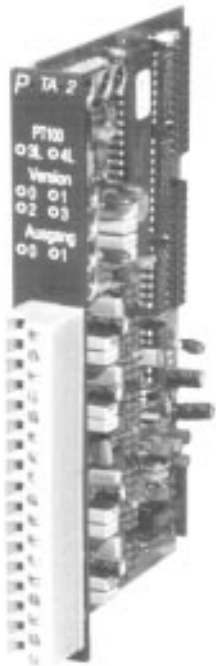


A4

ANALOG INPUT/OUTPUT MODULES, PTA2 - 2 INPUTS FOR PT100 SENSORS, 2 OUTPUTS

PLC SYSTEMS
MINICONTROL COMPONENTS



PTA2

- 2 Inputs for Direct Connection of PT100 Temperature Sensors
- Three Wire Connection
- 10 Bit Resolution
- Measurement Range -25 °C to +475 °C
- 2 Analog Outputs
- Output Voltage 0 to 10 V

TECHNICAL DATA

PTA2

| | |
|---------------------------------|------------------------------------|
| Number of Inputs | 2 |
| Temperature Sensor / Norm | PT100 / DIN 43760 |
| Connection Type | Three Wire Connection |
| Input Resolution | 10 Bit |
| Conversion Time per Channel | ca. 100 µsec |
| Input Precision | |
| Basic Precision at 20 °C | ±0.3 % + 110 ppm / R ¹⁾ |
| Offset Drift | ±0.039 % / °C |
| Gain Drift | ±170 ppm / °C |
| Number of Outputs | 2 |
| Output Signal | 0 to 10 V |
| Output Resolution | 8 Bit |
| Output Precision | |
| Offset at 20 °C | 0.2 % |
| Offset Drift (0 to 60 °C) | ±0.05 % |
| Gain Error at 20 °C | ±0.2 % |
| Gain Drift | ±0.012 % / °C |
| Linearity | 0.2 % |
| Maximum Output Load Per Channel | 20 mA |
| Documentation | Hardware Manual MINICONTROL |
| German | MAHWMINI-0 |
| English | MAHWMINI-E |
| French | MAHWMINI-F |

SLOTS

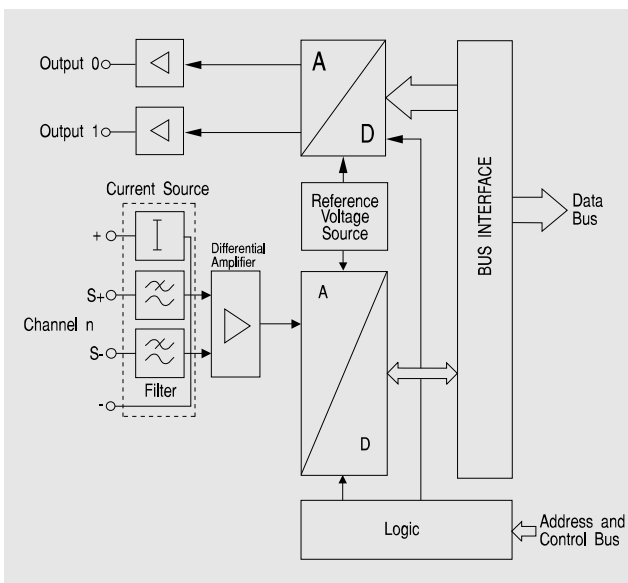
0 1 2 3 4 5

| | | |
|------|--------------------|-----|
| PTA2 | Base Unit C (CP32) | ● ● |
|------|--------------------|-----|

ORDER DATA

MCPTA2-21 Analog Input / Output Module, 2 inputs, for direct connection of PT100 temperature Sensors, 10 bit resolution, measurement range -25 to +475 °C, three wire connection, 2 analog outputs, output voltage 0 to 10 V, without galvanic isolation

DIAGRAM



CONNECTIONS



- + Positive Line Sensor 0
- S+ Sense Line (+) Sensor 0
- S- Sense Line (-) Sensor 0
- Negative Line Sensor 0
- + Positive Line Sensor 1
- S+ Sense Line (+) Sensor 1
- S- Sense Line (-) Sensor 1
- Negative Line Sensor 1
- Ground
- U Voltage Output A
- Ground
- U Voltage Output B
- Ground

SOFTWARE OPERATION

Software operation of the PT100 inputs is controlled with the standard function block TINE and the outputs are handled with the AOTE function block. Both of the function blocks are standard components of software package SWSPSTD01-0 (see section A7 "PLC Programming" as well).

The temperature in the defined unit (°C or °F) is augmented by a factor of 10 and stored as a 2's complement number. e.g.:

| Temperature | Result °C | Result °F |
|-----------------|-----------|-----------|
| -25 °C (-13 °F) | -250 | -130 |
| 0 °C (32 °F) | 0 | 320 |
| 100 °C (212 °F) | 1000 | 2120 |
| 475 °C (887 °F) | 4750 | 8870 |

¹⁾ R ... Line Resistance