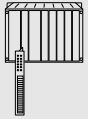


# ANALOG INPUT/OUTPUT MODULES, PT41 - 4 INPUTS FOR PT100 SENSORS

PLC SYSTEMS  
MINICONTROL COMPONENTS

# A4



## PT41

- 4 Inputs for Direct Connection of PT100 Temperature Sensors
- Three or Four Wire Connection
- 10 Bit Resolution

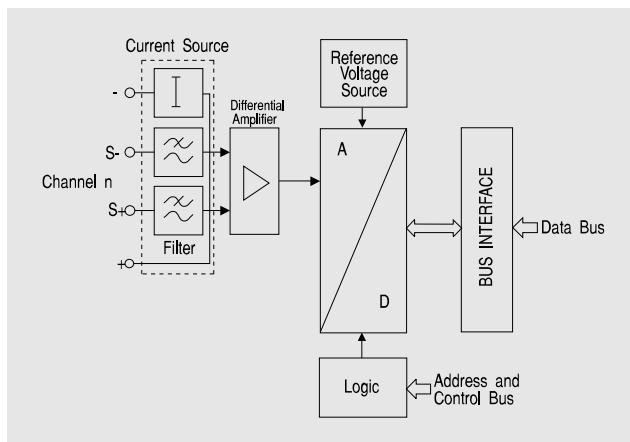
SLOTS		0	1	2	3	4	5
PT41	Base Unit C (CP32)			●	●		

### ORDER DATA

Analog Input Module for temperature measurement, 4 inputs for direct connection of PT100 temperature sensors, 10 bit resolution, without galvanic isolation

<b>MCPT41-0</b>	Measurement Range -25 to +225 °C, for Three Wire Connections
<b>MCPT41-1</b>	Measurement Range -25 to +225 °C, for Four Wire Connections

### DIAGRAM



### TECHNICAL DATA

	PT41-0	PT41-1
Number of Inputs	4	
Temperature Sensors / Norm	PT100 / DIN 43760	
Connection Type	Three Wire Connection	Four Wire Connection
Resolution per Inputs	10 Bit	
Conversion Time per Channel	ca. 100 µsec	
Input Precision		
Basic Precision at 20 °C	±0.3 % + 0.011 % / R <sup>1)</sup>	±0.3 % + 0.011 % / R <sup>1)</sup>
Offset Drift	±0.039 % / °C	±0.039 % / °C
Gain Drift	±0.017 % / °C	±0.017 % / °C
Documentation	Hardware Manual MINICONTROL	
German	MAHWMINI-0	
English	MAHWMINI-E	
French	MAHWMINI-F	

### CONNECTION

	-	Negative Line Sensor 0
	S-	Sense Line (-) Sensor 0
	S+	Sense Line (+) Sensor 0
	+	Positive Line Sensor 0
	-	Negative Line Sensor 1
	S-	Sense Line (-) Sensor 1
	S+	Sense Line (+) Sensor 1
	+	Positive Line Sensor 1
	-	Negative Line Sensor 2
	S-	Sense Line (-) Sensor 2
	S+	Sense Line (+) Sensor 2
	+	Positive Line Sensor 2
	-	Negative Line Sensor 3
	S-	Sense Line (-) Sensor 3
	S+	Sense Line (+) Sensor 3
	+	Positive Line Sensor 3
	▶	Ground

### SOFTWARE OPERATION

Analog input control is all handled through the TINA function block. This function block is a component of software package SWSPSSTD01-0 (see section A7 "PLC Programming" as well).

The parameters of the TINA function block are:

- Number of the first channel to be converted (0 to 3)
- Number of channels to be converted (1 to 4)
- Slot number of the PT41 module (0 or 1)
- Measurement range
- Desired units for the result (°C or °F)
- Target address for the converted values

The temperature in the defined units (°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
225 °C (437 °F)	2250	4370

<sup>1)</sup> R ... Line Resistance