DS18B20 Temperature sensors are only needed if Temperature monitoring is requested

+3V3 4k7 R2 CABLE CB1 GND

DS18B20 IC1 DS18B20 IC2 DS18B20 IC3 DS18B20 IC4

Vdd DQ GND

Q1 2N2219 3k3 R1 GND

LCD-016N002L 16x2 WC1602A DS1

LED- LED+ D7 D6 D5 D4 D3 D2 D1 D0 E R/W RS VO VDD VSS

RV1 10K Contrast +5V GND

Raspberry_Pi_2_3 CONN1

GPIO16 GPIO17_(GEN0) GPIO18_(GEN1) GPIO19 GPIO20 GPIO21 GPIO22_(GEN3) GPIO23_(GEN4) GPIO24_(GEN5) GPIO25_(GEN6) GPIO26 GPIO27_(GEN2)

(SDA1)_GPIO2 (SCL1)_GPIO3 (GCLK)_GPIO4 GPIO5 GPIO6 (SPI_CE1)_GPIO7 (SPI_CE0)_GPIO8 (SPI_MISO)_GPIO9 (SPI_MOSI)_GPIO10 (SPI_SCLK)_GPIO11 GPIO12 GPIO13 (TXD0)_GPIO14 (RXD0)_GPIO15

ID_SD ID_SC

SHUTDOWN SW1 PLUS SW2 CLEAR SW3

220R R3 39k R4 220R R5

D1 Red D3 Green D2 1N4148

Q2 BC238B

K1 RELAY_1RT CONN_02X01 P1

To contacts H1 and M in ELCO Heat pump regulator

Heat pump in freeze protection mode

Heat Pump running normally

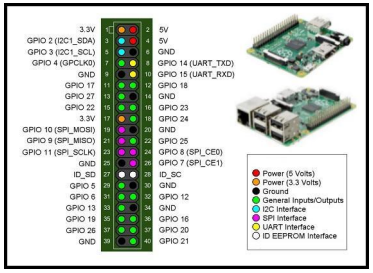
Screws connector example

CONN_01X07 P2

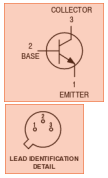
H to Heat Pump

M1 +5V GND From Power supply

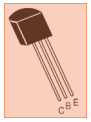
+3V3 DATA GND Cables to Temp. sensors



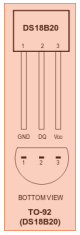
2N2219 pinout



BC238B pinout



DS18B20 pinout



Raspberry Pi extension header:

- Pin numbers corresponds to 2x20 header pin number
- GPIOxx corresponds to broadcom processor GPIO number

Yves OESCH	
Sheet: /	
File: PAC.sch	
Title: Heat Pump Holidays controller	
Size: A4	Date: 2016-11-04
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