Power input / MOSFET section

- 24V
- U2 — KF301-5.0-2P
- D1 — MBRS3200T3G
- vemf
- Q1 — IRLZ44PBF
- R2 100
- PD3 / D3_PWM
- R1 10k

Optional (INA226 sense)

- IN+ — R8 10
- INA226 0.022
- IN- — R5 10
- GND

SW1 section

- H2 (5 4 3 2 1)
- B, C, A
- SW1

Optional (buttons)

- OK/SET
- DOWN
- UP
- H1 (5 4 3 2 1)
- GND

Optional (INA226 Mod)

- I1 — INA226 Mod
- 8 VCC — VCC1
- 7 GND — GND
- 6 SDA — SDA
- 5 SCL — SCL
- 4 ALE
- 3 VBS
- 2 IN- — IN-
- 1 IN+ — IN+
- C3 0.1u

ENC connector

- J2 (5 4 3 2 1)
- VCC1, BTN, S2, S1
- GND

Display connector

- J1 (5 4 3 2 1)
- VCC1, SCLK, RCLK, DIO
- GND

ARDUINO1 — Arduino Pro mini

- DTR, TX0, RX1, VCC, GND, GND
- TX0, RX1, RST, GND
- RAW — RAW
- GND
- VCC — VCC1
- D2, D3, D4, D5, D6, D7, D8, D9
- A3, A2, A1, A0
- A1, A0
- BTN, D3_PWM, S2, S1, DIO, RCLK, SCLK
- D13, D12, D11, D10
- A4, A5, A6, A7
- SDA, SCL
- GND

- VCC1
- C2 0.1u
- GND

U1 / analog section

- U1 (1 2 3)
- 24V
- R10 20k
- R7 10k
- PC0 / A0
- C10 200u
- R9 4.7k
- C5 0.1u
- GND

- vemf
- R3 20k
- R6 10k
- PC1 / A1
- R4 4.7k
- C4 0.1u
- GND

Regulator section

- RAW
- 24V
- 9.6V
- R11 680k
- R12 100k
- C1 0.1u
- C6
- U4 — LP2951-5.0DRG
  - 1 OUT
  - 2 SENSE
  - 3 SHUTDOWN
  - 4 GROUND
  - 8 IN — IN
  - 7 FEEDBACK
  - 6 VTAP
  - 5 ERROR#
- NC 100k
- C7
- C11 0.1u
- GND

Title block

TITLE: GW_LED_Drill (https://alexgyver.ru/drill-pid/)

REV: 1.0

Company: V0

Sheet: 1/1

Date: 2025-10-14   Drawn By: UEF

EasyEDA

Figure 8-1. Input Filtering

V_S = 2.7V – 5.5V

Load Supply

100 nF

R_{FILTER}

$<100\ \Omega$

R_{SHUNT}

$<100\ \Omega$

Load

C_{FILTER}
0.1µF to 1µF

V_S
VBUS
IN+
R_{DIFF}
IN-
GND

High-Side or Low-Side Sensing Application

Bus Voltage
(0V to 36V)

High-Side Shunt

Load

Low-Side Shunt

VBUS

IN+

IN-

GND

ADC

X

Power Register

Current Register

Voltage Register

Alert Register

I²C-, SMBus-, Compatible Interface

TI Device

Supply Voltage
(2.7V to 5.5V)

C_{BYPASS}
0.1µF

VS

SDA
SCL

ALERT
A0
A1