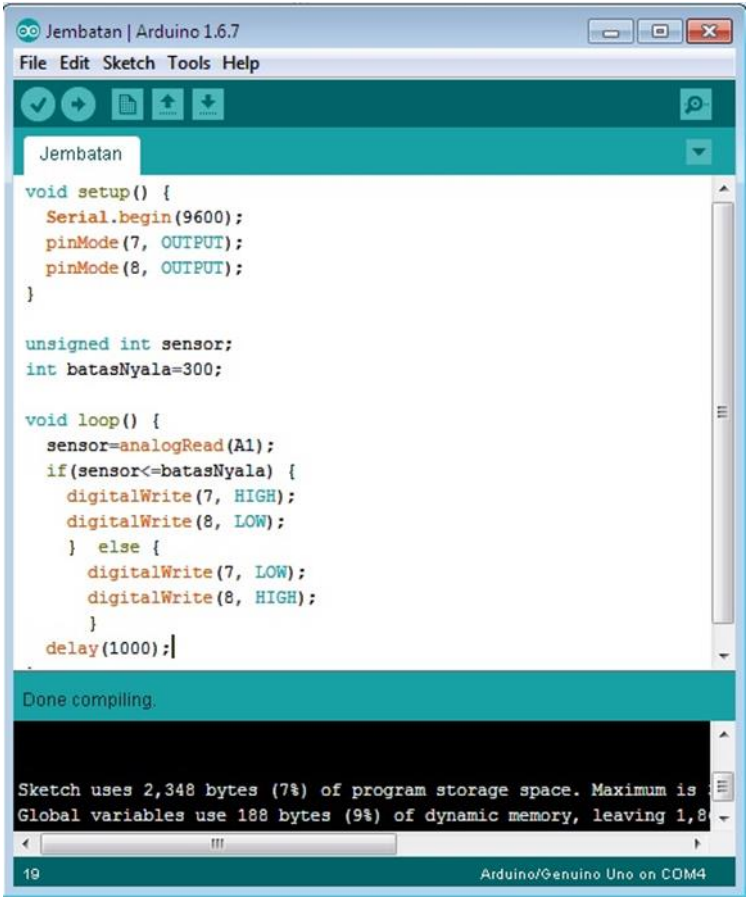

Jembatan | Arduino 1.6.7
File Edit Sketch Tools Help
Jembatan
void setup() {
Serial.begin(9600);
pinMode(7, OUTPUT);
pinMode(8, OUTPUT);
}
unsigned int sensor;
int batasNyala=300;
void loop() {
sensor=analogRead(A1);
if(sensor<=batasNyala) {
digitalWrite(7, HIGH);
digitalWrite(8, LOW);
} else {
digitalWrite(7, LOW);
digitalWrite(8, HIGH);
}
delay(1000);
Done compiling.
Sketch uses 2,348 bytes (7%) of program storage space. Maximum is
Global variables use 188 bytes (9%) of dynamic memory, leaving 1,8
19
Arduino/Genuino Uno on COM4

ARDUINO UNO Revision 3 BOARD

The Arduino Uno is one of the most common and widely used Arduino processor boards. There are a wide variety of shields (plug in boards adding functionality). It is relatively inexpensive (about $25 - $35).
The latest version as of this writing (3/2014) is Revision 3 (r3):

- Revision 2 added a pull-down resistor to the 8U2 HWB line, making it easier to put into DFU (Device Firmware Update) mode
- Revision 3 added
  - SDA and SCL pins are now brought out to the header near the AREF pin (upper left on picture). SDA and SCL are for the I2C interface
  - IOREF pin (middle lower on picture that allows shields to adapt to the voltage provided
  - Another pin not connected reserved for future use

The board can be powered from the USB connector (usually up to 500ma for all electronics including shield), or from the2.1mm barrel jack using a separate power supply when you cannot connect the board to the PC's USB port.

Links:

- Arduino web site: http://www.arduino.cc/
- Arduino Uno overview and image source: http://arduino.cc/en/Main/arduinoBoardUno#.UxNpBk2YZuG
- DFU Mode (Device Firmware update) explanation: http://arduino.cc/en/Hacking/DFUProgramming8U2#.UxNqXE2YZuE
- Arduino Uno schematic: http://arduino.cc/en/uploads/Main/Arduino_Uno_Rev3-schematic.pdf
- Arduino Uno Eagle PCB Files: http://arduino.cc/en/uploads/Main/arduino_Uno_Rev3-02-TH.zip
- Eagle PCB PCB design software (use Licesnse = "Run as Freeware"): https://www.cadsoftusa.com/download-eagle/
- Hardware Index – past and present boards: http://arduino.cc/en/Main/Boards#.UxNq9U2YZuE
- Specifications comparison chart: http://arduino.cc/en/Products.Compare#.UxOJGk2YZuF
- Board comparison chart: http://arduino.cc/en/Products.Compare#.UxN6oE2YZuE
- Sources
  - MP3Car: http://store.mp3car.com/SearchResults.asp?Search=arduino
  - Sparkfun: https://www.sparkfun.com/
  - Adafruit: http://www.adafruit.com/category/17
  - Amazon: http://www.amazon.com/s/ref=nb_sb_noss_1?url=search-alias%3Daps&field-keywords=Arduino
  - Pololu: http://www.pololu.com/search?query=Arduino

ARDUINO UNO Revision 3 Specifications

- Microcontroller: ATmega328
- Operating Voltage: 5V
- Uno Board Recommended Input Voltage: 7 – 12 V
- Uno Board Input Voltage Limits: 6 – 20 V
- Digital I/O Pins: 14 total – 6 of which can be PWM
- Analog Input Pins: 6
- Maximum DC Current per I/O pin at 5VDC: 40ma
- Maximum DC Current per I/I pinat 3.3 VDC: 50ma
- Flash Memory: 32KB (0.5KB used by bootloader)
- SRAM Memory: 2KB
- EEPROM: 1KB
- Clock Speed: 16 MHz

Links:

- Arduino specifications and image page: http://arduino.cc/en/Main/arduinoBoardUno#.UxOOLk2YZuH

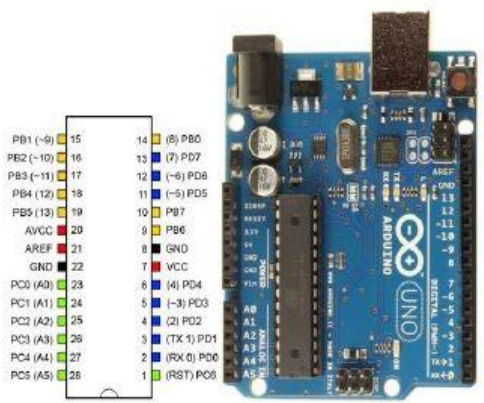
ARDUINO UNO Revision 3 Processor Peripherals (Atmel ATmega 328)

- Two 8-bit Timer/Counters with Separate Prescaler and Compare Mode
- One 16-bit Timer/Counter with Separate Prescaler, Compare Mode, and Capture Mode
- Real Time Counter with Separate Oscillator
- Six PWM channes
- Six channel 10 bit ADC including temperature measurement
- Programmable Serial USART
- Master/Slave SPI Serial Interface
- Byte-oriented 2 wire Serial Interface (Philips I2C compatible)
- Programmable Watchdog Timer with Separate On-chip Oscillator
- On-chip Analog Comparator

Links:

- Source of above diagram: http://tekkpinoy.com/wp-content/uploads/2013/10/1.jpg
- AT Mega 328 datasheet: http://www.atmel.com/Images/doc8161.pdf

ARDUINO UNO Revision 3 and ATmega328 processor



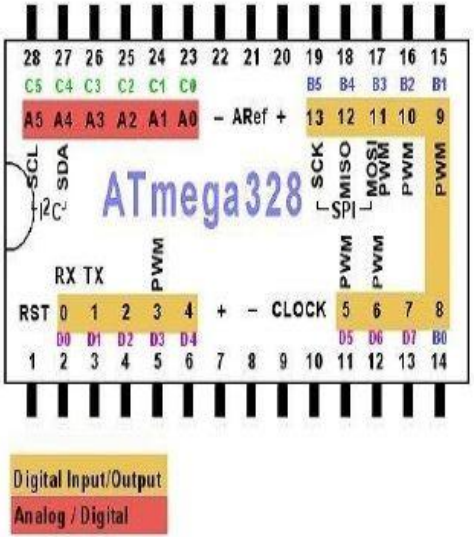
The Arduino board makes it very easy to use the ATmega328 processor by providing easy access to most of the pins via the headers, In addition, it provides:

- 5 VDC regulated power from the 6 – 20 VDC input jack
- 3.3 VDC regulated power available for other electronics
- The crystal oscillator
- A reset switch
- USB access to the serial port
- Headers for connection and for shields

Links:

- Arduino specifications and image page: http://arduino.cc/en/Main/arduinoBoardUno#.UxOOLk2YZuH
- ATmega328 processor image modified from image found at: http://www.protostack.com/microcontrollers/atmega328-pu-atmel-8-bit-32k-avr-microcontroller

ARDUINO UNO Revision 3 Processor Pinout (Atmel ATmega 328) – Commonly Used



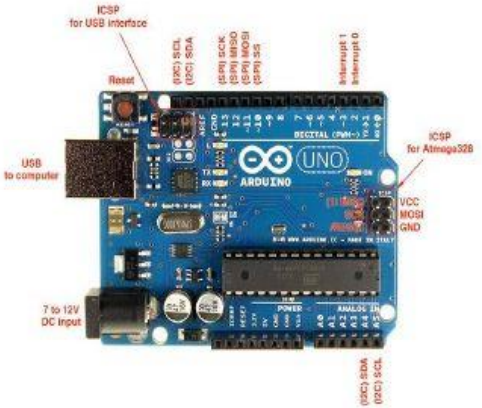
Pin Definition

- PORT B (PB0 – PB7) is an 8 bit bidirectional I/O port with internal pull-ups. Processor pins 14 – 17 bring PB0 to PB5 out
  - PB0 – PB5 are also interrupts 0-5 respectively
  - PB1 can also be used as a PWM output
  - PB2 can also be SPI Bus Master Slave Select (*SS) or PWM output
  - PB3 can also be or SPI Bus Master Out/Slave In (MOSI) or PWM output
  - PB4 can also be SPI Bus Master In/Slave Out (MISO)
  - PB5 can also be SPI Bus Master Clock Input (SCK)
  - PB6 and PB7 are brought out on Processor pins 9 and 10 for the crystal clock oscillator
- PORT C (PC0 – PC5) is a 7 bit bidirectional I/O port with internal pull-up resistors. Processor pins 23 – 28 bring PC0 to PC5 out.
  - PC0 – PC5 are also interrupts 8-13 respectively
  - PC0 – PC5 can also be used as A/D inputs
  - PC4 and PC5 can also be used as SDA and SCL for I2C
  - PC6 is brought out on processor pin 1 as reset
- PORT D (D0 – D7) is an 8 bit bidirectional I/O port with internal pull-ups. Processor pins 2 – 6 and 11 – 13 bring all pins out
  - PD0 can also be USART Input (RXD)
  - PD1 can also be USART Output (TXD)
  - PD3 can also be used as a PWM output
  - PD5 can also be used as a PWM output
  - PD6 can also be used as a PWM output

Links:

- Source of above diagram: http://www.hobbytronics.co.uk/arduino-atmega328-pinout
- AT Mega 328 datasheet: http://www.atmel.com/Images/doc8161.pdf

ARDUINO UNO Revision 3 Pinout (Uno PCB) – Commonly Used Features are printed on Silkscreen



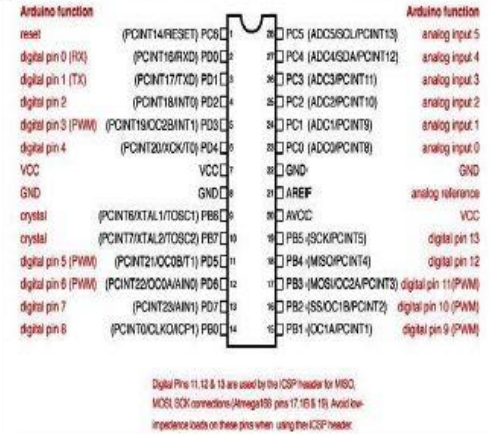
The Arduino Uno pinout is printed in the silkscreen on the top of the part. While this pinout is a good start, it does not explain the complete story – but it does give a good beginning. At first you use mainly the pins in the female headers at the edge of the board (top and bottom in the photo), plus USB and maybe power

- Tx and Rx are serial UART pins used for RS-232 and USB communications
- I2C is another serial communications method using a bidirectional data line (SDA) and a clock line (SCL)
- SPI is another serial communications method using one line for the master to transmit (MOSI – Master Out Slave In), another for the master to receive (MISO), and a third as a clock (SCK)
- A/D in Analogue to Digital this input converts an analogue voltage in to a digital representation
- PWM (Pulse Width Modulator) is used to create a square wave with a specific duty cycle (high time vs low time)
- ICSP is the In Circuit Serial Programming – another way to program the processor
- Vcc is the voltage supplied to the processor (+5VDC regulated from the higher input voltage)
- 3.3VDC is a regulated voltage (from the higher input voltage) for peripherals needing that voltage – 50ma maximum
- IOREF provides a voltage reference so shields can select the proper power source
- AREF is a reference INPUT voltage used by the A/Ds
- GND is the ground reference
- RESET resets the processor (and some peripherals)

Links:

- Source of above diagram: http://www.adafruit.com/blog/2012/05/25/handy-arduino-r3-pinout-diagram/
- Description of pin usage: http://www.gammon.com.au/forum/?id=11473
- Arduino Uno Pin Mapping: http://arduino.cc/en/Hacking/PinMapping168#.UxOJik2YZuE
- Description of Arduino Serial: http://arduino.cc/en/reference/serial#.UxOMKk2YZuE
- Description of the Arduino SPI functions and library: http://arduino.cc/en/Reference/SPI#.UxOPLk2YZuE
- Description of Arduino A/D: http://arduino.cc/en/Tutorial/AnalogInputPins#.UxOM7k2YZuE
- Description of Arduino PWM: http://arduino.cc/en/Tutorial/PWM#.UxOLz02YZuE
- Tutorial on ISP: http://arduino.cc/en/Tutorial/ArduinoISP#.UxOUSk2YZuE
- Tutorial on the AREF pin: http://tronixstuff.com/2013/12/12/arduino-tutorials-chapter-22-aref-pin/

ARDUINO UNO Revision 3 Processor Pinout (Atmel ATmega 328) – Other functions



Pin Definition

- PORT B pins, in addition to digital I/O have other uses
  - PB0 can also be the divided system clock output (CLKO) or Timer/Counter 1 Input Capture (ICP1)
  - PB1 can also be Timer/Counter1 Output Compare Match A (OC1A) out
  - PB2 can also be Timer/Counter1 Output Compare Match B (OC1B)
  - PB3 can also be Timer/Counter2 Output Compare Match A out(OC2A)
- Port D pins, in addition to digital I/O have other uses
  - PD3 is also Timer/Counter2 Output Compare Match B Output (OC2B)
  - PD4 is also Timer/Counter0 External Counter Input (T0) or USART External Clock Input/Output (XCK)
  - PD5 is also Timer/Counter0 Ouoput Compare Match B Output (OC0B) and Timer/Counter 1 External Counter Input
  - PD6 can also be Analog Comparator Positive In (AIN0)
  - PD7 can also be Analog Comparator Negative In (AIN1)

Links:

- Source of above diagram: http://nearbus.net/wiki/index.php?title=Atmega_328_Pinout
- AT Mega 328 datasheet: http://www.atmel.com/Images/doc8161.pdf

NOTE: A single diagram showing all features of the Arduino Uno and the Atmel ATMega328 processor is shown in Appendix A

APPENDIX A

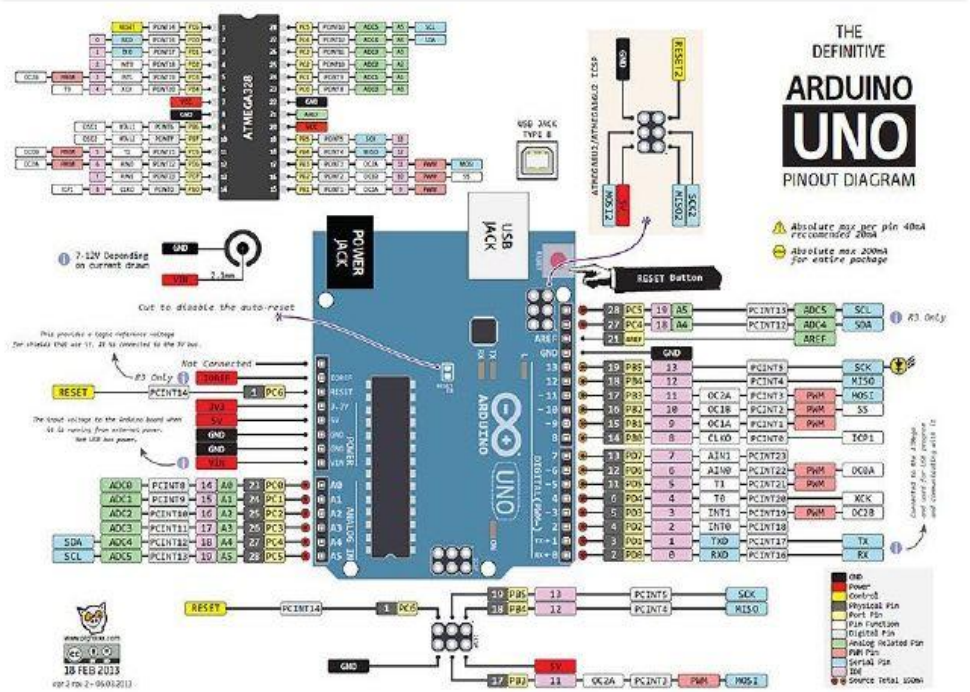


Diagram from: http://arduino-info.wikispaces.com/file/view/ArduinoUNO-900.jpg/421496636/ArduinoUNO-900.jpg

APPENDIX B

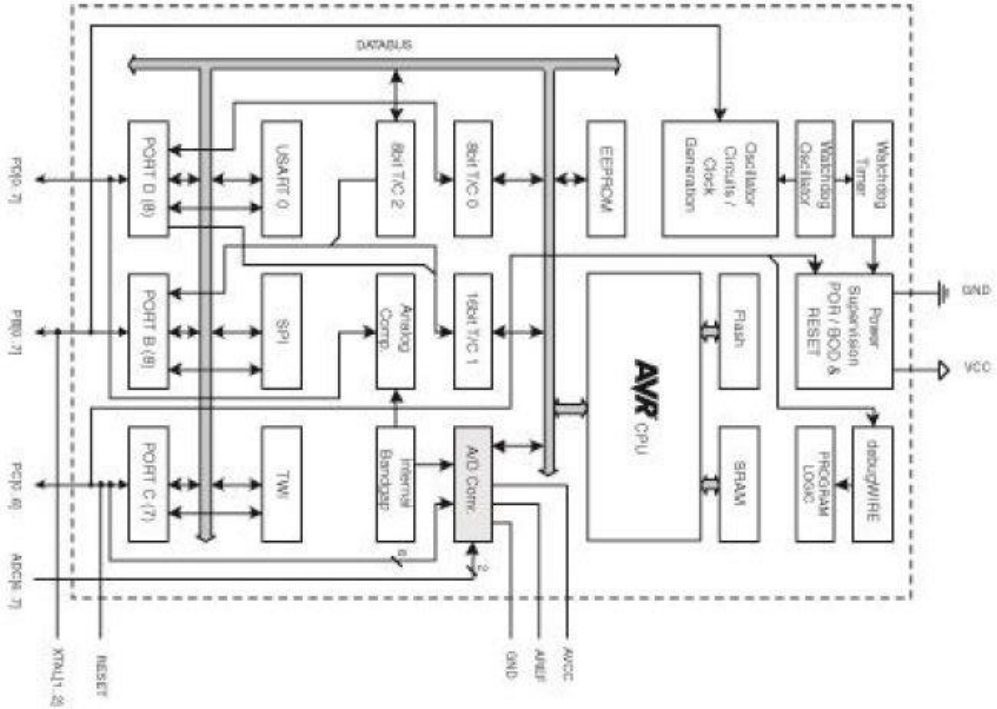


Diagram from document at: http://www.atmel.com/Images/doc8161.pdf

APPENDIX C

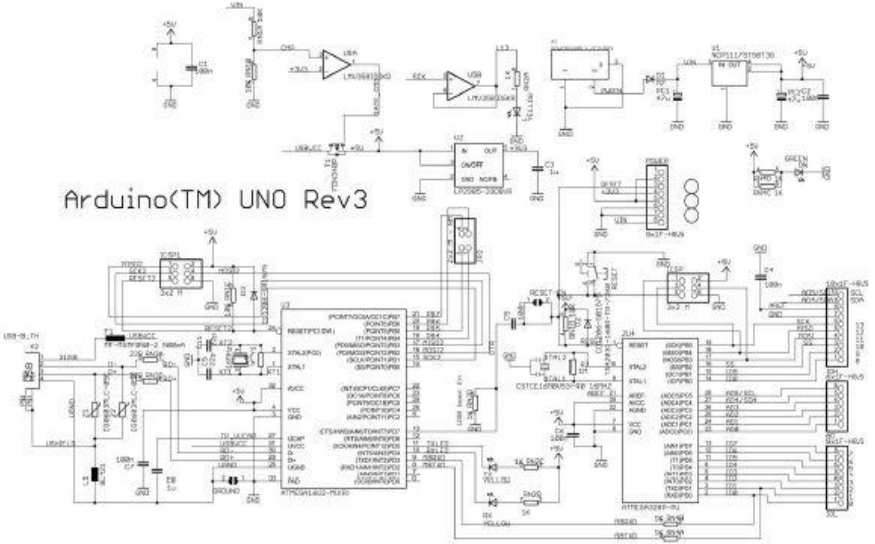
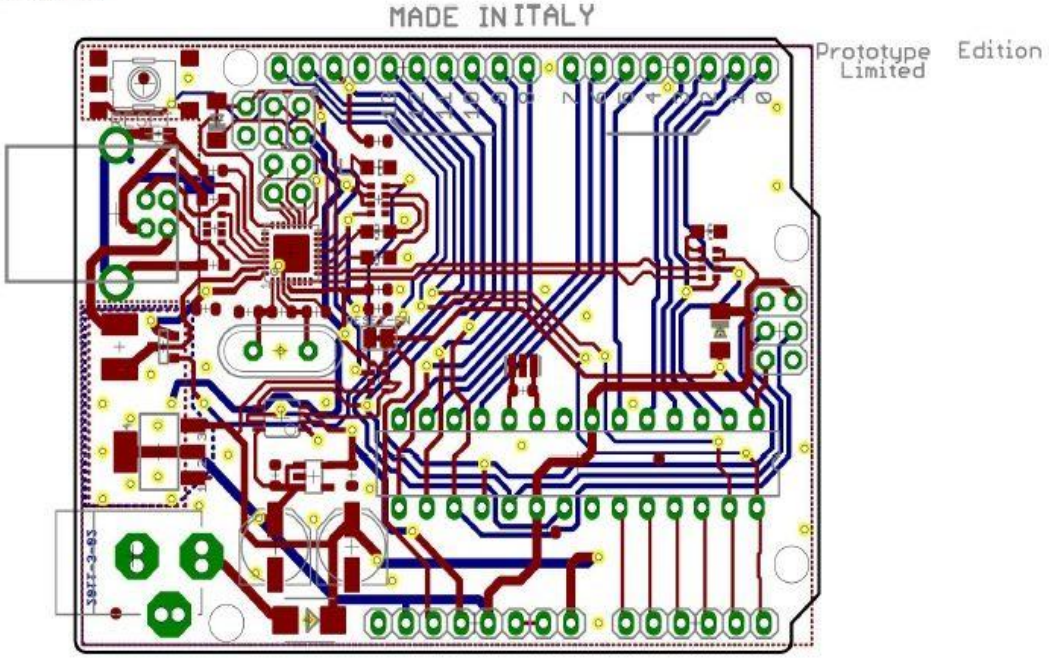


Diagram from document at: http://arduino.cc/en/uploads/Main/Arduino_Uno_Rev3-schematic.pdf

APPENDIX D



From arduino_Uno_Rev3-02-TH.zip file at http://arduino.cc/en/Main/ArduinoBoardUno#.Uxk9qk2YYpA

Eagle PCB software: Eagle PCB PCB design software (use Licesnse = "Run as Freeware"): https://www.cadsoftusa.com/download-eagle/

2 CHANNEL 5V 10A RELAY MODULE

Description

The relay module is an electrically operated switch that allows you to turn on or off a circuit using voltage and/or current much higher than a microcontroller could handle. There is no connection between the low voltage circuit operated by the microcontroller and the high power circuit. The relay protects each circuit from each other.

The each channel in the module has three connections named NC, COM, and NO. Depending on the input signal trigger mode, the jumper cap can be placed at high

level effective mode which 'closes' the normally open (NO) switch at high level input and at low level effective mode which operates the same but at low level input.

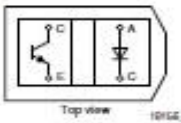
Specifications

- On-board EL817 photoelectric coupler with photoelectric isolating anti-interference ability strong
- On-board 5V, 10A / 250VAC, 10A / 30VDC relays
- Relay long life can absorb 100000 times in a row
- Module can be directly and MCU I/O link, with the output signal indicator
- Module with diode current protection, short response time
- PCB Size: 45.8mm x 32.4mm

Pin Configuration

1. VCC: 5V DC
2. COM: 5V DC
3. IN1: high/low output
4. IN2: high/low output
5. GND: ground

Reflective Optical Sensor with Transistor Output



FEATURES

- Package type: leaded
- Detector type: phototransistor
- Dimensions (L x W x H in mm): 10.2 x 5.8 x 7
- Peak operating distance: 2.5 mm
- Operating range within > 20 % relative collector current: 0.2 mm to 15 mm
- Typical output current under test: I_C = 1 mA
- Daylight blocking filter
- Emitter wavelength: 950 nm
- Lead (Pb)-free soldering released
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

RoHS COMPLIANT

DESCRIPTION

The TCRT5000 and TCRT5000L are reflective sensors which include an infrared emitter and phototransistor in a leaded package which blocks visible light. The package includes two mounting clips. TCRT5000L is the long lead version.

APPLICATIONS

- Position sensor for shaft encoder
- Detection of reflective material such as paper, IBM cards, magnetic tapes etc.
- Limit switch for mechanical motions in VCR
- General purpose - wherever the space is limited

PRODUCT SUMMARY				
PART NUMBER	DISTANCE FOR MAXIMUM CTR_{rel} [1] (mm)	DISTANCE RANGE FOR RELATIVE I_{out} > 20 % (mm)	TYPICAL OUTPUT CURRENT UNDER TEST [2] (mA)	DAYLIGHT BLOCKING FILTER INTEGRATED
TCRT5000	2.5	0.2 to 15	1	Yes
TCRT5000L	2.5	0.2 to 15	1	Yes

Notes

[1] CTR: current transfere ratio, I_{out}/I_e

[2] Conditions like in table basic characteristics/sensors

ORDERING INFORMATION			
ORDERING CODE	PACKAGING	VOLUME [1]	REMARKS
TCRT5000	Tube	MOQ: 4500 pcs, 50 pcs/tube	3.5 mm lead length
TCRT5000L	Tube	MOQ: 2400 pcs, 48 pcs/tube	15 mm lead length

Note

[1] MOQ: minimum order quantity

ABSOLUTE MAXIMUM RATINGS (1)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
INPUT (EMITTER)				
Reverse voltage		V_R	5	V
Forward current		I_F	60	mA
Forward surge current	$t_p \leq 10$ µs	I_{FSM}	3	A
Power dissipation	$T_{amb} \leq 25$ °C	P_V	100	mW
Junction temperature		T_j	100	°C

ABSOLUTE MAXIMUM RATINGS (1)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
OUTPUT (DETECTOR)				
Collector emitter voltage		V_{CEO}	70	V
Emitter collector voltage		V_{ECO}	5	V
Collector current		I_C	100	mA
Power dissipation	$T_{amb} \leq 55$ °C	P_V	100	mW
Junction temperature		T_j	100	°C
SENSOR				
Total power dissipation	$T_{amb} \leq 25$ °C	P_{tot}	200	mW
Ambient temperature range		T_{amb}	- 25 to + 85	°C
Storage temperature range		T_{stg}	- 25 to + 100	°C
Soldering temperature	2 mm from case, $t \leq 10$ s	T_{sd}	260	°C

Note
(1) T_{amb} = 25 °C, unless otherwise specified

ABSOLUTE MAXIMUM RATINGS

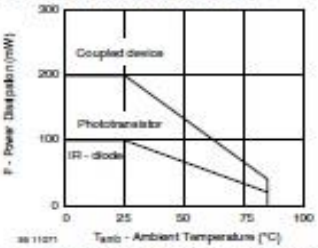


Fig. 1 - Power Dissipation Limit vs. Ambient Temperature

BASIC CHARACTERISTICS (1)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
INPUT (EMITTER)						
Forward voltage	I_F = 60 mA	V_F		1.25	1.5	V
Junction capacitance	V_R = 0 V, f = 1 MHz	C_j		17		pF
Radiant intensity	I_F = 60 mA, t_p = 20 ms	I_e			21	mW/sr
Peak wavelength	I_F = 100 mA	λ_P	940			nm
Virtual source diameter	Method: 63 % encircled energy	d		2.1		mm
OUTPUT (DETECTOR)						
Collector emitter voltage	I_C = 1 mA	V_{CEO}	70			V
Emitter collector voltage	I_E = 100 µA	V_{ECO}	7			V
Collector dark current	V_{CE} = 20 V, I_F = 0 A, E = 0 lx	I_{CEO}		10	200	nA
SENSOR						
Collector current	V_{CE} = 5 V, I_F = 10 mA, D = 12 mm	I_C (2) (3)	0.5	1	2.1	mA
Collector emitter saturation voltage	I_F = 10 mA, I_C = 0.1 mA, D = 12 mm	V_{CEsat} (2) (3)			0.4	V

Note
(1) T_{amb} = 25 °C, unless otherwise specified
(2) See figure 3
(3) Test surface: mirror (Mfr. Spindler a. Hoyer, Part No. 340005)

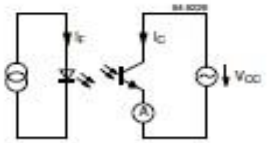


Fig. 2 - Test Circuit

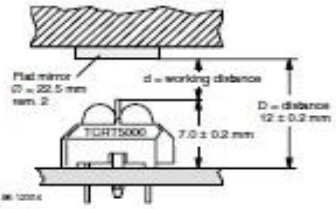


Fig. 3 - Test Circuit

BASIC CHARACTERISTICS

T_{amb} = 25 °C, unless otherwise specified

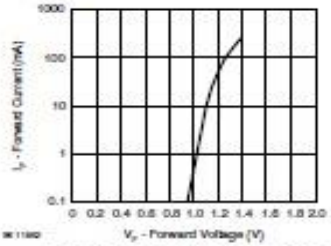


Fig. 4 - Forward Current vs. Forward Voltage

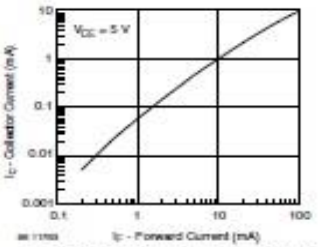


Fig. 6 - Collector Current vs. Forward Current

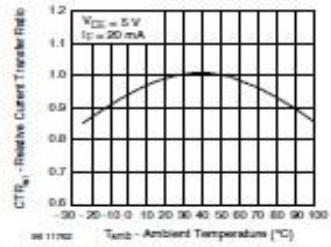


Fig. 5 - Relative Current Transfer Ratio vs. Ambient Temperature

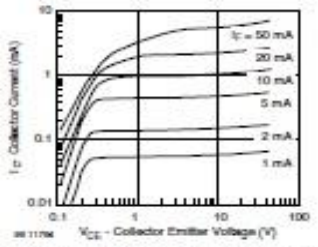


Fig. 7 - Collector Emitter Saturation Voltage vs. Collector Current

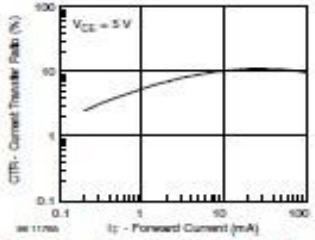


Fig. 8 - Current Transfer Ratio vs. Forward Current

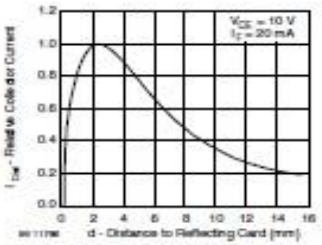
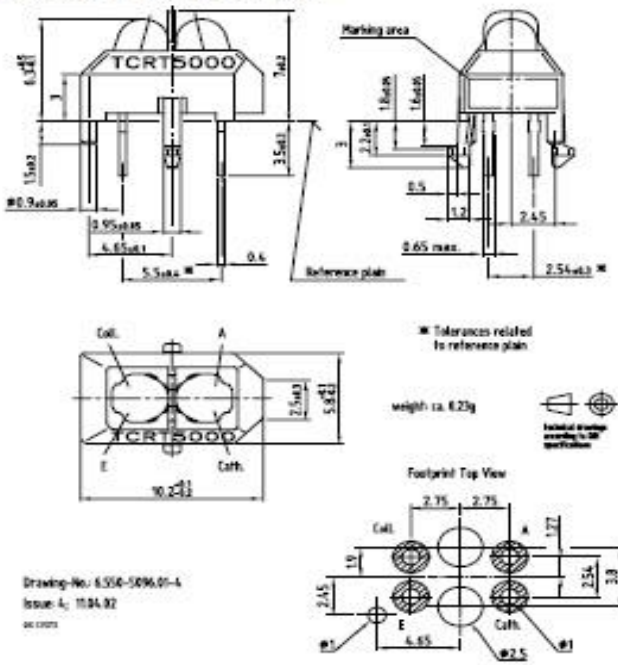
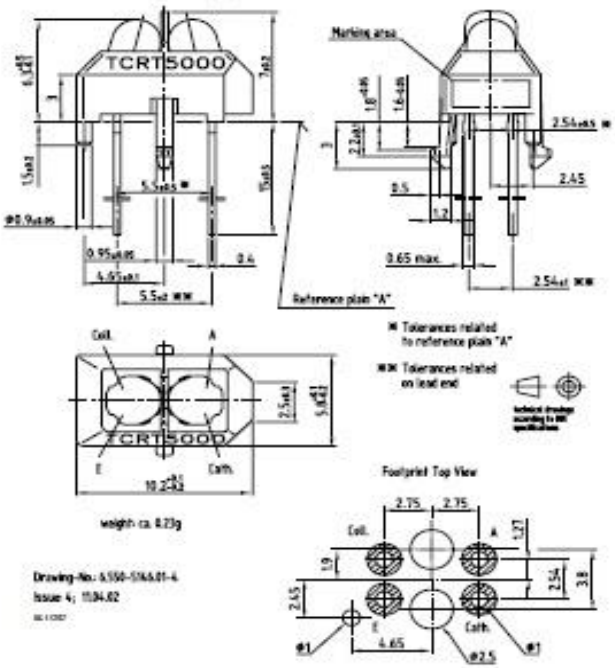


Fig. 9 - Relative Collector Current vs. Distance

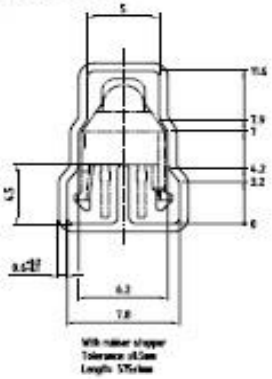
PACKAGE DIMENSIONS in millimeters, **TCRT5000**



PACKAGE DIMENSIONS in millimeters, **TCRT5000L**



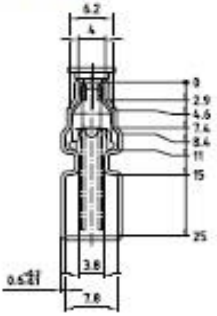
TUBE DIMENSIONS in millimeters, **TCRT5000**



With rubber shoppers
Tolerance: ±0.5mm
Length: 575±5mm

Drawing-No.: 9.700-5310.01-4
Issue: 1; 10.05.00

TUBE DIMENSIONS in millimeters, **TCRT5000L**



With shopper pins
Tolerance: ±0.5mm
Length: 575±5mm

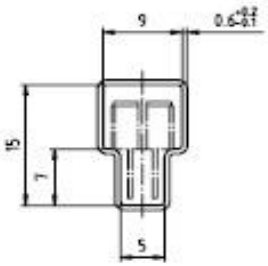
Drawing-No.: 9.700-5310.01-4
Issue: 1; 25.02.00

Packaging and Ordering Information

PART NUMBER	MOQ [1]	PCS PER TUBE	TUBE SPEC. (FIGURE)	CONSTITUENTS (FORMS)
CNY70	4000	80	1	28
TCPT13000X01	2000	Reel	[2]	29
TCRT1000	1000	Bulk	-	26
TCRT1010	1000	Bulk	-	26
TCRT5000	4500	50	2	27
TCRT5000L	2400	48	3	27
TCST1030	5200	65	5	24
TCST1030L	2600	65	6	24
TCST1103	1020	85	4	24
TCST1202	1020	85	4	24
TCST1230	4800	60	7	24
TCST1300	1020	85	4	24
TCST2103	1020	85	4	24
TCST2202	1020	85	4	24
TCST2300	1020	85	4	24
TCST5250	4860	30	8	24
TCUT1300X01	2000	Reel	[2]	29
TCZT8020-PAER	2500	Bulk	-	22

Notes
[1] MOQ: minimum order quantity
[2] Please refer to datasheets

TUBE SPECIFICATION FIGURES



With rubber stopper
Tolerance: ±0.5mm
Length: 575±1mm

Drawing-No.: 9.700-5097.01-4
Issue: 1; 25.02.00

15190

Fig. 1

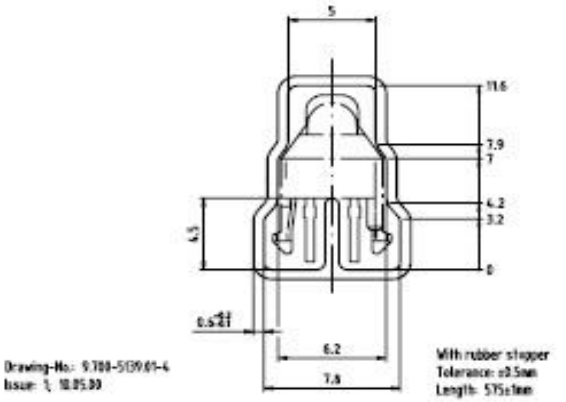

5
11.6
7.9
7
4.2
3.2
0
4.3
6.2
7.8
With rubber stopper
Tolerance: ±0.5mm
Length: 575±1mm
Drawing-No.: 9.700-5139.01-4
Issue: 1; 18.05.00
Drawing refers to following types: TCRT 5000

Fig. 2

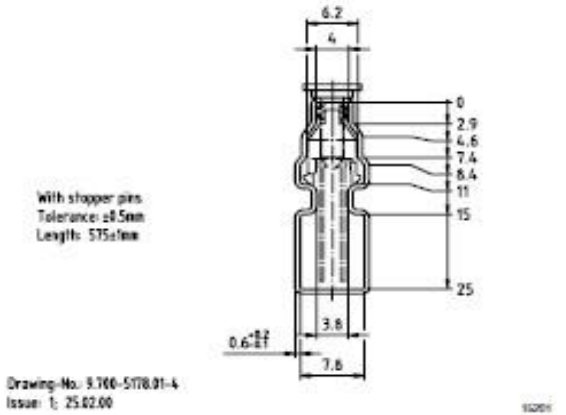
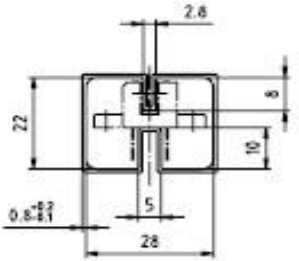

6.2
4
0
2.9
4.6
7.4
8.4
11
15
25
With stopper pins
Tolerance: ±0.5mm
Length: 575±1mm
3.6
7.8
Drawing-No.: 9.700-5178.01-4
Issue: 1; 25.02.00

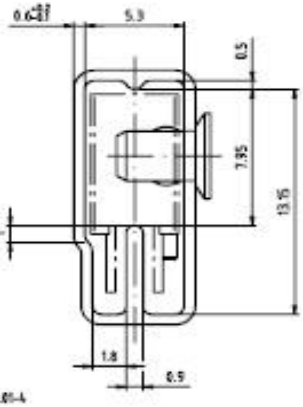
Fig. 3



With rubber stopper
Tolerance: ±0.5mm
Length: 575±1mm

Drawing-No.: 9.700-5100.01-4
Issue: 1; 25.02.00

Fig. 4



With stopper pins
Tolerance: ±0.5mm
Length: 575±1mm

Drawing-No.: 9.700-5140.01-4
Issue: 1; 25.02.00

Fig. 5

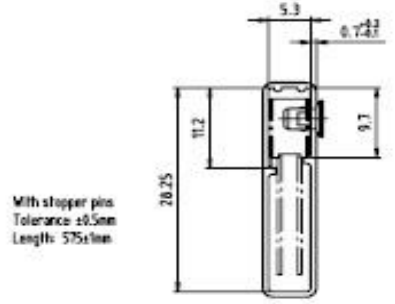

5.3
11.2
9.7
28.25
With stopper pins
Tolerance ±0.5mm
Length: 575±1mm
Drawing-No.: 9.700-5205.01-4
Issue: 1; 25.02.08

Fig. 6

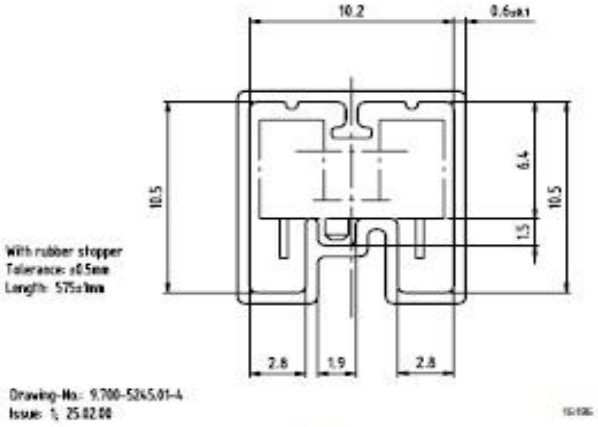

10.2
10.5
6.4
10.5
1.5
2.8
1.9
2.8
With rubber stopper
Tolerance: ±0.5mm
Length: 575±1mm
Drawing-No.: 9.700-5245.01-4
Issue: 1; 25.02.08

Fig. 7

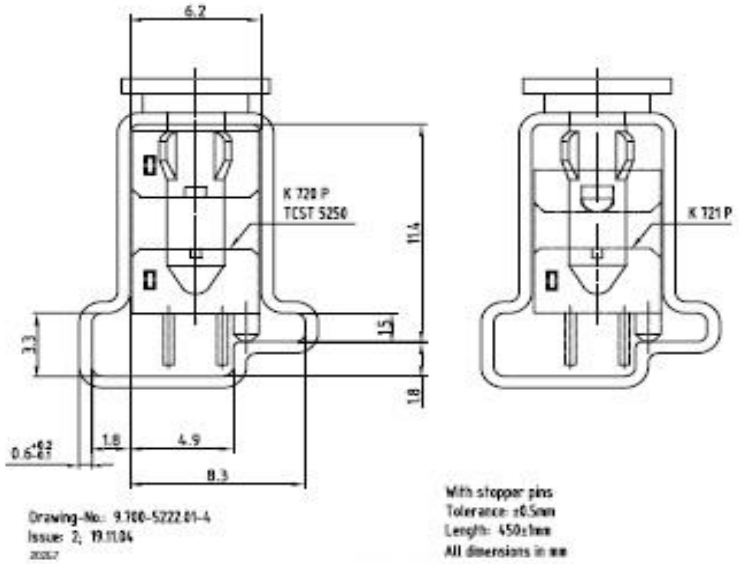

6.2
K 720 P
TCST 5250
11.4
1.5
1.8
3.3
0.6
1.8
4.9
8.3
K 721 P
Drawing-No.: 9.700-5222.01-4
Issue: 2; 19.11.04
20267
With stopper pins
Tolerance: ±0.5mm
Length: 450±5mm
All dimensions in mm

Fig. 8

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

TCRT5000 Line Tracking Sensor Module

TCRT5000 sensor of infrared emission diode constantly launch infrared, the infrared ray is emitted when the intensity of reflected back has not been reflected or but is not big enough,

Rating: Not Rated Yet
Price:
Variant price modifier:

Base price with tax:

Price with discount: 200,00 ?

Saleeprice with discount:

Sales price: 200,00 ?

Sales price without tax: 200,00 ?

Discount:

Tax amount:

Ask a question about this product

Description

Think It... Make It... Invent!

The TCRT5000 Line Tracking Breakout Board was made with Line Following Mobot designs in mind. The TCRT5000 itself is a combination of both phototransistor and IR LED encased in a small plastic package which is convenient when designing space constrained prototypes. A mounting hole is placed at the middle of the module with enough space to accommodate screws for affixing it onto the prototype. Three headers are also provided and labelled for power, ground and the signal. There is also an LED mounted at the back of the board to serve as an indicator if it detects a white surface. The connected comparator circuit makes use of a 74HC14 IC which can provide up to 25mA of current, enough to power an LED, a small buzzer and to drive logic inputs. The sensor can detect white surfaces of a distance 2.5mm-13mm.

For the TCRT5000 datasheet please follow this link: TCRT5000

For Updates on new products, tutorials and projects...

LIKE US ON FACEBOOK: EDWELECDERSGNWORKS

Module Specifications:

- Operating voltage : 5V
- Sensor detection distance (white surfaces) : 2.5mm - 13mm
- Output Current : 25mA
- Output Voltage : 4.5V - 5V

For Updates on new products, tutorials and projects...

LIKE US ON FACEBOOK: EDWELECDERSGNWORKS

Package Includes:

1 x TCRT5000 Line Tracking Sensor

Reviews

There are yet no reviews for this product.

UNIVERSITAS MUHAMMADIYAH SURABAYA
PUSAT BAHASA
Jl. Sutorejo 59 Surabaya 60113 Telp. 031-3811966, 3811967 Ext (130) Gd. A Lt 2
Email: pusba.umsby@gmail.com

ENDORSEMENT LETTER
539/PB-UMS/EL/VIII/2016

This letter is to certify that the abstract of the thesis below

Tittle	:	Automatic Lift Bridge Design
Student's name	:	Ahmat Ardianto
Reg. Number	:	20130335004
Department	:	D3 Teknik Komputer

has been endorsed by Pusat Bahasa *UMSurabaya* for further approval by the examining committee of the faculty.

Surabaya, 22 August 2016

Wahle Sumsia, M.Pd.