

S5/S7 ADAPTER

VARIOFACE S5/S7 Adapters for Siemens SIMATIC® S7

INTERFACE

Data Sheet
101976_03_en

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Description

For systems that are automated with SIMATIC® S5-115 and 135/155, various Phoenix Contact VARIOFACE S5/S7 adapters can be used to connect the existing SIMATIC® S5 field wiring directly to SIMATIC® S7. This saves both time and money. Costly rewiring of individual modules is not required.

During downtimes, such as weekends, systems can be tested with SIMATIC® S7 and can also be operated during production times with SIMATIC® S5. Once the changeover is complete, SIMATIC® S7 controls the system via VARIOFACE S5/S7 adapters and the old SIMATIC® S5 field wiring.

VARIOFACE S5/S7 adapters ensure safe system operation using modern control systems.

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Make sure you always use the latest documentation.
It can be downloaded at www.download.phoenixcontact.com.
A conversion table is available on the Internet at
www.download.phoenixcontact.com/general/7000_en_00.pdf.

Adapters for Converting S5-115 to S7-400

FLKM S115/... adapters provide a direct connection between a SIMATIC® S5 connector wired with individual wires and the SIMATIC® S7-400 base board. The SIMATIC® S5 connector is plugged directly into an S7-400 I/O card with the aid of the FLKM S115/... adapter. A new

SIMATIC® S7-400 is installed in place of the SIMATIC® S5. The existing field wiring remains intact.

Attention: Due to the geometry, it is only possible to use every other slot. The LEDs of the S7-400 module are hidden by the S5-115 adapter.

6ES5 420... to 6ES5 465...

Ordering Data

| Description | Type | Order No. | Pcs./Pck. |
|---|---------------------------|-----------|-----------|
| Digital IN and OUT 24 V DC from S5-115 to S7-400 | | | |
| IN 6ES5 420-7LA11 to 6ES7-421-1BL01-0AA0 6ES5 430-7LA11 to 6ES7-421-1BL01-0AA0 | FLKM S115/S400/SO155 | 2307248 | 1 |
| OUT 6ES5 441-7LA11 to 6ES7 422-1BL00-0AA0 6ES5 451-7LA11 to 6ES7 422-1BL00-0AA0 | | | |
| Digital OUT 24 V DC from S5-115 to S7-400 | | | |
| 6ES5 454-7LA12 to 6ES7 422 1BH11-0AA0 | FLKM S115-454-7LA/S400 | 2314901 | 1 |
| Analog IN (current and voltage measurement only) from S5-115 to S7-400 | | | |
| 6ES5 465-7LA13 to 6ES7 431 0HH00-0AB0 6ES5 465-7LA13 to 6ES7 431 7QH00-0AB0 | FLKM S115-465-7LA/UI/S400 | 2314914 | 1 |

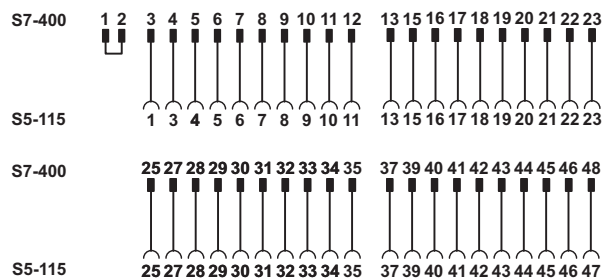


Technical Data

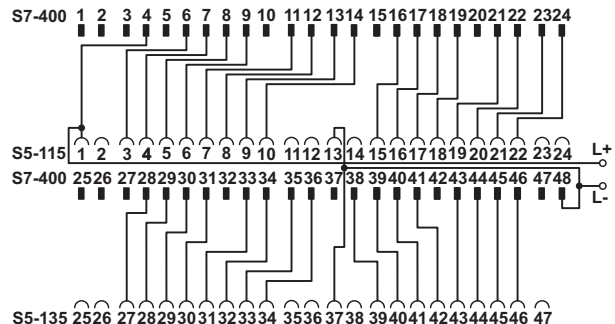
| | |
|---|------------------------|
| Maximum permissible operating voltage | 24 V AC/DC |
| Maximum permissible current (per branch) | 4 A |
| Maximum permissible current (separate power supply) | 4 A |
| Test voltage | 500 V (50 Hz, 1 min.) |
| Ambient temperature (operation) | -20°C ... +50°C |
| Mounting position | Vertical |
| Standards/specifications | DIN EN 50178/IEC 62103 |

Connection Schemes

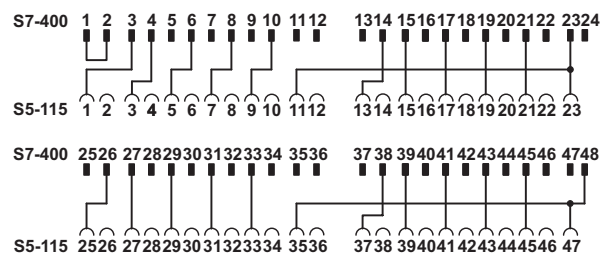
FLKM S115/S400/SO155



FLKM S115-465-7LA/UI/S400



FLKM S115-454-7LA/S400



Adapters for Converting S5-115 to S7-300

S5/S7 adapters connect S5-115 front adapters wired with individual wires to S7-300 I/O modules. With the aid of the FLKM S115/S7/FLK50/SO13 converter module, the signals of the S5-115 front adapter can be converted to a 50-pos. strip.

An FLK 50/EZ-DR/.../KONFEK 50-pos. system cable and a front adapter for SIMATIC® S7-300 (FLKM 50-PA-S300) connect the signals to the I/O module.

6ES5 420... to 6ES5 451...

Ordering Data

Description

Digital IN and OUT 24 V DC from S5-115 via converter, system cable, and front adapter to S7-300

IN

6ES5 420-7LA11 to 6ES7 321-1BL00-0AA0

6ES5 430-7LA11 to 6ES7 321-1BL00-0AA0

OUT

6ES5 441-7LA11 to 6ES7 322-1BL00-0AA0

6ES5 451-7LA11 to 6ES7 322-1BL00-0AA0

Type

FLKM S115/S7/FLK50/PLC/SO137

Order No.

2306294

Pcs./Pck.

1



Technical Data

Maximum permissible operating voltage

24 V AC/DC

Maximum permissible current (per branch)

1 A

Maximum permissible current (separate power supply)

2 A

Test voltage

500 V (50 Hz, 1 min.)

Ambient temperature (operation)

-20°C ... +50°C

Mounting position

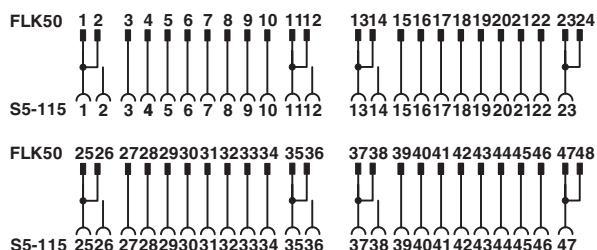
Any

Standards/specifications

DIN EN 50178/IEC 62103

Connection Scheme

FLKM S115/S7/FLK50/PLC/SO137



Application Example



Adapters for Converting S5-135/155 to S7-400

FLKM S135/... adapters provide a direct connection between a SIMATIC® S5 connector wired with individual wires and the SIMATIC® S7-400 base board. The SIMATIC® S5 connector is plugged directly into an S7-400 I/O card with the aid of the FLKM S135/... adapter. A new

SIMATIC® S7-400 is installed in place of the SIMATIC® S5. The existing field wiring remains intact.

Attention: The LEDs of the S7-400 module are hidden.

6ES5 420... to 6ES5 432...

Ordering Data

| Description | Type | Order No. | Pcs./Pck. |
|---|--------------------------|-----------|-----------|
| Digital IN 24 V/60 V from S5-135/155 to S7-400 | | | |
| 6ES5 420-4UA14 to 6ES7 421-1BL01-0AA0 | ① FLKM S135/S400/S0120 | 2301723 | 1 |
| 6ES5 430-4UA14 to 6ES7 421-1BL01-0AA0 | ② FLKM S135/S400/SO121 | 2301736 | 1 |
| 6ES5 431-4UA12 to 6ES7 421-7DH00-0AB0 | ③ FLKM S135-431-4UA/S400 | 2314846 | 1 |
| 6ES5 432-4UA12 to 6ES7 421-1BL01-0AA0 | ④ FLKM S135/S400/SO122 | 2301749 | 1 |

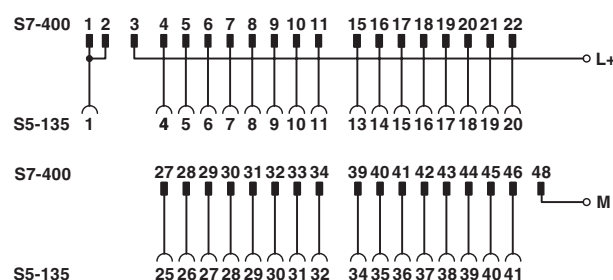


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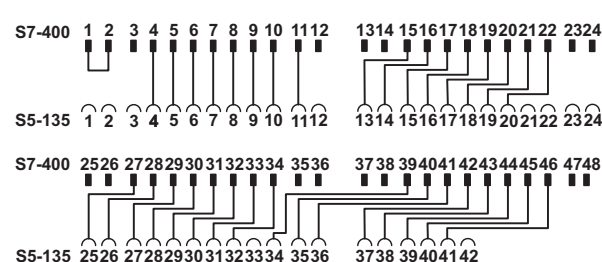
| | ① | ② | ③ | ④ |
|---|--------------------------|----------------------------|----------------------------|----------------------------|
| Maximum permissible operating voltage | 24 V AC/DC | 60 V DC | 24 V DC | 24 V AC/DC |
| Maximum permissible current (per branch) | 4 A | 2 A | 4 A | 4 A |
| Maximum permissible current (separate power supply) | 4 A | 2 A | 4 A | 4 A |
| Test voltage | 500 V (50 Hz, 1 min.) | 1.25 kV (50 Hz, 1 min.) | 1.25 kV (50 Hz, 1 min.) | 1.25 kV (50 Hz, 1 min.) |
| Ambient temperature (operation) | -20°C ... +50°C | | | |
| Mounting position | Any | | | |
| Standards/specifications | DIN EN 50178/IEC 62103 | | | |

Connection Schemes

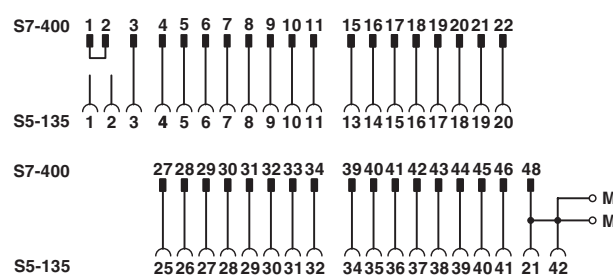
FLKM S135/S400/S0120



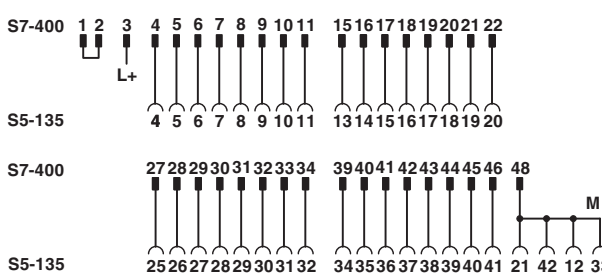
FLKM S135-431-4UA/S400



FLKM S135/S400/SO121



FLKM S135/S400/SO122



6ES5 436... to 6ES5 453...

Ordering Data

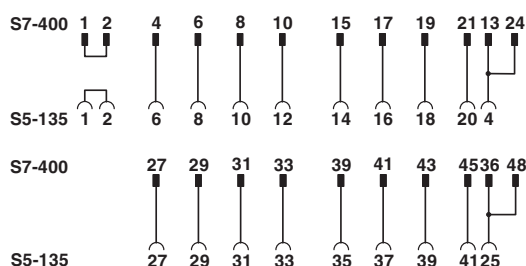
| Description | Type | Order No. | Pcs./Pck. |
|---|------------------------|-----------|-----------|
| Digital IN 120/230 V UC from S5-135/155 to S7-400 6ES5 436-4UA12 to 6ES7 421-1FH20-0AA0 | ① FLKM S135/S400/SO123 | 2301752 | 1 |
| Digital OUT 24 V from S5-135/155 to S7-400 6ES5 441-4UA12 to 6ES7 422-1BL00-0AA0 | ② FLKM S135/S400/SO125 | 2301778 | 1 |
| 6ES5 451-4UA14 to 6ES7 422-1BL00-0AA0 | ③ FLKM S135/S400/SO126 | 2301781 | 1 |
| Digital OUT 24 V DC/2 A from S5-135/155 to S7-400 6ES5 453-4UA12 to 6ES7 422-1HH00-0AA0 | ④ FLKM S135/S400/SO127 | 2301794 | 1 |



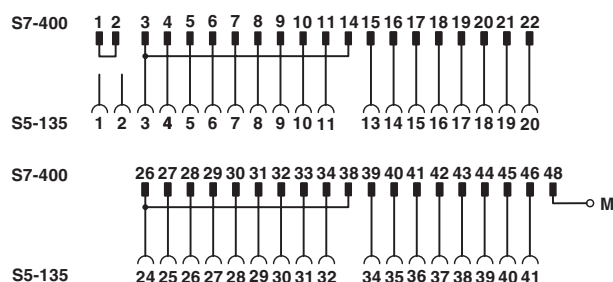
| Technical Data | ① | ② | ③ | ④ |
|---|---------------------------|--------------------------|----------------------------|--------------------------|
| Maximum permissible operating voltage | 230 V AC/DC | 24 V AC/DC | 24 V DC | 24 V DC |
| Maximum permissible current (per branch) | 4 A | | | |
| Maximum permissible current (separate power supply) | 4 A | | | |
| Test voltage | 1.5 kV (50 Hz, 1 min.) | 500 V (50 Hz, 1 min.) | 1.25 kV (50 Hz, 1 min.) | 500 V (50 Hz, 1 min.) |
| Ambient temperature (operation) | -20°C ... +50°C | | | |
| Mounting position | Any | | | |
| Standards/specifications | DIN EN 50178/IEC 62103 | | | |

Connection Schemes

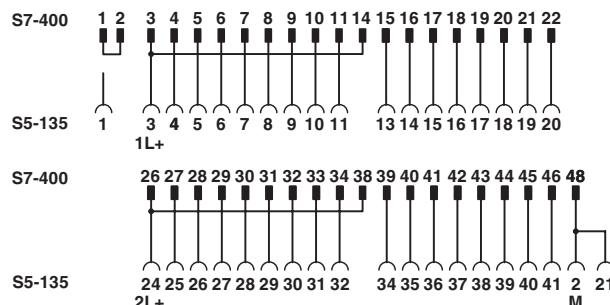
FLKM S135/S400/SO123



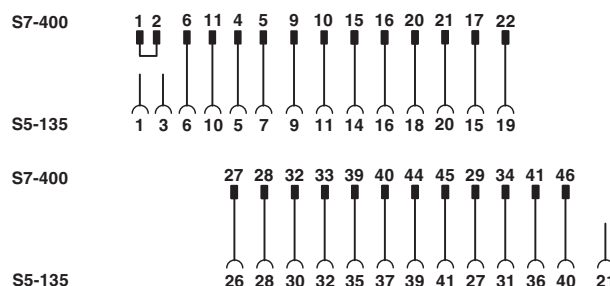
FLKM S135/S400/SO125



FLKM S135/S400/SO126



FLKM S135/S400/SO127



6ES5 454... to 6ES5 460...

Ordering Data

| Description | Type | Order No. | Pcs./Pck. |
|--|----------------------------|-----------|-----------|
| Digital OUT 24 V DC/2 A from S5-135/155 to S7-400 6ES5 454-4UA14 to 6ES7 422-1BH11-0AA0 | ① FLKM S135-454-4UA/S400 | 2314859 | 1 |
| Digital OUT 230 V UC/2 A from S5-135/155 to S7-400 6ES5 456-4UA12 to 6ES7 422-1FH00-0AA0 | ② FLKM S135/S400/SO124 | 2301765 | 1 |
| Analog IN (current measurement only) from S5-135/155 to S7-400 6ES5 460-4UA13 to 6ES7 431-1KF00-0AB0 | ③ FLKM S135-460-4UA/I/S400 | 2314613 | 1 |
| Analog IN (voltage measurement only) from S5-135/155 to S7-400 6ES5 460-4UA13 to 6ES7 431-1KF00-0AB0 | ④ FLKM S135-460-4UA/U/S400 | 2314862 | 1 |

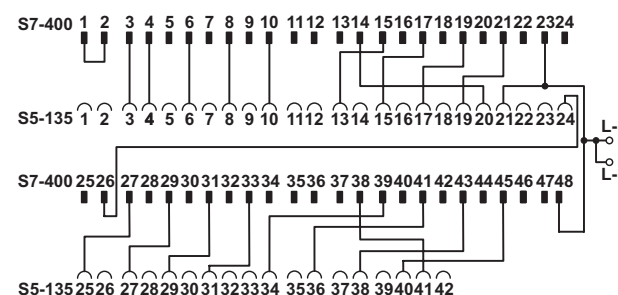


Technical Data

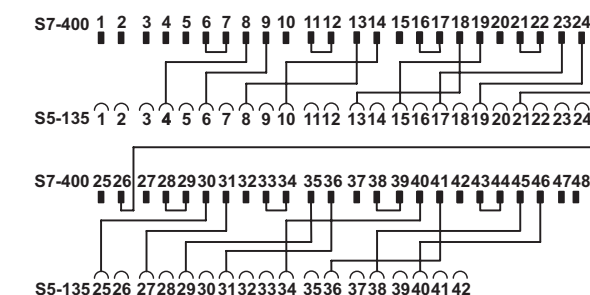
| | ① | ② | ③ | ④ |
|---|----------------------------|---------------------------|--------------------------|--------------------------|
| Maximum permissible operating voltage | 24 V DC | 230 V AC | 24 V DC | 24 V DC |
| Maximum permissible current (per branch) | 4 A | | | |
| Maximum permissible current (separate power supply) | 4 A | | | |
| Test voltage | 1.25 kV (50 Hz, 1 min.) | 1.5 kV (50 Hz, 1 min.) | 500 V (50 Hz, 1 min.) | 500 V (50 Hz, 1 min.) |
| Ambient temperature (operation) | -20°C ... +50°C | | | |
| Mounting position | Vertical | | | |
| Standards/specifications | DIN EN 50178/IEC 62103 | | | |

Connection Schemes

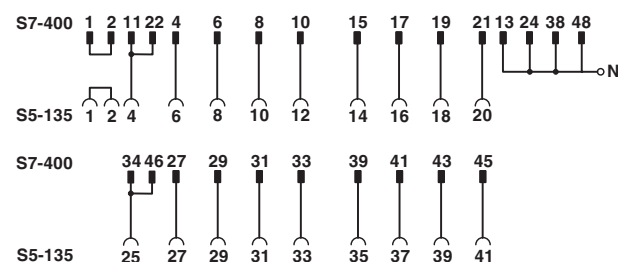
FLKM S135-454-4UA/S400



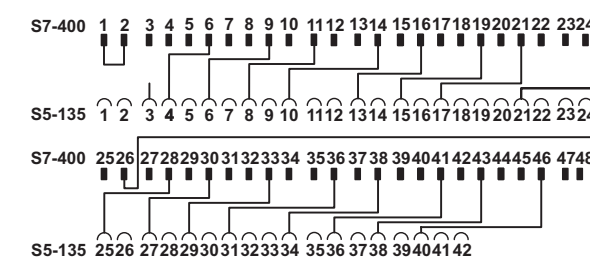
FLKM S135-460-4UA/I/S400



FLKM S135/S400/SO124



FLKM S135-460-4UA/U/S400



6ES5 465... to 6ES5 470...

Ordering Data

| Description | Type | Order No. | Pcs./Pck. |
|--|-----------------------------|-----------|-----------|
| Analog IN (Pt 100 only) from S5-135/155 to S7-400 6ES5 465-4UA13 to 6ES7 431-7KF10-0AB0 | ① FLKM S135-465-4UA/T/S400 | 2314875 | 1 |
| Analog IN (current and voltage measurement only) from S5-135/155 to S7-400 6ES5 465-4UA13 to 6ES7 431-0HH00-0AB0 6ES5 465-4UA13 to 6ES7 431-7QH00-0AB0 | ② FLKM S135-465-4UA/UI/S400 | 2314888 | 1 |
| Analog OUT (current output only) from S5-135/155 to S7-400 6ES5 470-4UA13 to 6ES7 432-1HF00-0AB0 6ES5 470-4UC13 to 6ES7 432-1HF00-0AB0 | ③ FLKM S135-470-4UC/I/S400 | 2314626 | 1 |
| Analog OUT (voltage output only) from S5-135/155 to S7-400 6ES5 470-4UA13 to 6ES7 432-1HF00-0AB0 6ES5 470-4UB13 to 6ES7 432-1HF00-0AB0 6ES5 470-4UC13 to 6ES7 432-1HF00-0AB0 | ④ FLKM S135-470-4UC/U/S400 | 2314891 | 1 |

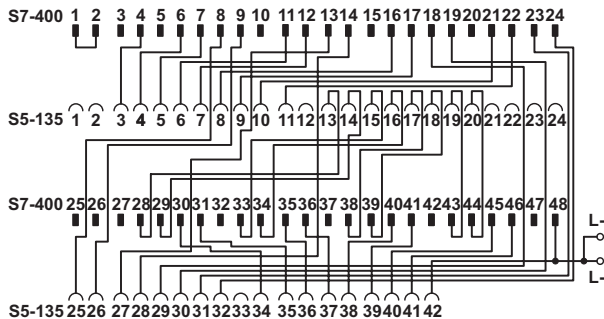


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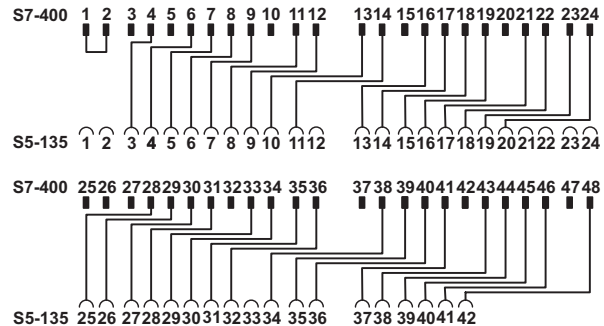
| | ① | ② | ③ | ④ |
|---|------------------------|-----|-----|-----|
| Maximum permissible operating voltage | 24 V DC | | | |
| Maximum permissible current (per branch) | 2 A | 4 A | 4 A | 4 A |
| Maximum permissible current (separate power supply) | 2 A | 4 A | 4 A | 4 A |
| Test voltage | 500 V (50 Hz, 1 min.) | | | |
| Ambient temperature (operation) | -20°C ... +50°C | | | |
| Mounting position | Any | | | |
| Standards/specifications | DIN EN 50178/IEC 62103 | | | |

Connection Schemes

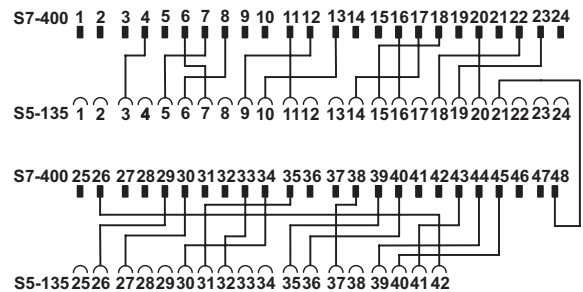
FLKM S135-465-4UA/T/S400



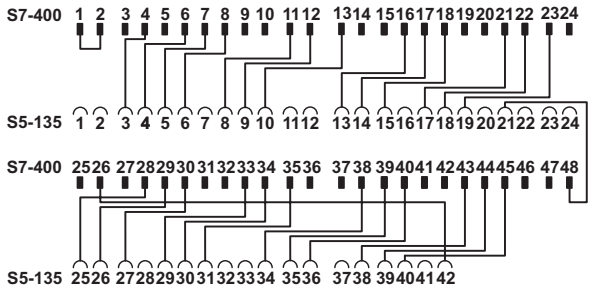
FLKM S135-465-4UA/UI/S400



FLKM S135-470-4UC/I/S400



FLKM S135-470-4UC/U/S400



Adapters for Converting S5-135 to S7-300

S5/S7 adapters connect S5-135 front adapters wired with individual wires to S7-300 I/O modules. With the aid of the FLKM S135/S7/FLK50 converter module, the signals of the S5-135 front adapter can be converted to a 50-pos. strip.

An FLK 50/EZ-DR/.../KONFEK 50-pos. system cable and a front adapter for SIMATIC® S7-300 (FLKM 50-PA-S300) connect the signals to the I/O module.

6ES5 420... to 6ES5 451...

Ordering Data

| Description | Type | Order No. | Pcs./Pck. |
|---|------------------------|-----------|-----------|
| Digital IN and OUT 24 V DC from S5-135 to S7-300 | | | |
| IN 6ES5 420-4UA14 to 6ES7 321-1BL00-0AA0 6ES5 430-4UA14 to 6ES7 321-1BL00-0AA0 | FLKM S135/S7/FLK50/PLC | 2314736 | 1 |
| OUT 6ES5 441-4UA14 to 6ES7 322-1BL00-0AA0 6ES5 451-4UA14 to 6ES7 322-1BL00-0AA0 | | | |

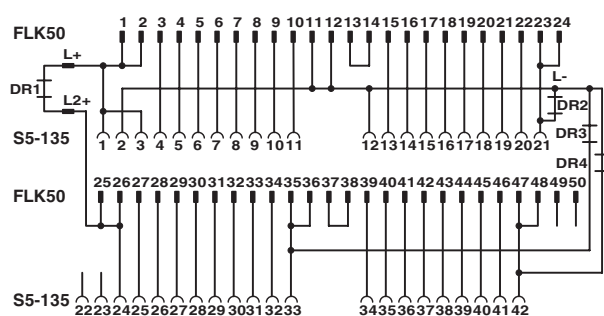


Technical Data

| | |
|---|------------------------|
| Maximum permissible operating voltage | 30 V AC/DC |
| Maximum permissible current (per branch) | 1 A |
| Maximum permissible current (separate power supply) | 2 A |
| Test voltage | 500 V (50 Hz, 1 min.) |
| Ambient temperature (operation) | -20°C ... +50°C |
| Mounting position | Any |
| Standards/specifications | DIN EN 50178/IEC 62103 |

Connection Schemes

FLKM S135/S7/FLK50/PLC



Application Example



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