

# SIMATIC S7-1500

## Central processing units

### Standard CPUs

#### Overview CPU 1515-2 PN

- The CPU for applications with medium to high requirements for program/data storage in the S7-1500 controller product range
- Medium to high processing speed for binary and floating-point arithmetic
- Used as central controller in production lines with central and distributed I/O
- PROFINET IO IRT interface with 2-port switch
- Additional PROFINET interface with separate IP address
- PROFINET IO Controller for operating distributed I/O on PROFINET
- PROFINET I-Device for connecting the CPU as an intelligent PROFINET device under a SIMATIC or non-Siemens PROFINET I/O controller
- Isochronous mode
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes, support for external encoders
- Integrated web server with the option of creating user-defined web pages
- SIMATIC memory card required for operation of the CPU

#### Overview CPU 1518-4 PN/DP

- The CPU with a very large program and data memory in the S7-1500 controller product range for demanding applications with extremely high requirements regarding program scope, performance and networking
- Extremely high processing speed for binary and floating-point arithmetic
- For cross-industry automation tasks in series machine, special machine and plant construction
- Used as central controller in production lines with central and distributed I/O
- PROFINET IO IRT interface with 2-port switch
- Two additional PROFINET interfaces with separate IP address
- PROFINET IO controller for operating distributed I/O on PROFINET.
- PROFINET I-Device for connecting the CPU as an intelligent PROFINET device under a SIMATIC or non-Siemens PROFINET I/O controller.
- PROFIBUS DP master interface
- Isochronous mode on PROFIBUS and PROFINET
- Integrated Motion Control functionalities for controlling speed-controlled and positioning axes, support for external encoders
- Integrated web server with the option of creating user-defined web pages
- SIMATIC memory card required for operation of the CPU

#### Technical specifications

|                                                                                    | 6ES7515-2AM00-0AB0<br>CPU 1515-2 PN   | 6ES7518-4AP00-0AB0<br>CPU 1518-4 PN/DP |
|------------------------------------------------------------------------------------|---------------------------------------|----------------------------------------|
| <b>General information</b>                                                         |                                       |                                        |
| Engineering with<br>• STEP 7 TIA Portal can be configured/integrated as of version | V13                                   | V13                                    |
| <b>Display</b>                                                                     |                                       |                                        |
| Screen diagonal (cm)                                                               | 6.1 cm                                | 6.1 cm                                 |
| <b>Supply voltage</b>                                                              |                                       |                                        |
| Type of supply voltage                                                             | 24 V DC                               | 24 V DC                                |
| <b>Power losses</b>                                                                |                                       |                                        |
| Power loss, typ.                                                                   | 6.3 W                                 | 24 W                                   |
| <b>Memory</b>                                                                      |                                       |                                        |
| Work memory<br>• integrated (for program)<br>• integrated (for data)               | 500 kbyte<br>3 Mbyte                  | 3 Mbyte<br>10 Mbyte                    |
| Load memory<br>• Plug-in (SIMATIC Memory Card), max.                               | 32 Gbyte                              | 32 Gbyte                               |
| <b>CPU processing times</b>                                                        |                                       |                                        |
| for bit operations, typ.                                                           | 30 ns                                 | 1 ns                                   |
| for word operations, typ.                                                          | 36 ns                                 | 2 ns                                   |
| for fixed point arithmetic, typ.                                                   | 48 ns                                 | 2 ns                                   |
| for floating point arithmetic, typ.                                                | 192 ns                                | 6 ns                                   |
| <b>Counters, timers and their retentivity</b>                                      |                                       |                                        |
| S7 counter<br>• Number                                                             | 2 048                                 | 2 048                                  |
| IEC counter<br>• Number                                                            | Any (only limited by the main memory) | Any (only limited by the main memory)  |
| S7 timer<br>• Number                                                               | 2 048                                 | 2 048                                  |
| IEC timer<br>• Number                                                              | Any (only limited by the main memory) | Any (only limited by the main memory)  |

## Technical specifications (continued)

|                                                                         | 6ES7515-2AM00-0AB0<br>CPU 1515-2 PN            | 6ES7518-4AP00-0AB0<br>CPU 1518-4 PN/DP         |
|-------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|
| <b>Data areas and their retentivity</b>                                 |                                                |                                                |
| Flag                                                                    |                                                |                                                |
| • Number, max.                                                          | 16 kbyte                                       | 16 kbyte                                       |
| <b>Address area</b>                                                     |                                                |                                                |
| I/O address area                                                        |                                                |                                                |
| • Inputs                                                                | 32 kbyte; All inputs are in the process image  | 32 kbyte; All inputs are in the process image  |
| • Outputs                                                               | 32 kbyte; All outputs are in the process image | 32 kbyte; All outputs are in the process image |
| <b>Time of day</b>                                                      |                                                |                                                |
| Clock                                                                   |                                                |                                                |
| • Type                                                                  | Hardware clock                                 | Hardware clock                                 |
| <b>Interfaces</b>                                                       |                                                |                                                |
| 1st interface                                                           |                                                |                                                |
| • Interface types                                                       |                                                |                                                |
| - Number of ports                                                       | 2                                              | 2                                              |
| - Integrated switch                                                     | Yes                                            | Yes                                            |
| - RJ 45 (Ethernet)                                                      | Yes                                            | Yes                                            |
| • Protocols                                                             |                                                |                                                |
| - PROFINET IO Controller                                                | Yes                                            | Yes                                            |
| - PROFINET IO Device                                                    | Yes                                            | Yes                                            |
| - SIMATIC communication                                                 | Yes                                            | Yes                                            |
| - Open IE communication                                                 | Yes                                            | Yes                                            |
| - Web server                                                            | Yes                                            | Yes                                            |
| - Media redundancy                                                      | Yes                                            | Yes                                            |
| 2nd interface                                                           |                                                |                                                |
| • Interface types                                                       |                                                |                                                |
| - Number of ports                                                       | 1                                              | 1                                              |
| - Integrated switch                                                     | No                                             | No                                             |
| - RJ 45 (Ethernet)                                                      | Yes                                            | Yes                                            |
| • Protocols                                                             |                                                |                                                |
| - PROFINET IO Controller                                                | No                                             | No                                             |
| - PROFINET IO Device                                                    | No                                             | No                                             |
| - SIMATIC communication                                                 | Yes                                            | Yes                                            |
| - Open IE communication                                                 | Yes                                            | Yes                                            |
| - Web server                                                            | Yes                                            | Yes                                            |
| 3rd interface                                                           |                                                |                                                |
| • Interface types                                                       |                                                |                                                |
| - Number of ports                                                       |                                                | 1                                              |
| - Integrated switch                                                     |                                                | No                                             |
| - RJ 45 (Ethernet)                                                      |                                                | Yes                                            |
| • Protocols                                                             |                                                |                                                |
| - PROFINET IO Controller                                                |                                                | No                                             |
| - PROFINET IO Device                                                    |                                                | No                                             |
| - SIMATIC communication                                                 |                                                | Yes                                            |
| - Open IE communication                                                 |                                                | Yes                                            |
| - Web server                                                            |                                                | Yes                                            |
| 4th interface                                                           |                                                |                                                |
| • Interface types                                                       |                                                |                                                |
| - Number of ports                                                       |                                                | 1                                              |
| - RS 485                                                                |                                                | Yes                                            |
| • Protocols                                                             |                                                |                                                |
| - SIMATIC communication                                                 |                                                | Yes                                            |
| - PROFIBUS DP master                                                    |                                                | Yes                                            |
| - PROFIBUS DP slave                                                     |                                                | No                                             |
| <b>Protocols</b>                                                        |                                                |                                                |
| Number of connections                                                   |                                                |                                                |
| • Number of connections, max.                                           | 192                                            | 384                                            |
| PROFINET IO Controller                                                  |                                                |                                                |
| • Services                                                              |                                                |                                                |
| - Max. number of connectable IO devices for RT                          | 256                                            | 512                                            |
| - Number of IO Devices with IRT and the option "high performance", max. | 64                                             | 64                                             |
| PROFIBUS                                                                |                                                |                                                |
| • Services                                                              |                                                |                                                |
| - Number of DP slaves                                                   |                                                | 125                                            |

# SIMATIC S7-1500

## Central processing units

### Standard CPUs

#### Technical specifications (continued)

|                                                                                                                                                                                                                                                       | 6ES7515-2AM00-0AB0<br>CPU 1515-2 PN                                                                                                                                                                                                                                                                                         | 6ES7518-4AP00-0AB0<br>CPU 1518-4 PN/DP                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Isochronous mode</b><br>Isochronous operation<br>(application synchronized up to terminal)                                                                                                                                                         | Yes                                                                                                                                                                                                                                                                                                                         | Yes                                                                                                                                                                                                                                                                                                                               |
| <b>supported technology objects</b><br>Motion<br>• Speed-controlled axis<br>- Number of speed-controlled axes, max.<br><br>• Positioning axis<br>- Number of positioning axes, max.<br><br>• External encoders<br>- Number of external encoders, max. | Yes<br><br>20; Up to 20 axes in total (speed-controlled, positioning axis, external encoders) are supported<br><br>20; Up to 20 axes in total (speed-controlled, positioning axis, external encoders) are supported<br><br>20; Up to 20 axes in total (speed-controlled, positioning axis, external encoders) are supported | Yes<br><br>128; Up to 128 axes in total (speed-controlled, positioning axis, external encoders) are supported<br><br>128; Up to 128 axes in total (speed-controlled, positioning axis, external encoders) are supported<br><br>128; Up to 128 axes in total (speed-controlled, positioning axis, external encoders) are supported |
| Controller<br>• PID_Compact<br><br>• PID_3Step                                                                                                                                                                                                        | Yes; Universal PID controller with integrated optimization<br><br>Yes; PID controller with integrated optimization for valves                                                                                                                                                                                               | Yes; Universal PID controller with integrated optimization<br><br>Yes; PID controller with integrated optimization for valves                                                                                                                                                                                                     |
| Counting and measuring<br>• High-speed counter                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                                                                                                                         | Yes                                                                                                                                                                                                                                                                                                                               |
| <b>Ambient conditions</b><br>Operating temperature<br>• horizontal installation, min.<br>• horizontal installation, max.<br><br>• vertical installation, min.<br>• vertical installation, max.                                                        | 0 °C<br>60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off<br>0 °C<br>40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off                                                                                                    | 0 °C<br>60 °C; Display: 50 °C, at an operating temperature of typically 50 °C, the display is switched off<br>0 °C<br>40 °C; Display: 40 °C, at an operating temperature of typically 40 °C, the display is switched off                                                                                                          |
| <b>Configuration</b><br>programming<br>• Programming language<br>- LAD<br>- FBD<br>- STL<br>- SCL<br>- GRAPH                                                                                                                                          | Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                             | Yes<br>Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                   |
| Know-how protection<br>• User program protection<br>• Copy protection<br>• Block protection                                                                                                                                                           | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                           | Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                                 |
| Access protection<br>• Password for display<br>• Protection level: Write protection<br>• Protection level: Read/write protection<br>• Protection level: Complete protection                                                                           | Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                    | Yes<br>Yes<br>Yes<br>Yes                                                                                                                                                                                                                                                                                                          |
| <b>Dimensions</b><br>Width<br>Height<br>Depth                                                                                                                                                                                                         | 70 mm<br>147 mm<br>129 mm                                                                                                                                                                                                                                                                                                   | 175 mm<br>147 mm<br>129 mm                                                                                                                                                                                                                                                                                                        |
| <b>Weights</b><br>Weight, approx.                                                                                                                                                                                                                     | 830 g                                                                                                                                                                                                                                                                                                                       | 1 988 g                                                                                                                                                                                                                                                                                                                           |

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## Central processing units

### Standard CPUs

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| Ordering data                                                                                                                                                                                                                                                                                      | Article No.                                                                                                                                       |                                                                                                                                                                                                                                                       | Article No.                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>CPU 1515-2 PN</b><br>Work memory 500 KB for program, 3 MB for data, PROFINET IO IRT interface, PROFINET interface; SIMATIC memory card required                                                                                                                                                 | <b>6ES7515-2AM00-0AB0</b>                                                                                                                         | <b>PROFIBUS FC Standard Cable GP</b><br>Standard type with special design for fast mounting, 2-core, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                              | <b>6XV1830-0EH10</b>                                                                |
| <b>CPU 1518-4 PN/DP</b><br>Work memory 3 MB for program, 10 MB for data, PROFINET IO IRT interface, 2 PROFINET/PROFIBUS interfaces; SIMATIC memory card required                                                                                                                                   | <b>6ES7518-4AP00-0AB0</b>                                                                                                                         | <b>PROFIBUS FC Robust Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                        | <b>6XV1830-0JH10</b>                                                                |
| <b>Accessories</b>                                                                                                                                                                                                                                                                                 |                                                                                                                                                   | <b>PROFIBUS FC Flexible Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                      | <b>6XV1831-2K</b>                                                                   |
| <b>SIMATIC memory card</b>                                                                                                                                                                                                                                                                         |                                                                                                                                                   | <b>PROFIBUS FC Trailing Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m<br>Sheath color: Petrol<br>Sheath color: Violet                                                                      | <b>6XV1830-3EH10</b><br><b>6XV1831-2L</b>                                           |
| 4 MB                                                                                                                                                                                                                                                                                               | <b>6ES7954-8LC02-0AA0</b>                                                                                                                         | <b>PROFIBUS FC Food Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                          | <b>6XV1830-0GH10</b>                                                                |
| 12 MB                                                                                                                                                                                                                                                                                              | <b>6ES7954-8LE02-0AA0</b>                                                                                                                         | <b>PROFIBUS FC Ground Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                        | <b>6XV1830-3FH10</b>                                                                |
| 24 MB                                                                                                                                                                                                                                                                                              | <b>6ES7954-8LF02-0AA0</b>                                                                                                                         | <b>PROFIBUS FC FRNC Cable GP</b><br>2-wire, shielded, flame-retardant, with copolymer outer sheath FRNC; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                    | <b>6XV1830-0LH10</b>                                                                |
| 2 GB                                                                                                                                                                                                                                                                                               | <b>6ES7954-8LP01-0AA0</b>                                                                                                                         | <b>PROFIBUS FastConnect Stripping Tool</b><br>Preadjusted stripping tool for fast stripping of PROFIBUS FastConnect bus cables                                                                                                                        | <b>6GK1905-6AA00</b>                                                                |
| <b>SIMATIC S7-1500 mounting rail</b><br>Fixed lengths, with grounding elements<br>• 160 mm<br>• 482 mm<br>• 530 mm<br>• 830 mm<br><br>For cutting to length by customer, without drill holes; grounding elements must be ordered separately<br>• 2000 mm                                           | <b>6ES7590-1AB60-0AA0</b><br><b>6ES7590-1AE80-0AA0</b><br><b>6ES7590-1AF30-0AA0</b><br><b>6ES7590-1AJ30-0AA0</b><br><br><b>6ES7590-1BC00-0AA0</b> | <b>IE FC RJ45 plugs</b><br>RJ45 plug connector for Industrial Ethernet with a rugged metal enclosure and integrated insulation displacement contacts for connecting Industrial Ethernet FC installation cables                                        |                                                                                     |
| <b>PE connection element for mounting rail 2000 mm</b><br>20 units                                                                                                                                                                                                                                 | <b>6ES7590-5AA00-0AA0</b>                                                                                                                         | <b>IE FC RJ45 Plug 180</b><br>180° cable outlet<br>1 unit<br>10 units<br>50 units                                                                                                                                                                     | <b>6GK1901-1BB10-2AA0</b><br><b>6GK1901-1BB10-2AB0</b><br><b>6GK1901-1BB10-2AE0</b> |
| <b>Power supply</b><br>For supplying the backplane bus of the S7-1500<br>24 V DC input voltage, power 25 W<br>24/48/60 V DC input voltage, power 60 W<br>120/230 V AC input voltage, power 60 W                                                                                                    | <b>6ES7505-0KA00-0AB0</b><br><b>6ES7505-0RA00-0AB0</b><br><br><b>6ES7507-0RA00-0AB0</b>                                                           | <b>IE FC TP Standard Cable GP 2x2</b><br>4-core, shielded TP installation cable for connection to IE FC Outlet RJ45/ IE FC RJ45 Plug; PROFINET-compliant; with UL approval; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m | <b>6XV1840-2AH10</b>                                                                |
| <b>Power connector</b><br>With coding element for power supply module; spare part, 10 units                                                                                                                                                                                                        | <b>6ES7590-8AA00-0AA0</b>                                                                                                                         |                                                                                                                                                                                                                                                       |                                                                                     |
| <b>Load power supply</b><br>24 V DC/3A<br>24 V DC/8A                                                                                                                                                                                                                                               | <b>6EP1332-4BA00</b><br><b>6EP1333-4BA00</b>                                                                                                      |                                                                                                                                                                                                                                                       |                                                                                     |
| <b>Power supply connector</b><br>Spare part; for connecting the 24 V DC supply voltage<br>• with push-in terminals                                                                                                                                                                                 | <b>6ES7193-4JB00-0AA0</b>                                                                                                                         |                                                                                                                                                                                                                                                       |                                                                                     |
| <b>PROFIBUS FastConnect bus connector RS485 with 90° cable outlet</b><br>with insulation displacement, max. transmission rate 12 Mbit/s<br>without PG interface, grounding via control cabinet contact surface; 1 unit<br>with PG interface, grounding via control cabinet contact surface; 1 unit | <b>6ES7972-0BA70-0XA0</b><br><br><b>6ES7972-0BB70-0XA0</b>                                                                                        |                                                                                                                                                                                                                                                       |                                                                                     |

# SIMATIC S7-1500

## Central processing units

### Fail-safe CPUs

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| Ordering data                                                                                                                                                                                                                                                                                                  | Article No.                                                                                                    |                                                                                                                                                                                                                                                       | Article No.                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| <b>CPU 1516F-3 PN/DP</b><br>Fail-safe CPU, 1.5 MB RAM for program, 5 MB for data, PROFINET IO IRT interface, PROFINET/PROFIBUS interface; SIMATIC memory card required                                                                                                                                         | 6ES7516-3FN00-0AB0                                                                                             | <b>PROFIBUS FC Standard Cable GP</b><br>Standard type with special design for fast mounting, 2-core, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                              | 6XV1830-0EH10                                                  |
| <b>CPU 1518F-4 PN/DP</b><br>Fail-safe CPU, 4.5 MB RAM for program, 10 MB for data, PROFINET IO IRT interface, 2 PROFINET interfaces, PROFIBUS interface; SIMATIC Memory Card required                                                                                                                          | 6ES7518-4FP00-0AB0                                                                                             | <b>PROFIBUS FC Robust Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                        | 6XV1830-0JH10                                                  |
| <b>Accessories</b>                                                                                                                                                                                                                                                                                             |                                                                                                                | <b>PROFIBUS FC Flexible Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                      | 6XV1831-2K                                                     |
| <b>SIMATIC memory card</b><br>4 MB<br>12 MB<br>24 MB<br>2 GB                                                                                                                                                                                                                                                   | 6ES7954-8LC02-0AA0<br>6ES7954-8LE02-0AA0<br>6ES7954-8LF02-0AA0<br>6ES7954-8LP01-0AA0                           | <b>PROFIBUS FC Trailing Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                      |                                                                |
| <b>SIMATIC S7-1500 mounting rail</b><br>Fixed lengths, with grounding elements<br>• 160 mm<br>• 482 mm<br>• 530 mm<br>• 830 mm<br><br>For cutting to length by customer, without drill holes; grounding elements must be ordered separately<br>• 2000 mm                                                       | 6ES7590-1AB60-0AA0<br>6ES7590-1AE80-0AA0<br>6ES7590-1AF30-0AA0<br>6ES7590-1AJ30-0AA0<br><br>6ES7590-1BC00-0AA0 | Sheath color: Petrol<br>Sheath color: Violet<br><b>PROFIBUS FC Food Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                          | 6XV1830-3EH10<br>6XV1831-2L<br>6XV1830-0GH10                   |
| <b>PE connection element for mounting rail 2000 mm</b><br>20 units                                                                                                                                                                                                                                             | 6ES7590-5AA00-0AA0                                                                                             | <b>PROFIBUS FC Ground Cable</b><br>2-wire, shielded; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                                                                        | 6XV1830-3FH10                                                  |
| <b>Power supply</b><br>For supplying the backplane bus of the S7-1500<br><br>24 V DC input voltage, power 25 W<br>24/48/60 V DC input voltage, power 60 W<br>120/230 V AC input voltage, power 60 W                                                                                                            | 6ES7505-0KA00-0AB0<br>6ES7505-0RA00-0AB0<br>6ES7507-0RA00-0AB0                                                 | <b>PROFIBUS FC FRNC Cable GP</b><br>2-wire, shielded, flame-retardant, with copolymer outer sheath FRNC; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m                                                                    | 6XV1830-0LH10                                                  |
| <b>Power connector</b><br>With coding element for power supply module; spare part, 10 units                                                                                                                                                                                                                    | 6ES7590-8AA00-0AA0                                                                                             | <b>PROFIBUS FastConnect Stripping Tool</b><br>Preadjusted stripping tool for fast stripping of PROFIBUS FastConnect bus cables                                                                                                                        | 6GK1905-6AA00                                                  |
| <b>Load power supply</b><br>24 V DC/3A<br>24 V DC/8A                                                                                                                                                                                                                                                           | 6EP1332-4BA00<br>6EP1333-4BA00                                                                                 | <b>IE FC RJ45 plugs</b><br>RJ45 plug connector for Industrial Ethernet with a rugged metal enclosure and integrated insulation displacement contacts for connecting Industrial Ethernet FC installation cables                                        |                                                                |
| <b>Power supply connector</b><br>Spare part; for connecting the 24 V DC supply voltage<br>• with push-in terminals                                                                                                                                                                                             | 6ES7193-4JB00-0AA0                                                                                             | <b>IE FC RJ45 Plug 180</b><br>180° cable outlet<br>1 unit<br>10 units<br>50 units                                                                                                                                                                     | 6GK1901-1BB10-2AA0<br>6GK1901-1BB10-2AB0<br>6GK1901-1BB10-2AE0 |
| <b>PROFIBUS FastConnect bus connector RS485 with 90° cable outlet</b><br><br>with insulation displacement, max. transmission rate 12 Mbit/s<br><br>without PG interface, grounding via control cabinet contact surface; 1 unit<br><br>with PG interface, grounding via control cabinet contact surface; 1 unit | 6ES7972-0BA70-0XA0<br><br>6ES7972-0BB70-0XA0                                                                   | <b>IE FC TP Standard Cable GP 2x2</b><br>4-core, shielded TP installation cable for connection to IE FC Outlet RJ45/ IE FC RJ45 Plug; PROFINET-compliant; with UL approval; sold by the meter; max. delivery unit 1000 m, minimum order quantity 20 m | 6XV1840-2AH10                                                  |

# SIMATIC ET 200 distributed I/O

## ET 200MP

### Interface modules IM 155-5 PN

#### Technical specifications (continued)

|                                                       | 6ES7155-5AA00-0AB0<br>IM 155-5 PN ST | 6ES7155-5AA00-0AC0<br>IM 155-5 PN HF |
|-------------------------------------------------------|--------------------------------------|--------------------------------------|
| shortest clock pulse                                  | 250 µs                               | 250 µs                               |
| max. cycle                                            | 4 ms                                 | 4 ms                                 |
| <b>Interrupts/diagnostics/<br/>status information</b> |                                      |                                      |
| Status indicator                                      | Yes                                  | Yes                                  |
| Alarms                                                |                                      |                                      |
| • Alarms                                              | Yes                                  | Yes                                  |
| Diagnostic messages                                   |                                      |                                      |
| • Diagnostic functions                                | Yes                                  | Yes                                  |

|                                 | 6ES7155-5AA00-0AB0<br>IM 155-5 PN ST | 6ES7155-5AA00-0AC0<br>IM 155-5 PN HF |
|---------------------------------|--------------------------------------|--------------------------------------|
| Diagnostics indication LED      |                                      |                                      |
| • RUN LED                       | Yes; Green LED                       | Yes; Green LED                       |
| • ERROR LED                     | Yes; Red LED                         | Yes; Red LED                         |
| • MAINT LED                     | Yes; yellow LED                      | Yes; yellow LED                      |
| • Connection display LINK TX/RX | Yes; yellow LED                      | Yes; yellow LED                      |
| <b>Isolation</b>                |                                      |                                      |
| Isolation checked with          | 707 V DC (type test)                 | 707 V DC (type test)                 |
| <b>Dimensions</b>               |                                      |                                      |
| Width                           | 35 mm                                | 35 mm                                |
| Height                          | 147 mm                               | 155 mm                               |
| Depth                           | 129 mm                               | 120 mm                               |
| <b>Weights</b>                  |                                      |                                      |
| Weight, approx.                 | 310 g                                | 350 g                                |

#### Ordering data

#### Article No.

##### IM 155-5 PN interface module

IP 20 degree of protection, module width 35 mm, installation on S7-1500 mounting rail

IM 155-5 PN ST, standard version

6ES7155-5AA00-0AB0

IM 155-5 PN HF, High Feature version with additional functions

6ES7155-5AA00-0AC0

##### Accessories

##### Front flap for IM 155-5 PN (spare part), 5 units

6ES7528-0AA70-7AA0

##### SIMATIC S7-1500 mounting rail

Fixed lengths, with grounding elements

- 160 mm
- 482 mm
- 530 mm
- 830 mm

6ES7590-1AB60-0AA0  
6ES7590-1AE80-0AA0  
6ES7590-1AF30-0AA0  
6ES7590-1AJ30-0AA0

For cutting to length by customer, without drill holes; grounding elements must be ordered separately

- 2000 mm

6ES7590-1BC00-0AA0

##### PE connection element for mounting rail 2000 mm

6ES7590-5AA00-0AA0

20 units

##### Power supply

For supplying the backplane bus of the S7-1500

24 V DC input voltage, power 25 W

6ES7505-0KA00-0AB0

24/48/60 V DC input voltage, power 60 W

6ES7505-0RA00-0AB0

120/230 V AC input voltage, power 60 W

6ES7507-0RA00-0AB0

##### Power connector

6ES7590-8AA00-0AA0

With coding element for power supply module; spare part, 10 units

##### Load power supply

24 V DC/3 A

6EP1332-4BA00

24 V DC/8 A

6EP1333-4BA00

##### Power supply connector

Spare part; for connecting the 24 V DC supply voltage

- with push-in terminals

6ES7193-4JB00-0AA0

#### Article No.

##### IE FC RJ45 plugs

RJ45 plug connector for Industrial Ethernet with a rugged metal enclosure and integrated insulation displacement contacts for connecting Industrial Ethernet FC installation cables

##### IE FC RJ45 plug 180

180° cable outlet

1 unit

6GK1901-1BB10-2AA0

10 units

6GK1901-1BB10-2AB0

50 units

6GK1901-1BB10-2AE0

##### IE FC TP Standard Cable GP 2x2

6XV1840-2AH10

4-core, shielded TP installation cable for connection to IE FC Outlet RJ45/ IE FC RJ45 Plug; PROFINET-compatible; with UL approval;

Sold by the meter, max. length 1000 m; minimum order 20 m

##### IE FC TP Trailing Cable 2 x 2 (Type C)

6XV1840-3AH10

4-core, shielded TP installation cable for connection to IE FC Outlet RJ45/ IE FC RJ45 Plug 180/90 for trailing cable use; PROFINET-compatible; with UL approval;

Sold by the meter, max. length 1000 m; minimum order 20 m

##### IE FC TP Marine Cable 2 x 2 (Type B)

6XV1840-4AH10

4-core, shielded TP installation cable for connection to IE FC Outlet RJ45/ IE FC RJ45 Plug 180/90 marine certified,

Sold by the meter, max. length 1000 m; minimum order 20 m

##### IE FC Stripping Tool

6GK1901-1GA00

Preadjusted stripping tool for fast stripping of Industrial Ethernet FC cables