

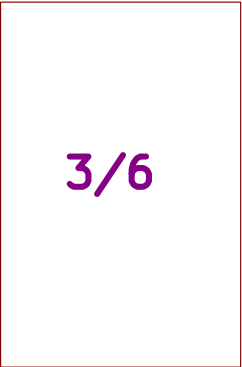
PICO STAGE-20.0

RASPI



File: raspi.kicad_sch

PICO



File: pico.kicad_sch

CONNECTOR



File: connector.kicad_sch

INPUT



File: input.kicad_sch

OUTPUT



File: output.kicad_sch

According to OSHA <https://www.oshwa.org/a-resolution-to-redefine-spi-signal-names/>

New signal names:

SDO – Serial Data Out. An output signal on a device where data is sent out to another SPI device.
SDI – Serial Data In. An input signal on a device where data is received from another SPI device.
CS – Chip Select. Activated by the controller to initiate communication with a given peripheral.
PICO (peripheral in/controller out). For devices that can be either a controller or a peripheral; the signal on which the device sends output when acting as the controller, and receives input when acting as the peripheral.
POCI (peripheral out/controller in). For devices that can be either a controller or a peripheral; the signal on which the device receives input when acting as the controller, and sends output when acting as the peripheral.
SDIO – Serial Data In/Out. A bi-directional serial signal.

Deprecated signal names:

MOSI – Master Out Slave In
MISO – Master In Slave Out
SS – Slave Select
MOMI – Master Out Master In
SOSI – Slave Out Slave In

Signal names unchanged:

SCK – Serial Clock. The clock for the bus generated by the controller.

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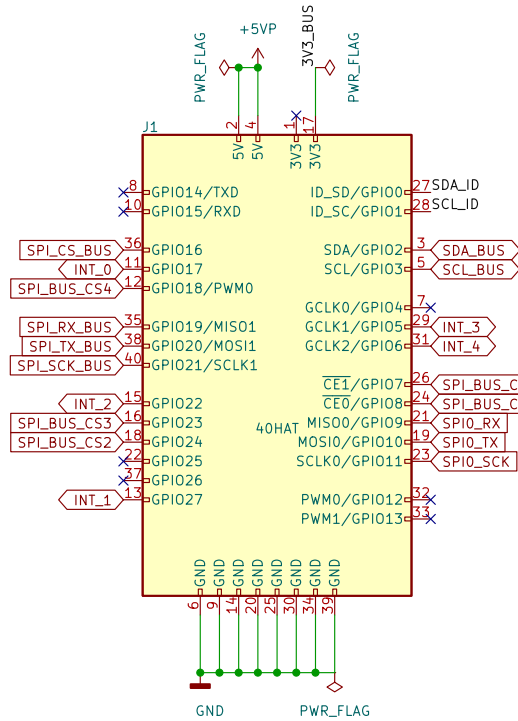
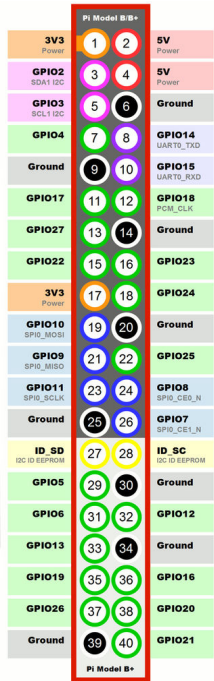


Sheet: /
File: M10DX01-20.kicad_sch

Title: **M10DX01 –**

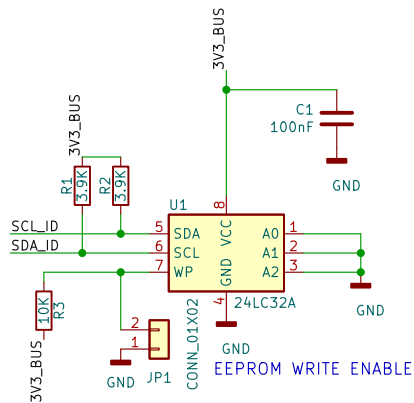
Size: A4	Date: 2022-03-21	Rev: 20.0
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1	Id: 1/6	

PICO STAGE-20.0

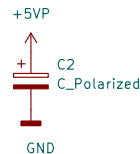


HAT EEPROM

The HAT spec requires this EEPROM with system information to be in place in order to be called a HAT. It should be set up as write protected (WP pin held high), so it may be desirable to either put a jumper as shown to enable writing, or to hook up a spare IO pin to do so.



LOG1
OSHWGR



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WIZcube		GR000004	
Sheet: /RASPI/		File: raspi.kicad_sch	
Title: M10DX01 -			
Size: A4	Date: 2022-03-21	Rev: 20.0	
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1		Id: 2/6	

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README FIRST

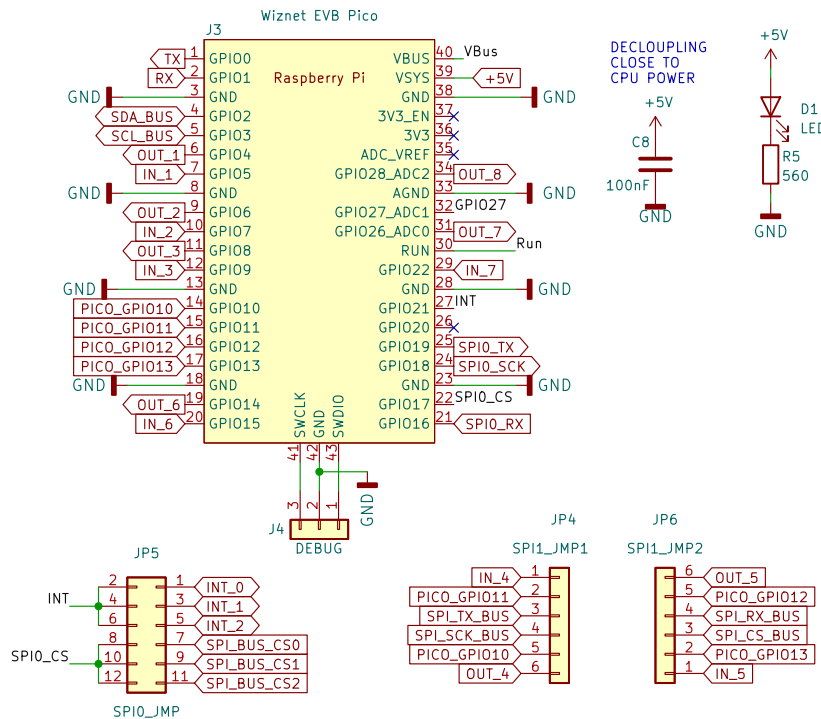
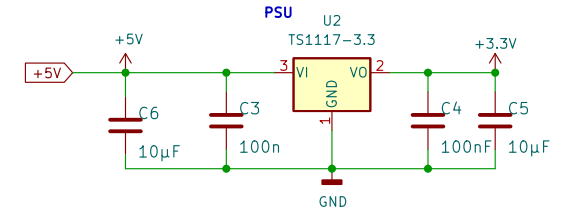
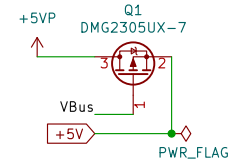
GPIO16–GPIO21 used by WIZNET
GPIO16, GPIO18, GPIO19 shared with WIZNET, CANBUS, SD, SPI on the BUS to control other M10 module through SPI
ALL have different CS pins and INTERRUPT pins

CANBUS IS THE LATEST STANDARD. SPEED UP TO 5MHZ.
MAYBE THIS IS ALSO A SOLUTION FOR FAST I/O. WE CHECK THIS BY EXPERIMENTING.

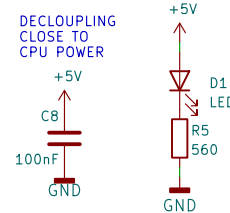
BELOW SIGNALS ARE CONNECTED TO
RASPI 40 PIN CONNECTOR

INT_0
INT_1
INT_2
INT_3
INT_4
SPL_BUS_CS0
SPL_BUS_CS1
SPL_BUS_CS2
SPL_BUS_CS3
SPL_BUS_CS4

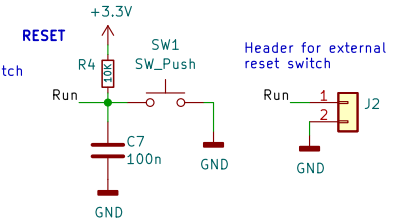
PMOSFET to allow
powering PICO
from external +5V
while still connected
via USB. Per Raspberry
Pi Pico datasheet.



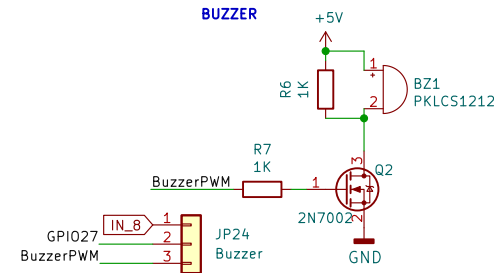
POWER INDICATOR LED



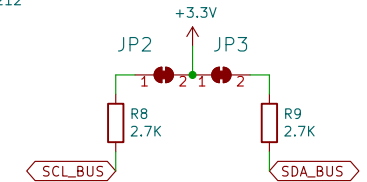
Reset Switch. verify
assembly house switch
choices.



BUZZER



I2C Pullups
Soldered by Default



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Sheet: /PICO/
File: pico.kicad_sch

Title: M10DX01 –

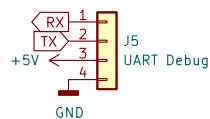
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Rev: 20.0
Id: 3/6

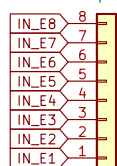


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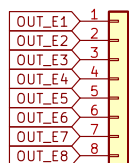
UART DEBUG CONNECTOR



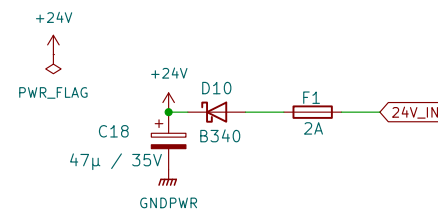
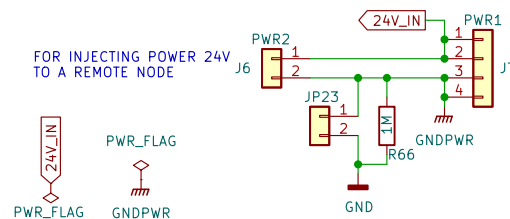
J8
Inputs



J9
Outputs



+24V POWER



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Sheet: /CONNECTOR/

File: connector.kicad_sch

Title: M10DX01 -

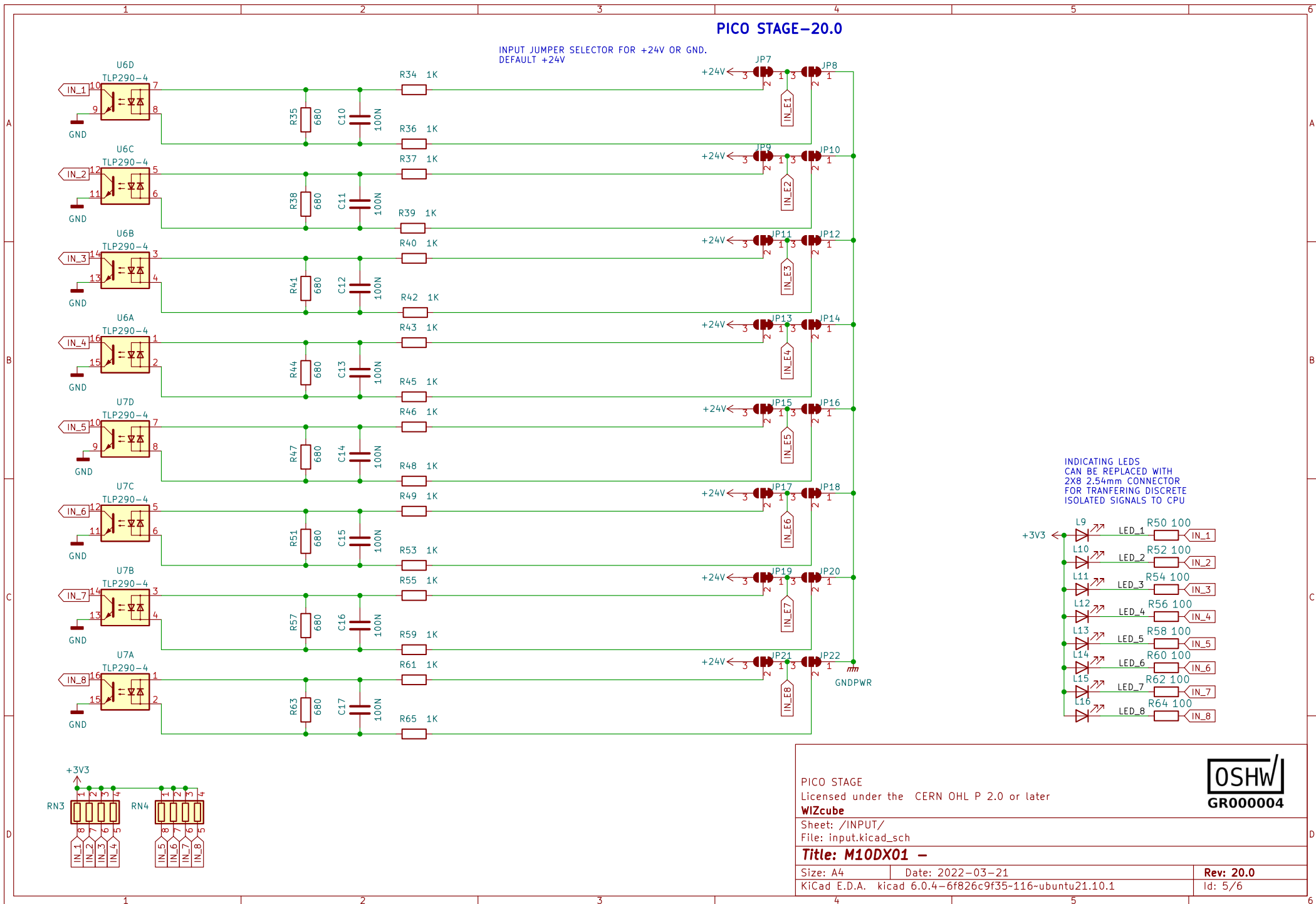
Size: A4 Date: 2022-03-21

KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

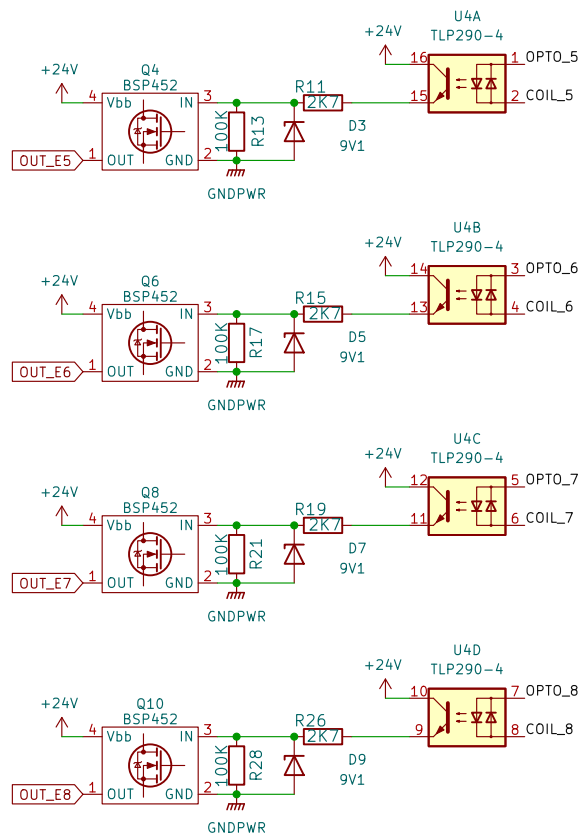
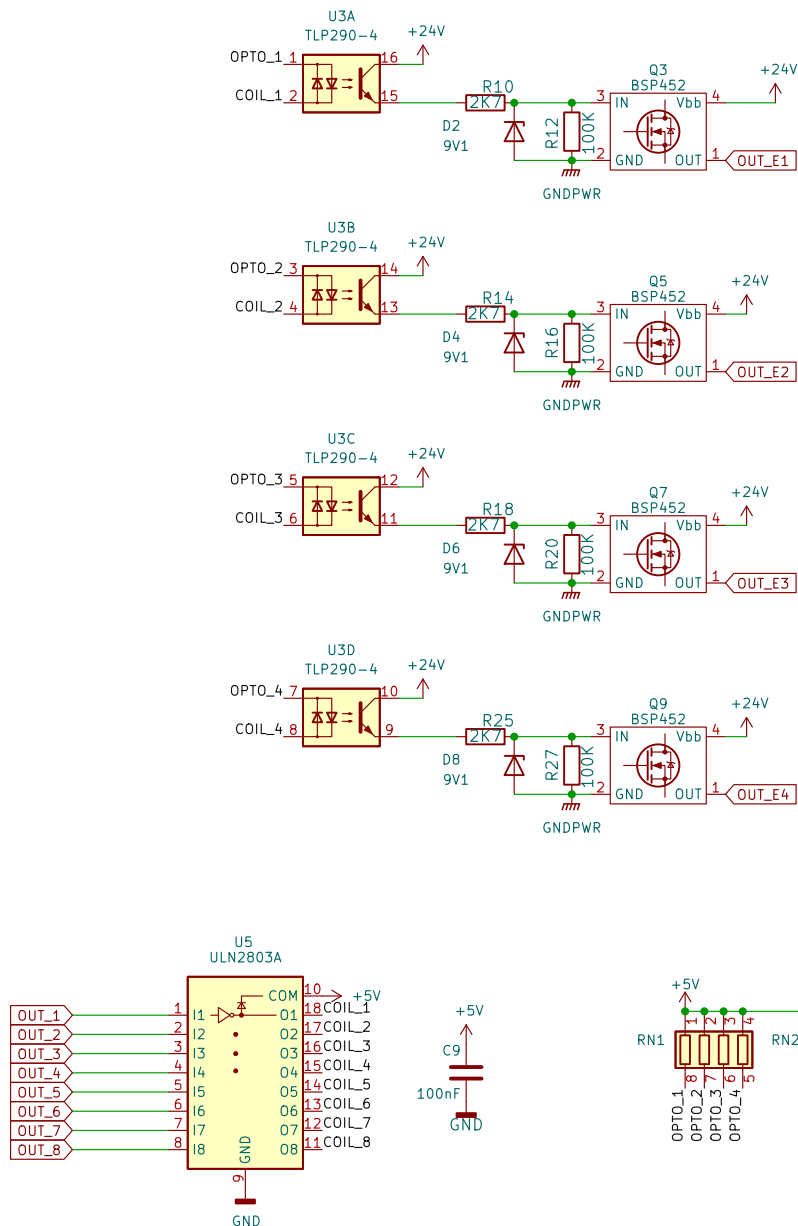


Rev: 20.0

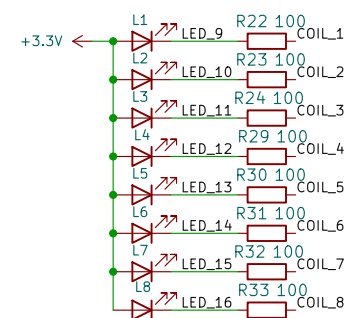
Id: 4/6



PICO STAGE-20.0



INDICATING LEDS
CAN BE REPLACED WITH
2X8 2.54mm. CONNECTOR
FOR TRANSFERING DISCRETE
ISOLATED SIGNALS TO CPU



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OSHW
GR000004

Sheet: /OUTPUT/
File: output.kicad_sch

Title: M10DX01 -

Size: A4 Date: 2022-03-21
KiCad E.D.A. kicad 6.0.4-6f826c9f35-116-ubuntu21.10.1

Rev: 20.0
Id: 6/6