

# SIMATIC S5-135U, S5-155U/H

## Interface modules

### IM 300 and IM 312 interface modules; centralized configuration

#### Application



The IM 300/IM 312 interface modules are used for centralized configuration of I/O modules and intelligent I/O modules (without page addressing) with a central controller via the following expansion units:

- EG 183U
- EG 184U
- EG 187U

These expansion units can also be connected in centralized configuration with the EG 183U and EG 185U expansion units.

#### Design

The IM 300 interface module must be plugged into the slot provided in the central controller. The IM 312 interface module is plugged into the expansion unit. Up to four IM 300 interface modules can be used in the central controller, however, not more than two IM 300-5 in the ZG 135U/155U.

One IM 300 interface module can be plugged into each EG 183U or EG 185U expansion unit.

The IM 300 interface module allows two areas of 256 byte to be configured (P and Q areas).

#### Connecting the EG 184U and EG 187U expansion units

(Expansion units without power supply chassis)  
The IM 300-5C interface module is to be used in the central controller and the IM 312-5 interface module in the expansion unit (see Fig. 4/49). Power (5 V, internal) is supplied to the EG 184U and EG 187U expansion units by way of the interface modules.

#### Connection of the EG 183U expansion unit

(Expansion unit with power supply chassis) The IM 300-3 interfacemodule is to be used

in the central controller and the IM 312 interface module in the expansion unit (see Fig. 4/47). The IM 312-3 and IM 312-5 interface modules cannot be used simultaneously in one chain.

#### Connecting additional expansion units

In addition to the aforementioned expansion units, an expansion unit in the ER 701-1 expansion rack of the S5-115U programmable controller can also be connected (see Fig. 4/48). The expansion unit is supplied with power (5 V) by way of the interface module.

#### Technical specifications

Current consumption (at 5 V)

- |          |      |       |
|----------|------|-------|
| • IM 300 | max. | 0.6 A |
| • IM 312 | max. | 0.2 A |

Power loss

- |          |      |     |
|----------|------|-----|
| • IM 300 | max. | 3 W |
| • IM 312 | max. | 1 W |

Space requirements

1 slot

Weight

approx.

0.35 kg (0.77 lb)

#### Ordering data

##### IM 300 interface module

- for the central controller
- For connecting the EG 184U or EG 187U
- For connecting the EG 183U
- For connecting the ER 701-0 or ER 701-1

**6ES5 300-5CA11**

**6ES5 300-3AB11**

**6ES5 300-5LB11**

##### IM 306 interface module

for the expansion units  
ER 701-0, ER 701-1

**6ES5 306-7LA11**

##### 705 connecting cable

for connecting the IM 300-5LB interface module to the IM 306

- |        |                 |
|--------|-----------------|
| Length | 0.5 m (1.64 ft) |
|        | 1.2 m (3.93 ft) |
|        | 1.5 m (4.92 ft) |
|        | 2.5 m (8.2 ft)  |

**6ES5 705-0AF00**

**6ES5 705-0BB20**

**6ES5 705-0BB50**

**6ES5 705-0BC50**

##### IM 312 interface module

for the expansion units

**EG 184U or EG 187U;**

- Expansion unit arranged above the central controller, 0.5 m (1.6 ft) cable
- Location of expansion unit arbitrary, 1.5 m (4.9 ft) cable

**EG 183U;**

- Expansion unit arranged above the central controller, 0.5 m (1.6 ft) cable
- Expansion unit arranged below the central controller, 0.95 m (3.1 ft) cable

##### Terminator for the IM 312-3 interface module

The operating instructions are included in the S5-135U/155U system manual (see page 4/155).

Order No.

**6ES5 312-5CA12**

**6ES5 312-5CA22**

**6ES5 312-3AB12**

**6ES5 312-3AB32**

**6ES5 760-0AB11**

### IM 300 and IM 312 interface modules; centralized configuration (continued)

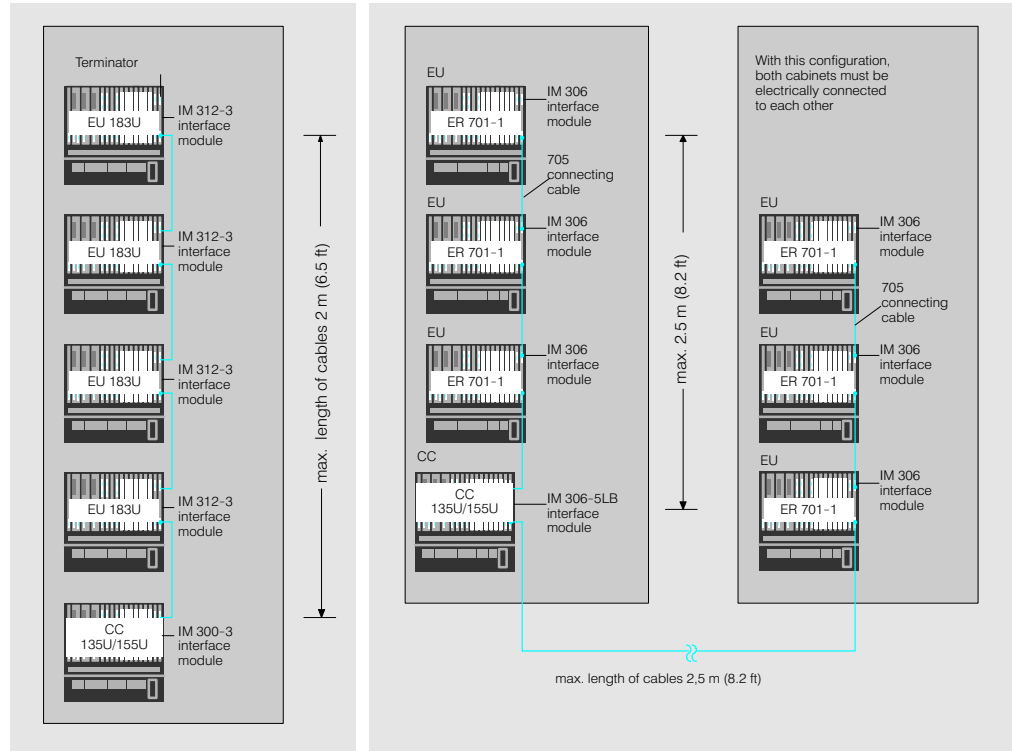


Fig. 4/47 Connection of expansion units **with** power supply chassis to the central controller in centralized configuration using the IM 312-3 and IM 300-3 interface modules

Fig. 4/48 Connection of expansion units **without** power supply chassis to the central controller in centralized configuration using the IM 306 and IM 300-5LB interface modules.

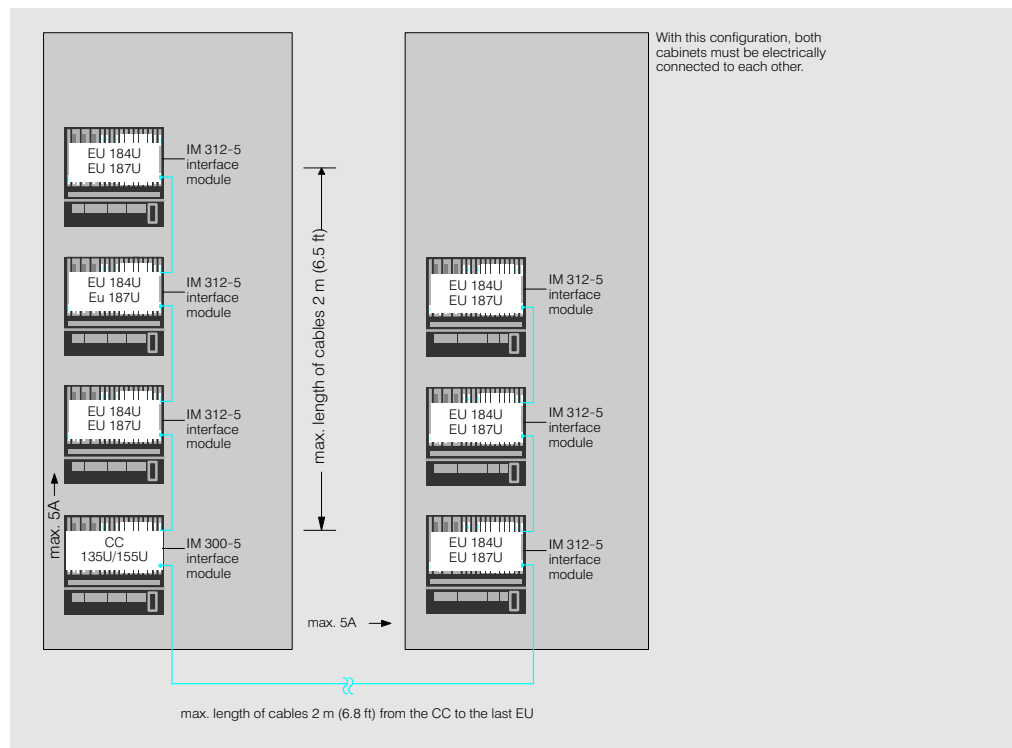


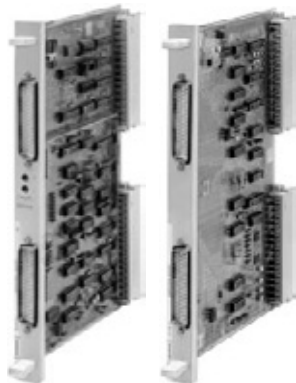
Fig. 4/49 Connection of expansion units **without** power supply chassis to the central controller in centralized configuration using the IM 312-5 and IM 300-5 interface modules.

# SIMATIC S5-135U, S5-155U/H

## Interface modules

### IM 301 and IM 310 interface modules; distributed configuration up to 200 m (656 ft)

#### Application



The IM 301/IM 310 interface modules are used for distributed configuration of I/O modules and intelligent I/O modules (without page addressing) with a central controller via the EG 183U expansion unit. The expansion unit can be up to 200 m (656 ft) away from the central controller.

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#### Design

The IM 301 interface module is plugged into the central controller and the IM 310 interface module into the expansion unit. Additional expansion units can be connected in centralized configuration to the distributed EG 183U expansion units. Up to four IM 301 interface modules can be plugged into the central controller.

The IM 301-5 interface module is used if additional EG 184U or EG 187U expansion units are to be connected in a centralized configuration to the central controller.

The IM 301-3 interface module is used if additional EG 183U expansion units are to be connected in a centralized configuration to the central controller.

Terminators must always be inserted into the last IM 310 and into the unused central connectors of the IM 301-3 and the unused distributed connectors of the IM 301-3 and IM 301-5.

The IM 301 interface module allows two areas of 256 byte to be configured (CP and Q areas).

#### Technical specifications

##### Current consumption (at 5 V)

• IM 301	max.	0.8 A
• IM 310	max.	0.7 A

##### Power loss

• IM 301	max.	4 W
• IM 310	max.	3.5 W

##### Space requirements

1 slot

Weight approx. 0.3 kg (0.66 lb)

#### Ordering data

##### IM 301 interface module

- for the central controller
- For the connection of the EG 184U or EG 187U
- For the connection of the EG 183U

**6ES5 301-5CA12**

**6ES5 301-3AB13**

##### Terminator for the IM 301

- For free distributed connection of IM 301-3 and IM 301-5 (bottom)
- For free centralized connection of IM 301-3 (top)

**6ES5 760-0AA11**

**6ES5 760-0AB11**

##### IM 310 interface module

for the expansion unit

**6ES5 310-3AB11**

##### Terminator for the IM 310

The operating instructions are included in the S5-135U/155U system manual (see page 4/155).

**6ES5 760-0AA11**

##### 721 connecting cable

1.00 m (3.28 ft)	<b>6ES5 721-0 BB00</b>
1.60 m (5.20 ft)	<b>6ES5 721-0 BB60</b>
2.00 m (6.56 ft)	<b>6ES5 721-0 BC00</b>
2.50 m (8.20 ft)	<b>6ES5 721-0 BC50</b>
3.20 m (10.4 ft)	<b>6ES5 721-0 BD20</b>
5.00 m (16.4 ft)	<b>6ES5 721-0 BF00</b>
8.00 m (26.2 ft)	<b>6ES5 721-0 BJ00</b>
10.00 m (32.8 ft)	<b>6ES5 721-0 CB00</b>
12.00 m (39.3 ft)	<b>6ES5 721-0 CB20</b>
16.00 m (52.4 ft)	<b>6ES5 721-0 CB60</b>
20.00 m (65.6 ft)	<b>6ES5 721-0 CC00</b>
25.00 m (82.0 ft)	<b>6ES5 721-0 CC50</b>
32.00 m (104.9 ft)	<b>6ES5 721-0 CD20</b>
40.00 m (131.2 ft)	<b>6ES5 721-0 CE00</b>
50.00 m (164.0 ft)	<b>6ES5 721-0 CF00</b>
63.00 m (206.6 ft)	<b>6ES5 721-0 CG30</b>
80.00 m (262.4 ft)	<b>6ES5 721-0 CJ00</b>
100.00 m (328.0 ft)	<b>6ES5 721-0 DB00</b>
500.00 m (1640 ft)	<b>6ES5 721-0 DF00</b>