SIEMENS

## Data sheet 6ES7144-4GF01-0AB0



SIMATIC DP, Electronic module for ET 200 PRO 4 AI I High Feature, +-20 mA; 0...20 mA; 4-20mA; Channel diagnostics; incl. bus module, Connection module IO 6ES7194-4..00-0AA0 order separately

| | |
|---|---|
| **Supply voltage** | |
| Rated value (DC) | 24 V |
| Reverse polarity protection | Yes; against destruction |
| **Input current** | |
| from supply voltage 1L+, max. | 40 mA; Typical |
| from backplane bus 3.3 V DC, max. | 12 mA; Typical |
| **Encoder supply** | |
| Number of outputs | 4 |
| Short-circuit protection | Yes; per module, electronic to frame |
| Output current | |
| ● up to 55 °C, max. | 1 A |
| **Power loss** | |
| Power loss, typ. | 1.1 W |
| **Address area** | |
| Address space per module | |
| ● Address space per module, max. | 8 byte |
| **Analog inputs** | |
| Number of analog inputs | 4 |
| permissible input current for current input (destruction limit), max. | 40 mA |
| Cycle time (all channels) max. | 10 ms |
| Input ranges (rated values), currents | |
| ● 0 to 20 mA | Yes |
| — Input resistance (0 to 20 mA) | 50 Ω |
| ● -20 mA to +20 mA | Yes |
| — Input resistance (-20 mA to +20 mA) | 50 Ω |
| ● 4 mA to 20 mA | Yes |
| — Input resistance (4 mA to 20 mA) | 50 Ω |
| Cable length | |
| ● shielded, max. | 30 m |
| **Analog value generation for the inputs** | |
| Measurement principle | integrating |
| Integration and conversion time/resolution per channel | |
| ● Resolution with overrange (bit including sign), max. | 15 bit; 15 bit + sign at ±10 V, at ±5 V; 15 bit at 0 V to 10 V, at 1 V to 5 V |
| ● Interference voltage suppression for interference frequency f1 in Hz | 16,67 / 50 / 60 / 3 600 |
| Smoothing of measured values | |
| ● Parameterizable | Yes |
| ● Step: None | Yes; 1x cycle time |


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| | |
|---|---|
| ● Step: low | Yes; 4x cycle time |
| ● Step: Medium | Yes; 16x cycle time |
| ● Step: High | Yes; 64x cycle time |
| **Encoder** | |
| Connection of signal encoders | |
| ● for current measurement as 2-wire transducer | Yes |
| ● for current measurement as 4-wire transducer | Yes |
| **Errors/accuracies** | |
| Linearity error (relative to input range), (+/-) | 0.0075 % |
| Temperature error (relative to input range), (+/-) | 0.00075 %/K |
| Crosstalk between the inputs, min. | -70 dB |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-) | 0.004 % |
| Operational error limit in overall temperature range | |
| ● Current, relative to input range, (+/-) | 0.1 % |
| Basic error limit (operational limit at 25 °C) | |
| ● Current, relative to input range, (+/-) | 0.075 % |
| Interference voltage suppression for f = n x (f1 +/- 0.5 %), f1 = interference frequency | |
| ● Series mode interference (peak value of interference < rated value of input range), min. | 60 dB |
| ● Common mode interference (USS < 2.5 V), min. | 80 dB; Interference voltage < 5 V |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes |
| Alarms | |
| ● Diagnostic alarm | Yes; Parameterizable |
| ● Hardware interrupt | Yes; (limit value alarm), can be parameterized for channel 0 |
| Diagnoses | |
| ● Diagnostic information readable | Yes |
| ● Wire break | Yes; at 4 to 20 mA |
| ● short-circuit | Yes; at 4 to 20 mA |
| Diagnostics indication LED | |
| ● Group error SF (red) | Yes |
| **Potential separation** | |
| Potential separation analog inputs | |
| ● between the channels | No |
| ● between the channels and backplane bus | Yes |
| **Permissible potential difference** | |
| Between the inputs and MANA (UCM) | 5 Vpp AC |
| **Isolation** | |
| Isolation tested with | 707 V DC (type test) |
| **Dimensions** | |
| Width | 45 mm |
| Height | 130 mm |
| Depth | 35 mm |
| **Weights** | |
| Weight, approx. | 150 g |
| **Classifications** | |

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-24-26-01 |
| eClass | 14 | 27-24-26-01 |
| eClass | 12 | 27-24-26-01 |
| eClass | 9.1 | 27-24-26-01 |
| eClass | 9 | 27-24-26-01 |
| eClass | 8 | 27-24-26-01 |
| eClass | 7.1 | 27-24-26-01 |
| eClass | 6 | 27-24-26-01 |
| ETIM | 10 | EC001596 |


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| | | |
|---|---|---|
| ETIM | 9 | EC001596 |
| ETIM | 8 | EC001596 |
| ETIM | 7 | EC001596 |
| IDEA | 4 | 3562 |
| UNSPSC | 15 | 32-15-17-05 |

## Approvals / Certificates

### General Product Approval

| | | | | | |
|---|---|---|---|---|---|
| CCC | Miscellaneous | EAC | CE EG-Konf. | UKCA | Confirmation |

| Maritime application | other | | Railway | Environment | |
|---|---|---|---|---|---|
| CCS (China Classification Society) | 产品合格 QC PASS | Confirmation | Confirmation | Environmental Confirmations | EPD |

### Environment

Environmental Confirmations

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