

The diagram illustrates an Arduino Uno microcontroller board connected to a transformer and a relay. The Arduino Uno is shown with its ATmega328P microcontroller and various pins labeled. The transformer has a primary winding connected to a 12V AC source (V1) and a secondary winding connected to a 5V relay (RL1). The relay is controlled by a 5V DC source. The circuit is labeled with component names and values.

Arduino Uno Components:

- Reset BTN
- RESET
- ANALOG IN
- ATMEGA328P-2U
- www.TheEngineeringProjects.com
- AREF
- PB5/SCK
- PB4/MISO
- PB3/MOSI/OC2A
- ~ PB2/OC1B
- ~ PB1/OC1A
- PB0/ICP1/CLKO
- PD7/AIN1
- ~ PD7/AIN1
- ~ PD5/T1/OC0B
- PD4/T0/XCK
- ~ PD3/INT1/OC2B
- PD2/INT0
- PD1/TXD
- PD0/RXD
- PC0/ADC0
- PC1/ADC1
- PC2/ADC2
- PC3/ADC3
- PC4/ADC4/SDA
- PC5/ADC5/SCL

Transformer and Relay Components:

- V1: VSINE, VA=12V, FREQ=5
- L1: 12V
- RL1: 5V

Arduino Uno Pin Connections:

- Pin 13: PB5/SCK
- Pin 12: PB4/MISO
- Pin 11: PB3/MOSI/OC2A
- Pin 10: ~ PB2/OC1B
- Pin 9: ~ PB1/OC1A
- Pin 8: PB0/ICP1/CLKO
- Pin 7: PD7/AIN1
- Pin 6: ~ PD7/AIN1
- Pin 5: ~ PD5/T1/OC0B
- Pin 4: PD4/T0/XCK
- Pin 3: ~ PD3/INT1/OC2B
- Pin 2: PD2/INT0
- Pin 1: PD1/TXD
- Pin 0: PD0/RXD
- Pin A0: PC0/ADC0
- Pin A1: PC1/ADC1
- Pin A2: PC2/ADC2
- Pin A3: PC3/ADC3
- Pin A4: PC4/ADC4/SDA
- Pin A5: PC5/ADC5/SCL

