

SIMATIC ET 200AL, PROFINET interface module IM 157-1 PN,  
Degree of protection IP67



| General information   |                          |
|---|--------------------------|
| Product type designation  | IM 157-1 PN              |
| HW functional status  | E01                      |
| Firmware version  | V1.0.x                   |
| Vendor identification (VendorID)  | 002AH                    |
| Product function  |                          |
| <ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>  | Yes; I&M0 to I&M4        |
| Engineering with  |                          |
| <ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul> | STEP 7 V13 SP1 or higher |
| <ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>            | From V5.5 SP4 Hotfix 3   |
| <ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>                 | GSDML V2.3.1             |
| Configuration control   |                          |
| via dataset   | Yes                      |
| Supply voltage  |                          |
| Load voltage 1L+  |                          |
| <ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>  | 24 V                     |
| <ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>                     | 20.4 V                   |

- permissible range, upper limit (DC) 28.8 V
- Reverse polarity protection Yes; against destruction

### Input current

|  |                    |
|--|--------------------|
| Current consumption (rated value)          | 100 mA             |
| from load voltage 1L+ (unswitched voltage) | 4 A; Maximum value |
| from load voltage 2L+, max.                | 4 A; Maximum value |

### Power loss

|                  |       |
|------------------|-------|
| Power loss, typ. | 2.9 W |
|------------------|-------|

### Address area

|                                   |            |
|-----------------------------------|------------|
| Address space per station         |            |
| • Address space per station, max. | 1 430 byte |

### Interfaces

|                               |   |
|-------------------------------|---|
| Number of PROFINET interfaces | 1 |
|-------------------------------|---|

#### 1. Interface

|                         |                     |
|-------------------------|---------------------|
| Interface type          | PROFINET            |
| Interface types         |                     |
| • integrated switch     | Yes                 |
| • M12 port              | Yes; 2x M12 D-coded |
| Protocols               |                     |
| • PROFINET IO Device    | Yes                 |
| • Open IE communication | Yes                 |

#### Interface types

|                          |  |
|--------------------------|--|
| M12 port                 |  |
| • Transmission procedure | PROFINET with 100 Mbit/s full duplex (100BASE-TX)      |
| • 10 Mbps                | Yes; for Ethernet services                             |
| • 100 Mbps               | Yes; PROFINET with 100 Mbit/s full duplex (100BASE-TX) |
| • Autonegotiation        | Yes  |
| • Autocrossing           | Yes  |

#### Protocols

|   |  |
|---|--|
| PROFINET IO Device                                  |  |
| Services  |  |
| — IRT   | Yes; 250 $\mu$ s, 500 $\mu$ s, 1 ms, 2 ms, 4 ms, 8 ms, 16 ms, 32 ms, 64 ms, 128 ms |
| — PROFIenergy                                       | Yes  |
| — Shared device                                     | Yes  |
| — Number of IO Controllers with shared device, max. | 4  |

#### Redundancy mode

|                  |     |
|------------------|-----|
| Media redundancy |     |
| — MRP            | Yes |

|  |                      |
|--|----------------------|
| — MRPD   | Yes                  |
| <b>Open IE communication</b>   |                      |
| • TCP/IP   | Yes                  |
| • SNMP   | Yes                  |
| • LLDP   | Yes                  |
| <b>Interrupts/diagnostics/status information</b>                                       |                      |
| Diagnostics function   | Yes                  |
| <b>Alarms</b>  |                      |
| • Diagnostic alarm   | Yes                  |
| <b>Diagnostics indication LED</b>  |                      |
| • RUN LED  | Yes; green LED       |
| • ERROR LED  | Yes; red LED         |
| • MAINT LED  | Yes; Yellow LED      |
| • Connection display LINK TX/RX  | Yes; 2x green LED    |
| <b>Potential separation</b>  |                      |
| between the load voltages  | Yes                  |
| between PROFINET and all other circuits  | Yes                  |
| <b>Isolation</b>   |                      |
| Isolation tested with  | 707 V DC (type test) |
| <b>Degree and class of protection</b>  |                      |
| IP degree of protection  | IP65/67              |
| <b>Standards, approvals, certificates</b>  |                      |
| Suitable for safety-related tripping of standard modules                               | Yes; From FS01       |
| <b>Highest safety class achievable for safety-related tripping of standard modules</b> |                      |
| • Performance level according to ISO 13849-1   | PL d                 |
| • Category according to ISO 13849-1  | Cat. 3               |
| • SILCL according to IEC 62061   | SILCL 2              |
| <b>Ambient conditions</b>  |                      |
| <b>Ambient temperature during operation</b>  |                      |
| • min.   | -25 °C               |
| • max.   | 55 °C                |
| <b>Connection method</b>   |                      |
| Design of electrical connection for supply voltage                                     | M8, 4-pole           |
| <b>ET-Connection</b>   |                      |
| • ET-Connection  | M8, 4-pin, shielded  |
| <b>Dimensions</b>  |                      |
| Width  | 45 mm                |
| Height   | 159 mm               |

|                       |            |
|-----------------------|------------|
| Depth                 | 40 mm      |
| <b>Weights</b>        |            |
| Weight, approx.       | 263 g      |
| <b>last modified:</b> | 05/13/2020 |