

MANUFACTURER DOCUMENT PACKAGE

# Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS SIMATIC S7

## 6ES7134-7TD00-0AB0

FOUR-CHANNEL HART INPUT MODULE

Used with the applicable SIMATIC ET 200iSP configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official product documentation



Figure similar

SIMATIC DP, electronic module for ET200iSP, 4 AI HART, 2DMU, for connecting HART 2-wire transmitters, supported HART protocol Version 6.0, Ex ib (ia Ga) IIC T4 Gb, Ex ib [ia IIIC Da] IIC T4 Gb, Ex ib [ia] I Mb

| General information                                                    |                                                                                                      |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| Product type designation                                               | 4AI I 2WIRE HART                                                                                     |
| Input current                                                          |                                                                                                      |
| Current consumption, typ.                                              | 280 mA                                                                                               |
| from supply voltage L+, max.                                           | 320 mA                                                                                               |
| output voltage / header                                                |                                                                                                      |
| supply voltage of the transmitters / header                            |                                                                                                      |
| • short-circuit proof                                                  | Yes                                                                                                  |
| • Supply current, max.                                                 | 23 mA; per channel                                                                                   |
| Power loss                                                             |                                                                                                      |
| Power loss, typ.                                                       | 2.7 W                                                                                                |
| Analog inputs                                                          |                                                                                                      |
| Number of analog inputs                                                | 4                                                                                                    |
| permissible input current for current input (destruction limit), max.  | 90 mA                                                                                                |
| Cycle time (all channels) max.                                         | 120 ms; 30 ms basic conversion time x4 channels with 60 Hz, 50 Hz interference frequency suppression |
| Technical unit for temperature measurement adjustable                  | Yes                                                                                                  |
| Input ranges (rated values), currents                                  |                                                                                                      |
| • 4 mA to 20 mA                                                        | Yes                                                                                                  |
| Cable length                                                           |                                                                                                      |
| • shielded, max.                                                       | 500 m                                                                                                |
| Analog value generation for the inputs                                 |                                                                                                      |
| Measurement principle                                                  | integrating (Sigma-Delta)                                                                            |
| Integration and conversion time/resolution per channel                 |                                                                                                      |
| • Resolution with overrange (bit including sign), max.                 | 13 bit                                                                                               |
| • Integration time, parameterizable                                    | No                                                                                                   |
| • Interference voltage suppression for interference frequency f1 in Hz | 50 / 60 Hz                                                                                           |
| Smoothing of measured values                                           |                                                                                                      |
| • parameterizable                                                      | Yes; in 4 stages                                                                                     |
| • Step: None                                                           | Yes; 1x cycle time                                                                                   |
| • Step: low                                                            | Yes; 4x cycle time                                                                                   |
| • Step: Medium                                                         | Yes; 32x cycle time                                                                                  |
| • Step: High                                                           | Yes; 64x cycle time                                                                                  |
| Encoder                                                                |                                                                                                      |
| Connection of signal encoders                                          |                                                                                                      |
| • for current measurement as 2-wire transducer                         | Yes                                                                                                  |
| — Burden of 2-wire transmitter, max.                                   | 750 Ω                                                                                                |
| Errors/accuracies                                                      |                                                                                                      |

|                                                                                                     |                                                    |
|-----------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Linearity error (relative to input range), (+/-)                                                    | 0.015 %                                            |
| Temperature error (relative to input range), (+/-)                                                  | 0.005 %/K                                          |
| Crosstalk between the inputs, min.                                                                  | -50 dB                                             |
| Repeat accuracy in steady state at 25 °C (relative to input range), (+/-)                           | 0.01 %                                             |
| Operational error limit in overall temperature range                                                |                                                    |
| • Current, relative to input range, (+/-)                                                           | 0.15 %                                             |
| Basic error limit (operational limit at 25 °C)                                                      |                                                    |
| • Current, relative to input range, (+/-)                                                           | 0.1 %                                              |
| Interference voltage suppression for $f = n \times (f_1 \pm 1 \%)$ , $f_1$ = interference frequency |                                                    |
| • Series mode interference (peak value of interference < rated value of input range), min.          | 70 dB                                              |
| Interrupts/diagnostics/status information                                                           |                                                    |
| Alarms                                                                                              |                                                    |
| • Diagnostic alarm                                                                                  | Yes; Parameterizable                               |
| • Limit value alarm                                                                                 | Yes; Parameterizable                               |
| Diagnoses                                                                                           |                                                    |
| • Diagnostic information readable                                                                   | Yes                                                |
| • Wire-break                                                                                        | Yes                                                |
| • Short-circuit                                                                                     | Yes                                                |
| 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                                                |
| Standards, approvals, certificates                                                                  |                                                    |
| CE mark                                                                                             | Yes                                                |
| Highest safety class achievable in safety mode                                                      |                                                    |
| • Performance level according to ISO 13849-1                                                        | none                                               |
| • SIL acc. to IEC 61508                                                                             | No                                                 |
| Use in hazardous areas                                                                              |                                                    |
| • ATEX marking                                                                                      | II2 G (1) GD Ex ib[ia] IIC T4 and I M2 Ex ib[ia] I |
| • ATEX certificate                                                                                  | 04 ATEX 1244                                       |
| Dimensions                                                                                          |                                                    |
| Width                                                                                               | 30 mm                                              |
| Height                                                                                              | 129 mm                                             |
| Depth                                                                                               | 136.5 mm                                           |
| Weights                                                                                             |                                                    |
| Weight, approx.                                                                                     | 230 g                                              |

last modified: 9/6/2023 