SIEMENS

## Data sheet 6ES7332-5TB10-0AB0



Figure similar

********** spare part ********* SIMATIC DP, HART analog output, SM 332, 2 AO, 0/4 - 20 mA HART from HART revision 5.0, for ET200M with IM 153-2, 1 x 20-pole

| | |
|---|---|
| **Supply voltage** | |
| Load voltage L+ | |
| ● Rated value (DC) | 24 V |
| ● Reverse polarity protection | Yes |
| **Input current** | |
| from load voltage L+ (without load), max. | 150 mA |
| from backplane bus 5 V DC, max. | 100 mA |
| **Power loss** | |
| Power loss, typ. | 3.5 W |
| **Analog outputs** | |
| Number of analog outputs | 2 |
| Current output, no-load voltage, max. | 19 V |
| Cycle time (all channels) max. | 5 ms |
| Output ranges, current | |
| ● 0 to 20 mA | Yes |
| ● -20 mA to +20 mA | No |
| ● 4 mA to 20 mA | Yes |
| Connection of actuators | |
| ● for current output two-wire connection | Yes |
| Load impedance (in rated range of output) | |
| ● with current outputs, max. | 650 Ω |
| ● with current outputs, inductive load, max. | 7.5 mH |
| Destruction limits against externally applied voltages and currents | |
| ● Voltages at the outputs towards MANA | max. 17 V / -0.5 V |
| ● Current, max. | 60 mA / -1 A |
| Cable length | |
| ● shielded, max. | 400 m |
| **Analog value generation for the outputs** | |
| Integration and conversion time/resolution per channel | |
| ● Resolution with overrange (bit including sign), max. | 12 bit; + sign |
| ● Conversion time (per channel) | 40 ms |
| Settling time | |
| ● for resistive load | 2.5 ms |
| ● for capacitive load | 4 ms |
| ● for inductive load | 2.5 ms |
| **Errors/accuracies** | |
| Operational error limit in overall temperature range | |
| ● Current, relative to output range, (+/-) | 0.55 % |


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| | |
|---|---|
| Basic error limit (operational limit at 25 °C) | |
| ● Current, relative to output range, (+/-) | 0.15 % |
| **Interrupts/diagnostics/status information** | |
| Diagnostics function | Yes; Parameterizable |
| Substitute values connectable | Yes; Parameterizable |
| Alarms | |
| ● Diagnostic alarm | Yes; Parameterizable |
| Diagnoses | |
| ● Overrange | Yes |
| ● Wire break | Yes; as of output value > 0.5 mA |
| ● HART communication active | Yes; green LED (H) |
| Diagnostics indication LED | |
| ● Group error SF (red) | Yes; red LED |
| ● Channel fault indicator F (red) | Yes; per channel |
| **Ex(i) characteristics** | |
| Module for Ex(i) protection | Yes |
| maximum values for connecting terminals for gas group IIC | |
| ● Uo (no-load voltage), max. | 19 V |
| ● Io (short-circuit current), max. | 66 mA |
| ● Po (power output), max. | 506 mW |
| ● Co (permissible external capacity), max. | 230 nF |
| ● Lo (permissible external inductivity), max. | 7.5 mH |
| ● Um (voltage at non-intrinsically safe connecting terminals), max. | 60 V; DC |
| **Potential separation** | |
| Potential separation analog outputs | |
| ● between the channels | Yes |
| ● between the channels and backplane bus | Yes |
| ● Between the channels and load voltage L+ | Yes |
| **Permissible potential difference** | |
| between the outputs (UCM) | 60 V DC/30 V AC permitted potential difference (Viso) of signals from hazardous areas |
| **Degree and class of protection** | |
| IP degree of protection | IP20 |
| **Standards, approvals, certificates** | |
| Use in hazardous areas | |
| ● ATEX marking | ATEX II 3 G (2) GD Ex nA [ib Gb] [ib IIIC Db] IIC T4 Gc |
| ● ATEX certificate | DEKRA 14 ATEX 0053X |
| ● FM marking | Class I, Division 2, Group A, B, C, D T4; Class I, Zone 2, Group IIC T4 |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● max. | 60 °C |
| **Connection method** | |
| required front connector | 20-pin |
| **Dimensions** | |
| Width | 40 mm |
| Height | 125 mm |
| Depth | 120 mm |
| **Weights** | |
| Weight, approx. | 290 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 |


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| | | |
|---|---|---|
| eClass | 7.1 | 27-24-26-01 |
| eClass | 6 | 27-24-26-01 |
| ETIM | 10 | EC001596 |
| ETIM | 9 | EC001596 |
| ETIM | 8 | EC001596 |
| ETIM | 7 | EC001596 |
| IDEA | 4 | 3562 |
| UNSPSC | 15 | 32-15-17-05 |

## Approvals / Certificates

### General Product Approval

Miscellaneous

### General Product Approval

China RoHS

Manufacturer Declaration

Miscellaneous

### For use in hazardous locations

FM

### For use in hazardous locations

CCC-Ex

### Maritime application

NK / Nippon Kaiji Kyokai

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