Microprocessor Application FACET Board
581224 (91602-20)

LabVolt Series

Datasheet

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General Description

The Microprocessor Application Board is an add-on to the 32-Bit Microprocessor, Model 91017. It allows students to study how microprocessors can control and communicate with external devices. The Application Board has two application circuits: a DC Motor Controller and a Temperature Controller.

The DC Motor Controller has a motor whose speed and direction of rotation can be controlled by the microprocessor. Mounted on the motor's shaft is a fan blade that makes it easier for students to see the direction of rotation. The motor's shaft also has an encoder disk with optical interrupter that provides feedback on the motor speed to the microprocessor, allowing closed-loop control of the motor speed.

The Temperature Controller uses two temperature transducers whose output current is a function of their temperature. One transducer is thermally bonded to a resistor that is used as a heater. The microprocessor controls the turning on and turning off of the heater, whose status is indicated by an LED indicator. The other transducer is used as a room-temperature reference, allowing the microprocessor to perform closed-loop control of the temperature.

The Microprocessor Application Board interfaces to the 32-Bit Microprocessor Board via I/O control lines and digital-to-analog (DAC) and analog-to-digital (ADC) converters. Test points on the Application Board permit the monitoring of the digital and analog signals exchanged between the Microprocessor and Application Boards, using an oscilloscope, logic probe, or voltmeter.

Manual

Description	Manual number
Microprocessor Application Board (User Guide)	585395 (91747-00)

Table of Contents of the Manual(s)

Microprocessor Application Board (User Guide) (585395 (91747-00))

Specifications

Parameter	Value
Physical Characteristics	
Dimensions (H x W x D)	57 x 238 x 149 mm (2.5 x 9.25 x 5.75 in)
Net Weight	0.8 kg (1.8 lb)

Reflecting the commitment of Festo Didactic to high quality standards in product, design, development, production, installation, and service, our manufacturing and distribution facility has received the ISO 9001 certification.

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