

Analog Control Module

Overview

The analog control module was designed for the needs of the electronics experiments of technical institutes and universities, suitable for mechatronics, machinery and automations, automation majors and other related experiments teaching purpose. The module can be combined with Googol Tech's automatic control experiment devices to perform typical closed-loop analog circuit experiments as well as digital control experiments, such as DC/AC servo motor closed-loop control, magnetic levitation ball control, ball & beam control and many other experiments. Students can practise the analog control in many different fields and have a better understanding of automatic control theories and knowledge through these experiments.

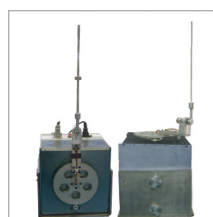


System configuration

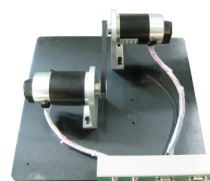
The analog control module is composed of the followings:

1. Linear amplifying driving circuit, voltage: 24V, current: 5A;
2. 6 operational amplifiers which can form 2 PID controllers;
3. Signal generator: triangle wave, sinusoidal wave and square wave;
4. Adjustable voltage output;
5. Circuit board for students to set up their own circuits;
6. Current loop, speed loop are used to detect the circuit;
7. DC power, 24V, 6A

Compatible experiment devices



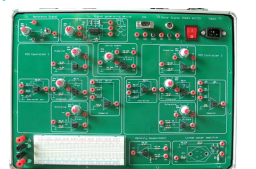
Inverted Pendulum



Single Axis DC Servo Control System



Ball & Beam System

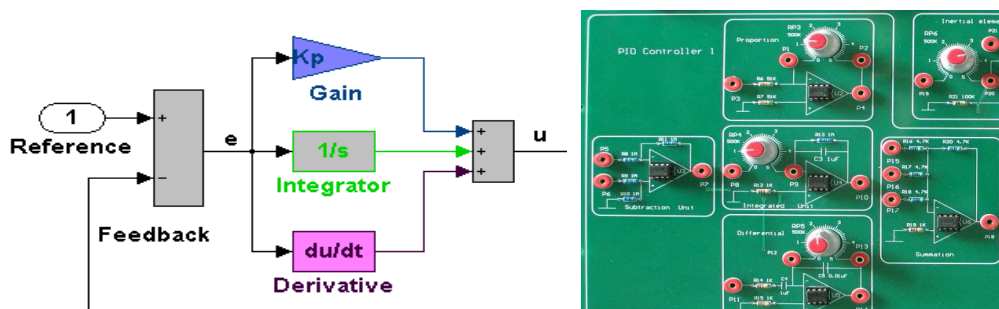


Magnetic Levitation System

Analog Control Module

Experiments contents

1. Signal following and filter design;
2. Operational amplifier usage experiment;
3. Typical step response experiment;
4. P, PD, PID controller experiment.
5. More experiments by combination with Googol Tech's experiment devises.



Specification

Input power	220VAC 1A 50HZ	Output power	5V , 1A ; ± 12V , 2.5A
Control precision	1%	Dimension	420*320*120 (mm)
Linear driving output power	± 12V , 2.5A	Weight	About 6KG

Ordering Guide

No.	Product name	Product description and configuration
GAES1001	Analog Control Module for DC motor	<ul style="list-style-type: none"> - Analog Control Module Box - User Manual - Experiments Manual

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