

PID Controller

587021 (9034-00)

FESTO

LabVolt Series

Datasheet



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General Description

The P.I.D. Controller is designed to be used as a core unit in the implementation of control systems containing analog feedback loops. It contains a P.I.D. (Proportional, integral, Derivative) amplifiers section which is used to condition the analog control signal with proportional, integral and derivative effect. The gain of each of these amplifiers can be varied independently to control these effects.

The other sections include circuit elements to achieve feedback signal amplification, signal rectification, low-pass filtering, error detection and output signal summation and limiting. The limiting section includes an “Anti-Reset” circuit which prevents the integrating amplifier in the P.I.D. Amplifier’s section from saturating. All these elements can easily be interconnected through the use of miniature 2 mm banana plug connection leads.

Specifications

Parameter	Value
Rating (All Sections)	
DC Power Input	±15 V, 100 mA
Input Voltage	0 to ±12 V
Output Voltage	0 to ±12 V
Input Impedance	1 MΩ
Output Impedance	1 kΩ
Feedback amplifiers	
Voltage Gain	1 to 10
Low-Pass Filters	
Voltage Gain	TTL compatible
Cut-off Frequency (Upper Filter)	0.2 Hz
Cut-off Frequency (Lower Filter)	0.2-70 Hz
Error Detector	
Number of Inputs	3 (1 inverted, 2 non-inverted)
Voltage Gain (for each input)	1
P.I.D. Amplifier	
Proportional Gain (Low)	0.5-5
Proportional Gain (High)	5-50
Derivative Gain	0.005-0.5
Integral Gain	10-100
Summing Amplifier	
Voltage Gain	1
Limiter	
Output Voltage (Upper Limit)	0 to +14 V
Output Voltage (Lower Limit)	0 to -14 V
Physical Characteristics	
Dimensions (H x W x D)	154 x 287 x 440 mm (6.1 x 11.3 x 17.3 in)
Net Weight	4.5 kg (9.9 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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