

SIMATIC

S5-135U/155U

System Manual

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6ES5998-0SH21

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With the distributed configuration, a distinction is made between parallel and serial communication. The main features of these types of communication are as follows:

- Parallel Fast data transmission line length of up to 600 m
- Serial Slower data transmission line length of up to 3000 m

2.2.1 Installing a PLC with Centralized Configuration

The following table shows which interface modules and connecting cables can be used for connecting the various expansion units to the CC in a centralized configuration.

Interface Module in the CC	Expansion Unit	Interface Module in the EU	Connecting Cable Max. Distance
IM 300-3 6ES5 300-3AB11	EU 183U EU 185U (I/O mod. only)	IM 312-3 ²⁾ 6ES5 312-3AB11	fixed to the IM 312 module 0.5 m; 0.95 m
IM 301-3 ¹⁾ 6ES5 301-3AB13	EU 183U EU 185U (I/O mod. only)	IM 312-3 ²⁾ 6ES5 312-3AB31	fixed to the IM 312 module 0.5 m; 0.95 m
IM 300-5 6ES5 300-5CA11	EU 184U EU 187U	IM 312-5 6ES5 312-5CA11	fixed to the IM 312 module 0.5 m; 1.5 m
IM 301-5 ¹⁾ 6ES5 301-5CA12	EU 184U EU 187U	IM 312-5 6ES5 312-5CA21	fixed to the IM 312 module 0.5 m; 1.5 m
IM 300-5 6ES5 300-5LB11	ER 701-1	IM 306 6ES5 306-7LA11	6ES5 705-0xxxx 0.5 m to 2,5 m

¹⁾ This IM has a second interface for distributed communication.

²⁾ The last IM 312-3 always requires a 6ES5 760-0AB11 terminator.

To install a PLC in a centralized configuration, you must observe the following conditions:

- A centralized configuration is generally only suitable for connecting I/O modules (DI, DO, AI, AO) and some intelligent I/O modules (IPs) in the EU (see the Configuring Aids in the catalog and Chapter 4).
- The line length between the IM in the CC and the last IM in the EU must not exceed 2 m.

7.1 The 300 and 312 Interface Modules

The 300 and 312 interface modules are used for **centralized** connection of I/O modules and signal preprocessing modules (IPs) to a CC via the following expansion units (allowing for possible configurations):

- EU 183U
- EU 184U
- EU 185U (only input/output modules)
- EU 187U
- ER 701-1

Additionally, you can utilize these IMs for secondary communication, i.e. additional EUs can be connected in a centralized arrangement to an EU 183U or EU 185U in distributed configuration. Up to four IM 300s can be used in one CC, up to two of which may be IM 300-5s. You can use one IM 300 in an EU 183U or EU 185U.

Application of the IM 300 and IM 312

An IM 300 EU interface module is complemented by an IM 312 or IM 306 CC interface module. Use the following IMs, depending on the connected EU:

EU Interface Module	EU Type	CC Interface Module
IM 300-5 C (6ES5 300-5CA11)	EU 184U, EU 187U	IM 312-5
IM 300-3 (6ES5 300-3AB11)	EU 183U EU 185U (only I/O modules)	IM 312-3
IM 300-5 L (6ES5 300-5LB11)	ER 701-1	IM 306

There are two versions of IM 312-3 and IM 312-5. They differ in the length of permanently connected cable:

Order No.	Cable Length
6ES5 312-5CA1X 6ES5 312-5CA2X	0.5 m 1.5 m
6ES5 312-3AB1X 6ES5 312-3AB3X	0.5 m 0.95 m