SIEMENS

Product information for

LOGO! Manual

6ED1 050-1AA00-0BE4, Release 07/2001

In this product information...

...you will find supplementary information on analog LOGO! Expansion module AM2 PT100 (order no. 6ED1 055-1MD00-0BA0). Please refer to the LOGO! Manual for information not found in this product information.
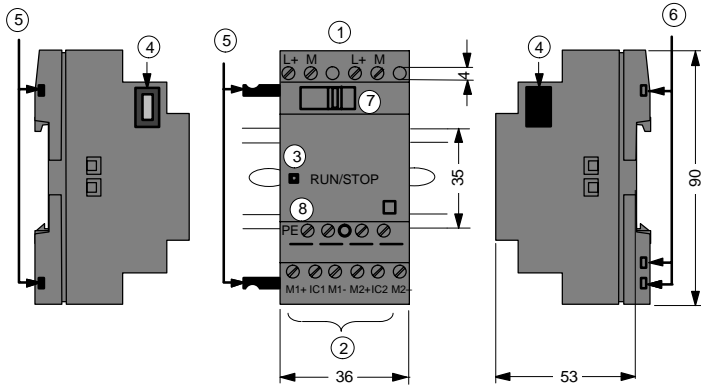
Short description of the expansion module AM2 PT100

The analog expansion module AM2 PT100 is equipped with two inputs, each one for connecting a Pt100 thermocouple.

The analog expansion module AM2 PT100 converts the resistive value of a connected Pt100 thermocouple to a temperature measurement range of −50 ˚C ... +200 ˚C with a resolution of 1000 measuring steps.

The analog expansion module AM2 PT100 is compatible with all LOGO! devices (as of ...–0BA3).

This is the structure of the expansion module AM2 PT100

①	Power supply	⑤	Mechanical encoding – Pins	⑧	PE terminal for ground and shielding termination of the analog measurement line.
②	Inputs	⑥	Mechanical encoding – Sockets		
③	Status display RUN/ STOP	⑦	Slides		
④	Expansion interface				

General technical data

Criteria	Values
Dimensions WxHxD	36 x 90 x 55 mm
Weight	approx. 90 g
Mounting	on 35 mm DIN rail2 unit widths or wall mounting
Further general technical data is found in the Logo! Manual	

Technical data of LOGO! AM2 PT100

	LOGO! AM2 PT100
Power supply	
Input voltage	12/24 VDC
Permitted range	10.8 ... 15.6 V DC 20.4 ... 28.8 V
Current consumption	25 ... 50 mA
Voltage loss buffering	typically 5 ms
Power loss at • 12 V • 24 V	 0.3 ... 0.6 W 0.6 ... 1.2 W
Electrical isolation	no
Reverse polarity protection	yes
PE terminal	Ground connection and measurement line shielding
Sensor inputs	
Number	2
Type	Thermocouple Pt100
Sensor connection • 2-wire technique • 2-wire technique	 yes yes
Measurement range	−50 ˚C ... +200 ˚C −58 ˚F ... +392 ˚F

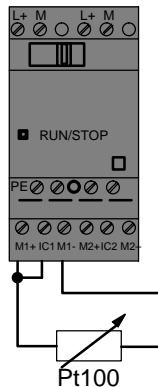|	LOGO! AM2 PT100
Setting of the measurement value display on the basic module: • 1 ˚ C steps • 0,25 ˚C steps (rounded to one decimal point) • 1 ˚ F steps • 0,25 ˚F steps (rounded to one decimal point)	Offset: –200, Gain: 25 Offset: –200, Gain: 250 Offset: –128, Gain: 45 Offset: –128, Gain: 450
Characteristic curve linearization	no
Measurement current Ic	1.1 mA
Measuring rate	depends on the assembly typically 50 ms
Resolution	0.25 ˚C
Error limits • 0 ˚C ... +200 ˚C • –50 ˚C ... +200 ˚C	of the measurement limit value: +/–1.0 % +/–1.5 %
Electrical isolation	no
Cable length (shielded)	10 m
Interference suppression	55 Hz

Options of connecting a Pt100 thermocouple

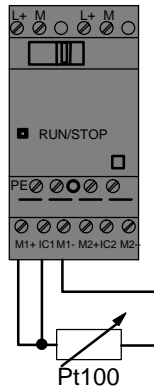You can connect a Pt100 thermocouple to the module in 2- or 3-wire technique.

When you select the **2-wire technique**, you must jumper terminals M1+ and IC1 or M2+ and IC2. Measurement errors due to measurement cable resistance will not be compensated with this type of connection.1 Ω cable resistance is proportional to a measurement error of +2.5 ˚C.

With **3-wire connection,** the influence of the cable length (resistance) on the measurement result will be suppressed.

2-wire technique   3-wire technique

Pt100   Pt100

Note

Operation of the LOGO! expansion module AM2 PT100 on an ungrounded (floating potential) power supply may result in severe fluctuation of the displayed temperature value.

In this case connect the negative output / power supply ground to the shielded measurement cables of the thermo-couple.

Programming the AM2 PT100 under LOGO!Soft Comfort V3.x

You can program the expansion module AM2 PT100 as usual under LOGO!Soft Comfort => Version 3.0. As of Version 3.1 plus Service Pack you can program the expansion module AM2 PT100 menu controlled.

Up–to–date information and Service Packs are found free of charge under the SIEMENS AG Internet URL:

http://www.ad.siemens.de/logo/index_00.htm