10.0 m	CABLE-FCN40/4X14/10,0M/S7-OUT	2321240	1
Assembled round cable, 40-pos. Fujitsu strip on four 14-pos. FLK strips (for connection to 6ES7 321-1BP00-0AA0 input module) Positive reading mode (sinking mode) of the module	0.5 m	CABLE-FCN40/4X14/0,5M/S7-IN	2321253	1
	1.0 m	CABLE-FCN40/4X14/1,0M/S7-IN	2321266	1
	2.0 m	CABLE-FCN40/4X14/2,0M/S7-IN	2321279	1
	3.0 m	CABLE-FCN40/4X14/3,0M/S7-IN	2321282	1
	4.0 m	CABLE-FCN40/4X14/4,0M/S7-IN	2321295	1
	6.0 m	CABLE-FCN40/4X14/6,0M/S7-IN	2321305	1
	8.0 m	CABLE-FCN40/4X14/8,0M/S7-IN	2321318	1
	10.0 m	CABLE-FCN40/4X14/10,0M/S7-IN	2321321	1

3 Technical data

General data	CABLE-FCN40/1X50/...M/S7...	CABLE-FCN40/4X14/...M/S7...
Nominal voltage UN	< 50 V AC/60 V DC	
Maximum permissible current carrying capacity per path	1 A	
Maximum conductor resistance	0.16 Ω/m	
Ambient temperature range		
Operation	-20°C … +50°C	
Storage/transport	-20°C ... +70°C	
Conductor cross-section	0.14 mm^2 (26 AWG)	
Conductor structure	7 litz wires, Cu tin-plated	
Outside diameter	10 mm	6.3 mm
Assembly	IDC IEC 60352-4/DIN EN 60352-4	
Connector, control side	40-pos. Fujitsu FCN connection	
Connector, module side	50-pos. flat-ribbon cable connection	4 x 14-pos. flat-ribbon cable connection

4 Color code and pin assignment

CABLE-FCN40/1X50/...M/S7-OUT

Connector, control side	Connector, module side	Conductor color
A1	3	Black
B1	27	Brown
A2	4	Red
B2	28	Orange
A3	5	Yellow
B3	29	Green
A4	6	Blue
B4	30	Violet
A5	7	Gray
B5	31	White
A6	8	White-black
B6	32	White-brown
A7	9	White-red
B7	33	White-orange
A8	10	White-yellow
B8	34	White-green
A9	11(-)	White-blue
B9	35(-)	White-violet
A10	1(+)	White-gray
B10	25(+)	Brown-black
A11	15	Brown-red
B11	39	Brown-orange
A12	16	Brown-yellow
B12	40	Brown-green
A13	17	Brown-blue
B13	41	Brown-violet
A14	18	Brown-gray
B14	42	Brown-white
A15	19	Green-black
B15	43	Green-brown
A16	20	Green-red
B16	44	Green-orange
A17	21	Green-blue
B17	45	Green-violet
A18	22	Green-gray
B18	46	Green-white
A19	23(-)	Yellow-black
B19	47(-)	Yellow-brown
A20	13(+)	Yellow-red
B20	37(+)	Yellow-orange

CABLE-FCN40/1X50/...M/S7-IN

Connector, control side	Connector, module side	Conductor color
A1	3	Black
B1	27	Brown
A2	4	Red
B2	28	Orange
A3	5	Yellow
B3	29	Green
A4	6	Blue
B4	30	Violet
A5	7	Gray
B5	31	White
A6	8	White-black
B6	32	White-brown
A7	9	White-red
B7	33	White-orange
A8	10	White-yellow
B8	34	White-green
A9	11(-)	White-blue
B9	35(-)	White-violet
A10	15	White-gray
B10	39	Brown-black
A11	16	Brown-red
B11	40	Brown-orange
A12	17	Brown-yellow
B12	41	Brown-green
A13	18	Brown-blue
B13	42	Brown-violet
A14	19	Brown-gray
B14	43	Brown-white
A15	20	Green-black
B15	44	Green-brown
A16	21	Green-red
B16	45	Green-orange
A17	22	Green-blue
B17	46	Green-violet
A18	23(-)	Green-gray
B18	47(-)	Green-white
A19		Yellow-black
B19		Yellow-brown
A20		Yellow-red
B20		Yellow-orange

CABLE-FCN40/4X14/...M/S7-OUT

	Connector, control side	Connector, module side	Conductor color
Connection 1 (byte 0)	A9	10(-)	White
	A10	9(+)	Gray
	A8	8	Violet
	A7	7	Blue
	A6	6	Green
	A5	5	Yellow
	A4	4	Orange
	A3	3	Red
	A2	2	Brown
	A1	1	Black
Connection 2 (byte 1)	A19	10(-)	White
	A20	9(+)	Gray
	A18	8	Violet
	A17	7	Blue
	A16	6	Green
	A15	5	Yellow
	A14	4	Orange
	A13	3	Red
	A12	2	Brown
	A11	1	Black
Connection 3 (byte 2)	B9	10(-)	White
	B10	9(+)	Gray
	B8	8	Violet
	B7	7	Blue
	B6	6	Green
	B5	5	Yellow
	B4	4	Orange
	B3	3	Red
	B2	2	Brown
	B1	1	Black
Connection 4 (byte 3)	B19	10(-)	White
	B20	9(+)	Gray
	B18	8	Violet
	B17	7	Blue
	B16	6	Green
	B15	5	Yellow
	B14	4	Orange
	B13	3	Red
	B12	2	Brown
	B11	1	Black

CABLE-FCN40/4X14/...M/S7-IN

	Connector, control side	Connector, module side	Conductor color
Connection 1 (byte 0)	A9	10(-)	Gray
	A8	8	Violet
	A7	7	Blue
	A6	6	Green
	A5	5	Yellow
	A4	4	Orange
	A3	3	Red
	A2	2	Brown
	A1	1	Black
Connection 2 (byte 1)	A18	10(-)	Gray
	A17	8	Violet
	A16	7	Blue
	A15	6	Green
	A14	5	Yellow
	A13	4	Orange
	A12	3	Red
	A11	2	Brown
	A10	1	Black
Connection 3 (byte 2)	B9	10(-)	Gray
	B8	8	Violet
	B7	7	Blue
	B6	6	Green
	B5	5	Yellow
	B4	4	Orange
	B3	3	Red
	B2	2	Brown
	B1	1	Black
Connection 4 (byte 3)	B18	10(-)	Gray
	B17	8	Violet
	B16	7	Blue
	B15	6	Green
	B14	5	Yellow
	B13	4	Orange
	B12	3	Red
	B11	2	Brown
	B10	1	Black

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