



SIMATIC ET 200AL, PROFIBUS interface module IM 157-1 DP, Degree of protection IP67

| General information                                      |                          |
|----------------------------------------------------------|--------------------------|
| Product type designation                                 | IM 157-1 DP              |
| HW functional status                                     | FS02                     |
| Firmware version                                         | V1.0.x                   |
| Vendor identification (VendorID)                         | 81A9H                    |
| Product function                                         |                          |
| • I&M data                                               | Yes; I&M0 to I&M3        |
| Engineering with                                         |                          |
| • STEP 7 TIA Portal configurable/integrated from version | STEP 7 V13 SP1 or higher |
| • STEP 7 configurable/integrated from version            | From V5.5 SP4 Hotfix 3   |
| • PROFIBUS from GSD version/GSD revision                 | GSD as of Revision 5     |
| Configuration control                                    |                          |
| via dataset                                              | Yes                      |
| Supply voltage                                           |                          |
| power supply according to NEC Class 2 required           | No                       |
| Load voltage 1L+                                         |                          |
| • Rated value (DC)                                       | 24 V                     |
| • permissible range, lower limit (DC)                    | 20.4 V                   |
| • permissible range, upper limit (DC)                    | 28.8 V                   |
| • Reverse polarity protection                            | Yes; against destruction |
| Input current                                            |                          |
| Current consumption (rated value)                        | 50 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.                                         | 1.7 W                    |
| Address area                                             |                          |
| Address space per station                                |                          |
| • Address space per station, max.                        | 244 byte                 |
| Interfaces                                               |                          |
| Number of PROFIBUS interfaces                            | 1                        |
| 1. Interface                                             |                          |
| Interface type                                           | PROFIBUS DP              |
| Interface types                                          |                          |
| • RS 485                                                 | Yes                      |
| • M12 port                                               | Yes; 2x M12 B-coded      |
| Protocols                                                |                          |
| • PROFIBUS DP device                                     | Yes                      |
| Interface types                                          |                          |
| RS 485                                                   |                          |

|                                                                                 |                                                                                                                                       |         |                |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|
| • Transmission rate, max.                                                       | 12 Mbit/s                                                                                                                             |         |                |
| Protocols                                                                       |                                                                                                                                       |         |                |
| Supports protocol for PROFINET IO                                               | No                                                                                                                                    |         |                |
| PROFIsafe                                                                       | No                                                                                                                                    |         |                |
| PROFIBUS                                                                        | Yes                                                                                                                                   |         |                |
| EtherNet/IP                                                                     | No                                                                                                                                    |         |                |
| PROFIBUS DP                                                                     |                                                                                                                                       |         |                |
| Services                                                                        |                                                                                                                                       |         |                |
| — SYNC capability                                                               | Yes                                                                                                                                   |         |                |
| — FREEZE capability                                                             | Yes                                                                                                                                   |         |                |
| — Direct data exchange (slave-to-slave communication)                           | Yes                                                                                                                                   |         |                |
| — DPV0                                                                          | Yes                                                                                                                                   |         |                |
| — DPV1                                                                          | Yes                                                                                                                                   |         |                |
| Interrupts/diagnostics/status information                                       |                                                                                                                                       |         |                |
| Diagnostics function                                                            | Yes                                                                                                                                   |         |                |
| Alarms                                                                          |                                                                                                                                       |         |                |
| • Diagnostic alarm                                                              | Yes                                                                                                                                   |         |                |
| Diagnostics indication LED                                                      |                                                                                                                                       |         |                |
| • RUN LED                                                                       | Yes; green LED                                                                                                                        |         |                |
| • ERROR LED                                                                     | Yes; red LED                                                                                                                          |         |                |
| • MAINT LED                                                                     | Yes; Yellow LED                                                                                                                       |         |                |
| • Connection display DP                                                         | Yes; green LED                                                                                                                        |         |                |
| Potential separation                                                            |                                                                                                                                       |         |                |
| between the load voltages                                                       | Yes                                                                                                                                   |         |                |
| between PROFIBUS DP and all other circuit components                            | Yes                                                                                                                                   |         |                |
| Isolation                                                                       |                                                                                                                                       |         |                |
| Isolation tested with                                                           | 707 V DC (type test)                                                                                                                  |         |                |
| Degree and class of protection                                                  |                                                                                                                                       |         |                |
| IP degree of protection                                                         | IP65/67                                                                                                                               |         |                |
| Standards, approvals, certificates                                              |                                                                                                                                       |         |                |
| Suitable for safety-related tripping of standard modules                        | Yes; From FS01                                                                                                                        |         |                |
| Highest safety class achievable for safety-related tripping of standard modules |                                                                                                                                       |         |                |
| • Performance level according to ISO 13849-1                                    | PL d                                                                                                                                  |         |                |
| • Category according to ISO 13849-1                                             | Cat. 3                                                                                                                                |         |                |
| • SIL acc. to IEC 62061                                                         | SIL 2                                                                                                                                 |         |                |
| • remark on safety-oriented shutdown                                            | <a href="https://support.industry.siemens.com/cs/de/en/view/39198632">https://support.industry.siemens.com/cs/de/en/view/39198632</a> |         |                |
| Ambient conditions                                                              |                                                                                                                                       |         |                |
| Ambient temperature during operation                                            |                                                                                                                                       |         |                |
| • min.                                                                          | -30 °C                                                                                                                                |         |                |
| • max.                                                                          | 55 °C                                                                                                                                 |         |                |
| connection method                                                               |                                                                                                                                       |         |                |
| Design of electrical connection for supply voltage                              | M8, 4-pole                                                                                                                            |         |                |
| ET-Connection                                                                   |                                                                                                                                       |         |                |
| • ET-Connection                                                                 | M8, 4-pin, shielded                                                                                                                   |         |                |
| Dimensions                                                                      |                                                                                                                                       |         |                |
| Width                                                                           | 45 mm                                                                                                                                 |         |                |
| Height                                                                          | 159 mm                                                                                                                                |         |                |
| Depth                                                                           | 46 mm                                                                                                                                 |         |                |
| Weights                                                                         |                                                                                                                                       |         |                |
| Weight, approx.                                                                 | 211 g                                                                                                                                 |         |                |
| Classifications                                                                 |                                                                                                                                       |         |                |
|                                                                                 |                                                                                                                                       | Version | Classification |
|                                                                                 | eClass                                                                                                                                | 14      | 27-24-26-08    |
|                                                                                 | eClass                                                                                                                                | 12      | 27-24-26-08    |
|                                                                                 | eClass                                                                                                                                | 9.1     | 27-24-26-08    |
|                                                                                 | eClass                                                                                                                                | 9       | 27-24-26-08    |
|                                                                                 | eClass                                                                                                                                | 8       | 27-24-26-08    |
|                                                                                 | eClass                                                                                                                                | 7.1     | 27-24-26-08    |

|        |    |             |
|--------|----|-------------|
| eClass | 6  | 27-24-26-08 |
| ETIM   | 9  | EC001604    |
| ETIM   | 8  | EC001604    |
| ETIM   | 7  | EC001604    |
| IDEA   | 4  | 3564        |
| UNSPSC | 15 | 32-15-17-05 |

Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)

  
EG-Konf.



[KC](#)

  
UL

  
RCM

EMV      Marine / Shipping

[KC](#)

  
ABS

  
BUREAU  
VERITAS

  
DNV

  
LRS

[NK / Nippon Kaiji Kyokai](#)

Marine / Shipping      other      Industrial Communication

  
RINA

[CCS \(China Classification Society\)](#)

  
KR  
KOREAN REGISTER

  
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