

ABSTRACT

A programmable Logic Controller (PLC) and Microcontroller are in the computer family. They are used in commercial and industrial applications. The goal from this project is connecting the PLC to microcontroller and programming the PLC & microcontroller so as to control in DC motor. Also PLC can work in any temperatures values and high voltage condition, with high load and consist of much inputs devices .Thus microcontroller work with a low voltage this useful to connect it to alarms or (LED).The result we get intelligent control system work in different environments.

The goal is not reached in completing this system, but a satisfactory completion qualification system and provided a solid base for next year's team to put new ideas. It is learned about control systems engineering. Also identified possible areas of future development for the project, and introduced next year's team to the project.

مستخلص

يمثل المتحكم المنطقي المبرمج و المتحكم الدقيق جزء من عائلة الكمبيوتر، ويستخدمان بكثرة في البيوتات التجارية والتطبيقات الصناعية.

في هذا المشروع تم ربط، العنصرين مع بعضهما لنحصل على متحكم جديد ذو كفاءة ومميزات خاصة وبرمجة كل واحد منهما ليتأقلم مع الآخر، ليتم التحكم في دائرة بسيطة كنموذج مصغر.

ويتميز المتحكم المنطقي في هذه الدائرة بالعمل على درجات حرارة مختلفة وقد تكون عالية وحالات جهود عالية ايضاً، بالإضافة إلى ذلك يعمل مع أحمال عالية ويتوافق مع معظم عناصر الدخل، وعليه من ناحية أخرى للدائرة يعمل المايكروكنترولر بجهود منخفضة وهذا مفيد أحياناً لربطه مع النبائط الصغيرة مثل الثنائي الضوئي وأجهزة التحذير والدارات المتكاملة وغيرها، والنتيجة نحصل على نظام تحكم بارع لبعض الدوائر الالكترونية ويعمل تحت ظروف بيئية مختلفة.

والهدف من هذا المشروع لا نعتبره يأخذ موضع التنافس لهذا النظام، ولكن نظام ذو كفاءة مرضية أو مقبولة ومحقق لقاعدة نظام للأجيال المقبلة لوضع تصاميم جديدة. وتعلمنا الكثير عن هندسة أنظمة التحكم. وأيضاً تحديد المجالات الممكنة لصناعة المستقبل والابتكار لمشاريع الأجيال المقبلة.

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List of abbreviation

A	Amper
ALU	Arithmetic Logic Unit
BCD	Binary-Code Decimal
BS2	Basic Stamp 2
CPU	Central Processing Unit
DC	Direct Current
EPROM	Erasable Programmable ROM
EEPROM	Electricity EPROM
FBD	Function Block Diagram
GND	Ground
IC	Integrated Circuit
K	Kilo
LAD	Ladder Logic
LED	Light Emitting Diode
MCU	Microcontroller
Micro/Win	Microsoft/Windows
PC	Personal Computer
PG	Programming Device
PLC	Programmable Logic Controller
PPI	Point-to-Point Interface
PWM	Pulse Width Modulation
RAM	Random Access Memory
RES	Reset
ROM	Read Only Memory
S7	STEP 7
STL	Statement List