

Distributed Controllers

based on ET 200Pro

Standard CPUs

IM 154-8 PN/DP CPU

Overview



- CPU with PLC functionality equivalent to S7-315-2 PN/DP provides distributed intelligence for preprocessing
- Interface module for exchanging pre-processed I/O data between the ET 200pro and a higher-level master/I/O controller via PROFIBUS DP/PROFINET IO
- PROFINET IO controller to operate distributed I/Os on PROFINET
- Component Based Automation (CBA) on PROFINET
- PROFINET proxy for intelligent devices on PROFIBUS DP in Component Based Automation (CBA)
- PROFINET interface with 3-port switch
- Isochronous mode on PROFIBUS or PROFINET
- Integrated web server with the option of creating user-defined web pages
- CPU with PLC functionality equivalent to S7-315-2 PN/DP provides distributed intelligence for preprocessing
- Fast, simple and end-to-end programming of a system with modular programs via STEP 7
- Fail-safe IM 154-8F PN/DP CPU PROFIsafe available

Note

SIMATIC Micro Memory Card required for operation of CPU.

Technical specifications

Article number	6ES7154-8AB01-0AB0 ET200PRO: IM 154-8 PN/DP CPU, 384KB
General information	
Engineering with	
• Programming package	STEP 7 V5.5 or higher
Supply voltage	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	8.5 W
Memory	
Work memory	
• integrated	384 kbyte
Load memory	
• Plug-in (MMC), max.	8 Mbyte
CPU processing times	
for bit operations, typ.	0.05 µs
for word operations, typ.	0.09 µs
for fixed point arithmetic, typ.	0.12 µs
for floating point arithmetic, typ.	0.45 µs
Counters, timers and their retentivity	
S7 counter	
• Number	256
IEC counter	
• present	Yes
S7 times	
• Number	256
IEC timer	
• present	Yes
Data areas and their retentivity	
Flag	
• Number, max.	2 048 byte
Address area	
I/O address area	
• Inputs	2 048 byte
• Outputs	2 048 byte
Process image	
• Inputs, adjustable	2 048 byte
• Outputs, adjustable	2 048 byte
Time of day	
Clock	
• Hardware clock (real-time)	Yes
Operating hours counter	
• Number	1
1. Interface	
Interface type	Integrated RS 485 interface
Physics	RS 485/connection: 2 x M12 b-coded
Functionality	
• MPI	Yes
• PROFIBUS DP master	Yes
• PROFIBUS DP slave	Yes
• Point-to-point connection	No
DP master	
• Number of DP slaves, max.	124

Technical specifications (continued)

Article number	6ES7154-8AB01-0AB0 ET200PRO: IM 154-8 PN/DP CPU, 384KB
2. Interface	
Interface type	PROFINET
Physics	Ethernet (2 x M12 d-coded; 1 x RJ45)
Interface types	
• Number of ports	3
Functionality	
• MPI	No
• PROFINET IO Controller	Yes; Also simultaneously with IO-Device functionality
• PROFINET IO Device	Yes; Also simultaneously with IO Controller functionality
• PROFINET CBA	Yes
• PROFIBUS DP master	No
• PROFIBUS DP slave	No
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes; Via PROFIBUS DP or PROFINET interface
Communication functions	
PG/OP communication	Yes
Global data communication	
• supported	Yes
S7 basic communication	
• supported	Yes
S7 communication	
• supported	Yes
Open IE communication	
• TCP/IP	Yes; via integrated PROFINET interface and loadable FBs
- Number of connections, max.	8
• ISO-on-TCP (RFC1006)	Yes
- Number of connections, max.	8
• UDP	Yes
- Number of connections, max.	8
Web server	
• supported	Yes
Configuration	
Programming	
Programming language	
- LAD	Yes
- FBD	Yes
- STL	Yes
- SCL	Yes
- CFC	Yes
- GRAPH	Yes
- HiGraph®	Yes
Know-how protection	
• User program protection/password protection	Yes
• Block encryption	Yes; With S7 block Privacy
Dimensions	
Width	135 mm
Height	130 mm
Depth	65 mm; 60 mm without cover for RJ45 socket; 65 mm with cover for RJ45 socket
Weights	
Weight, approx.	720 g

Ordering data

Article No.

**IM 154-8 PN/DP CPU interface
module, V3.2**

PROFINET IO controller for
operating distributed I/Os on
PROFINET, with integrated
PLC functionality.

6ES7154-8AB01-0AB0

Accessories**MMC 64 KB ¹⁾**

For program backup.

6ES7953-8LF31-0AA0

MMC 128 KB ¹⁾

For program backup.

6ES7953-8LG31-0AA0

MMC 512 KB ¹⁾

For program backup.

6ES7953-8LJ31-0AA0

MMC 2 MB ¹⁾

For program backup and/or
firmware updates.

6ES7953-8LL31-0AA0

MMC 4 MB ¹⁾

For program backup.

6ES7953-8LM31-0AA0

MMC 8 MB ¹⁾

For program backup.

6ES7953-8LP31-0AA0

Connection module

For CPU IM154-8 PN/DP,
with 4 x M12 and 2 x 7/8",
for connecting PROFINET and
PROFIBUS DP.

6ES7194-4AN00-0AA0

**SCALANCE X-200
Industrial Ethernet switches**

With integral SNMP access,
web diagnostics, copper cable
diagnostics and PROFINET
diagnostics, for setting up linear,
star and ring structures
SCALANCE X208PRO,
in degree of protection IP65,
with eight 10/100 Mbit/s M12 ports,
incl. eleven M12 dust caps.

6GK5208-0HA10-2AA6

**Industrial Ethernet
FC RJ45 Plug 180**

RJ45 plug connector for Industrial
Ethernet with a rugged metal
enclosure and integrated insulation
displacement contacts for
connecting Industrial Ethernet
FC installation cables;
with 180° cable outlet

- 1 unit
- 10 units
- 50 units

6GK1901-1BB10-2AA0
6GK1901-1BB10-2AB0
6GK1901-1BB10-2AE0

**Industrial Ethernet Fast Connect
installation cables**

- FastConnect Standard Cable
- FastConnect Trailing Cable
- FastConnect Marine Cable

6XV1840-2AH10
6XV1840-3AH10
6XV1840-4AH10

**Industrial Ethernet FastConnect
installation cables**

- **IE FC TP Trailing Cable GP 2 x 2;**
sold by the meter,
max. delivery unit 1 000 m;
minimum order quantity 20 m.
- **IE TP Torsion Cable GP 2 x 2;**
sold by the meter,
max. delivery unit 1 000 m;
minimum order quantity 20 m.

6XV1870-2D

6XV1870-2F

Industrial Ethernet Fast Connect

Stripping Tool

6GK1901-1GA00

¹⁾ An MMC is essential for operating the CPU