

FIELD INSTALLATION QUICK GUIDE

Installation Instructions

Siemens 6ES7550-1AA01-0AB0
TM Count 2x24V counter module

along

2.1.1 assignment and short diagram

Pre assignment for the first exercise

The table below shows the pre assignment of the first connector.

Table 1	Assignment of the first connector	Preassignment	
Line	Signal	20 x 16 connector with 20 x 16 connector signal A	20 x 16 pin connector with 20 x 16 connector signal B
1	20 x 16 A	20 x 16 A	20 x 16 B
2	20 x 16 A	20 x 16 A	20 x 16 B
3	20 x 16 A	20 x 16 A	20 x 16 B
4	20 x 16 A	20 x 16 A	20 x 16 B
5	20 x 16 A	20 x 16 A	20 x 16 B
6	20 x 16 A	20 x 16 A	20 x 16 B
7	20 x 16 A	20 x 16 A	20 x 16 B
8	20 x 16 A	20 x 16 A	20 x 16 B
9	20 x 16 A	20 x 16 A	20 x 16 B
10	20 x 16 A	20 x 16 A	20 x 16 B
11	20 x 16 A	20 x 16 A	20 x 16 B
12	20 x 16 A	20 x 16 A	20 x 16 B
13	20 x 16 A	20 x 16 A	20 x 16 B
14	20 x 16 A	20 x 16 A	20 x 16 B
15	20 x 16 A	20 x 16 A	20 x 16 B
16	20 x 16 A	20 x 16 A	20 x 16 B
17	20 x 16 A	20 x 16 A	20 x 16 B
18	20 x 16 A	20 x 16 A	20 x 16 B
19	20 x 16 A	20 x 16 A	20 x 16 B
20	20 x 16 A	20 x 16 A	20 x 16 B
21	20 x 16 A	20 x 16 A	20 x 16 B
22	20 x 16 A	20 x 16 A	20 x 16 B
23	20 x 16 A	20 x 16 A	20 x 16 B
24	20 x 16 A	20 x 16 A	20 x 16 B
25	20 x 16 A	20 x 16 A	20 x 16 B
26	20 x 16 A	20 x 16 A	20 x 16 B
27	20 x 16 A	20 x 16 A	20 x 16 B
28	20 x 16 A	20 x 16 A	20 x 16 B
29	20 x 16 A	20 x 16 A	20 x 16 B
30	20 x 16 A	20 x 16 A	20 x 16 B
31	20 x 16 A	20 x 16 A	20 x 16 B
32	20 x 16 A	20 x 16 A	20 x 16 B
33	20 x 16 A	20 x 16 A	20 x 16 B
34	20 x 16 A	20 x 16 A	20 x 16 B
35	20 x 16 A	20 x 16 A	20 x 16 B
36	20 x 16 A	20 x 16 A	20 x 16 B
37	20 x 16 A	20 x 16 A	20 x 16 B
38	20 x 16 A	20 x 16 A	20 x 16 B
39	20 x 16 A	20 x 16 A	20 x 16 B
40	20 x 16 A	20 x 16 A	20 x 16 B
41	20 x 16 A	20 x 16 A	20 x 16 B
42	20 x 16 A	20 x 16 A	20 x 16 B
43	20 x 16 A	20 x 16 A	20 x 16 B
44	20 x 16 A	20 x 16 A	20 x 16 B
45	20 x 16 A	20 x 16 A	20 x 16 B
46	20 x 16 A	20 x 16 A	20 x 16 B
47	20 x 16 A	20 x 16 A	20 x 16 B
48	20 x 16 A	20 x 16 A	20 x 16 B
49	20 x 16 A	20 x 16 A	20 x 16 B
50	20 x 16 A	20 x 16 A	20 x 16 B
51	20 x 16 A	20 x 16 A	20 x 16 B
52	20 x 16 A	20 x 16 A	20 x 16 B
53	20 x 16 A	20 x 16 A	20 x 16 B
54	20 x 16 A	20 x 16 A	20 x 16 B
55	20 x 16 A	20 x 16 A	20 x 16 B
56	20 x 16 A	20 x 16 A	20 x 16 B
57	20 x 16 A	20 x 16 A	20 x 16 B
58	20 x 16 A	20 x 16 A	20 x 16 B
59	20 x 16 A	20 x 16 A	20 x 16 B
60	20 x 16 A	20 x 16 A	20 x 16 B
61	20 x 16 A	20 x 16 A	20 x 16 B
62	20 x 16 A	20 x 16 A	20 x 16 B
63	20 x 16 A	20 x 16 A	20 x 16 B
64	20 x 16 A	20 x 16 A	20 x 16 B
65	20 x 16 A	20 x 16 A	20 x 16 B
66	20 x 16 A	20 x 16 A	20 x 16 B
67	20 x 16 A	20 x 16 A	20 x 16 B
68	20 x 16 A	20 x 16 A	20 x 16 B
69	20 x 16 A	20 x 16 A	20 x 16 B
70	20 x 16 A	20 x 16 A	20 x 16 B
71	20 x 16 A	20 x 16 A	20 x 16 B
72	20 x 16 A	20 x 16 A	20 x 16 B
73	20 x 16 A	20 x 16 A	20 x 16 B
74	20 x 16 A	20 x 16 A	20 x 16 B
75	20 x 16 A	20 x 16 A	20 x 16 B
76	20 x 16 A	20 x 16 A	20 x 16 B
77	20 x 16 A	20 x 16 A	20 x 16 B
78	20 x 16 A	20 x 16 A	20 x 16 B
79	20 x 16 A	20 x 16 A	20 x 16 B
80	20 x 16 A	20 x 16 A	20 x 16 B
81	20 x 16 A	20 x 16 A	20 x 16 B
82	20 x 16 A	20 x 16 A	20 x 16 B
83	20 x 16 A	20 x 16 A	20 x 16 B
84	20 x 16 A	20 x 16 A	20 x 16 B
85	20 x 16 A	20 x 16 A	20 x 16 B
86	20 x 16 A	20 x 16 A	20 x 16 B
87	20 x 16 A	20 x 16 A	20 x 16 B
88	20 x 16 A	20 x 16 A	20 x 16 B
89	20 x 16 A	20 x 16 A	20 x 16 B
90	20 x 16 A	20 x 16 A	20 x 16 B
91	20 x 16 A	20 x 16 A	20 x 16 B
92	20 x 16 A	20 x 16 A	20 x 16 B
93	20 x 16 A	20 x 16 A	20 x 16 B
94	20 x 16 A	20 x 16 A	20 x 16 B
95	20 x 16 A	20 x 16 A	20 x 16 B
96	20 x 16 A	20 x 16 A	20 x 16 B
97	20 x 16 A	20 x 16 A	20 x 16 B
98	20 x 16 A	20 x 16 A	20 x 16 B
99	20 x 16 A	20 x 16 A	20 x 16 B
100	20 x 16 A	20 x 16 A	20 x 16 B

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PRODUCT	6ES7550-1AA01-0AB0
FAMILY	SIMATIC S7-1500 / ET 200MP
FUNCTION	TM Count 2x24V counter module
STATUS	Verify exact configuration

Prepared by Amikon Limited from Siemens A5E31870371-AC, 12/2020. This guide does not replace the complete manufacturer manual, site procedure, hazardous-area drawing, or approval document.

01 CONFIRM THE ORDERED CONFIGURATION

Counting channels	2 channels; 32-bit counter range
Encoder signal classes	24 V sourcing, sinking or push-pull A/B/N signals
Encoder frequency	200 kHz input; 800 kHz count with quadruple evaluation
Load supply L+	24 V DC; permitted range 19.2 to 28.8 V DC
Encoder supply output	Common 24 V supply; maximum 1 A total across both channels
Digital inputs	6 configurable inputs; 3 per channel; IEC 61131 Type 3
Digital outputs	4 sourcing transistor outputs; 0.5 A each, 2 A total

02 MOUNTING AND CONNECTION

- Qualified personnel must isolate supply power and secure connected machinery before work.
- Mount on the S7-1500 rail with the correct U connector and 40-pin front connector.
- Connect 24 V DC to power terminals 41 (L+) and 44 (M); follow the complete Siemens pin assignment.
- Match A/B/N wiring to the encoder; ground cable shields at the front-connector shield support and encoder.
- Use shielded digital-input cables when input delay is None or 0.05 ms; respect the shared 1 A encoder budget.

OFFICIAL INSTALLATION REFERENCE

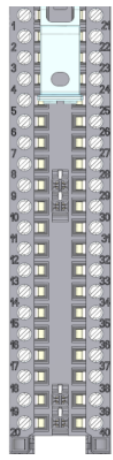
Wiring

3.1 Pin assignment and block diagram

Pin assignment for the front connector

The table below shows the pin assignment of the front connector.

Table 3- 1 Pin assignment of the front connector

View	Signal name	Designation					
		24 V incremental encoder		24 V pulse encoder			
		with signal N	without signal N	with direction signal	without direction signal	Up/Down	
	Counter channel 0						
	1	CH0.A	Encoder signal A		Counting signal A		Up counting signal A
	2	CH0.B	Encoder signal B		Direction signal B	—	Down counting signal B
	3	CH0.N	Encoder signal N	—			
	4	DI0.0	Digital input DI0				
	5	DI0.1	Digital input DI1				
	6	DI0.2	Digital input DI2				
	7	DQ0.0	Digital output DQ0				
	8	DQ0.1	Digital output DQ1				
	Encoder supply and ground of the two counter channels						
	9	24VDC	Encoder supply 24 V DC				
	10	M	Ground for encoder supply, digital inputs and digital outputs				
	Counter channel 1						
	11	CH1.A	Encoder signal A		Counting signal A		Up counting signal A
	12	CH1.B	Encoder signal B		Direction signal B	—	Down counting signal B
	13	CH1.N	Encoder signal N	—			
	14	DI1.0	Digital input DI0				
	15	DI1.1	Digital input DI1				
	16	DI1.2	Digital input DI2				
	17	DQ1.0	Digital output DQ0				
	18	DQ1.1	Digital output DQ1				
	19 - 40	—	—				

Official manufacturer reference reproduced from Siemens A5E31870371-AC, 12/2020. Use the current source document and all referenced drawings and notes for installation.

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CABLE ROUTING AND CONNECTION

- Mount on the S7-1500 rail with the correct U connector and 40-pin front connector.
- Connect 24 V DC to power terminals 41 (L+) and 44 (M); follow the complete Siemens pin assignment.
- Match A/B/N wiring to the encoder; ground cable shields at the front-connector shield support and encoder.
- Use shielded digital-input cables when input delay is None or 0.05 ms; respect the shared 1 A encoder budget.
- Restore gate, filter, capture and output-comparison settings; test counter direction, DQ loads and diagnostics.

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INITIAL SYSTEM CHECKS

- Confirm model identity and compatible system components before energizing.
- Verify wiring, grounding, enclosure, and applicable hazardous-area requirements.
- Confirm normal RUN, channel operation and diagnostic status after commissioning.
- Record the installed order number and baseline operating condition.

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CONTROLLED DOCUMENTS

Official source	Siemens A5E31870371-AC, 12/2020
Product record	6ES7550-1AA01-0AB0
Manufacturer	Siemens
Support	INFO@AMIKON.CN