

Only six DOUT anode columns are used. These are current limited by resistors R1-6.

BOM v1.0 placeholder

| Type | Qty | Value | Package | Parts | Mouser | Reichelt | Conrad | Other | Notes |
|-------------------------|-----|----------------|---------|----------|-----------------|-----------------|----------------|-------|----------------------|
| Resistors | | | | | | | | | |
| | 6 | 100-220R 5% | THT | R1-6 | | | | | |
| Resistor network | | | | | | | | | |
| | 1 | 10k | SOM16 | RN1 | 4816P-T02-103LF | | | | |
| Capacitors | | | | | | | | | |
| | 3 | 100n | 1206 | C1-3 | | | | | |
| Diodes | | | | | | | | | |
| | 19 | 1N4148 | THT | | | | | | |
| LEDs | | | | | | | | | |
| | 18 | various | 3mm | | | | | | insert into switches |
| ICs | | | | | | | | | |
| | 1 | 74HC165 | SOIC16 | IC2 | 595-SN74HC165DR | | | | |
| | 2 | 74HC595 | SOIC16 | IC1, IC3 | | | | | |
| Encoder | | | | | | | | | |
| | 1 | STEC12 | | | | STEC12E08 | | | |
| Switches | | | | | | | | | |
| | 18 | MEC/APEM | 3FTH9 | SW1-18 | 642-3FTH9 | TASTER 3FTH9 | 705276 - 62 | | |
| Headers | | | | | | | | | |
| | 1 | 1*3 | male | | | | | | |
| | 2 | 2*5 | male | | | | | | |
| Hardware | | | | | | | | | |
| | 6 | M3 spacer | TBD | | | | | | |
| | 1 | datawheel | DK-38? | | | | | | |
| | 18 | switchcaps | 22.5mm | | 642-1S11-22.5 | | 1S11-22.5 | | |

Versions

v1.0: first release.

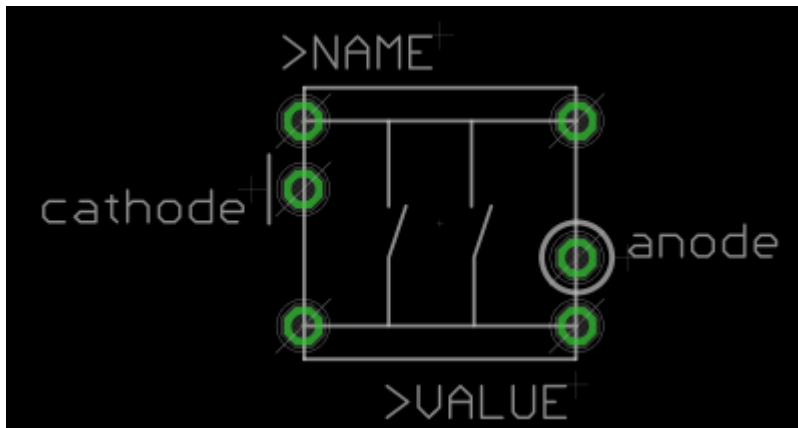
Assembly

Start with the SMT parts (caps, ICs and RN), then the resistors and diodes with correct polarity. Headers, switches (read below first!), encoder, caps and knobs.

Important: insert the LEDs into the switches before soldering them! It's quite hard to bend the legs once the switches are in place. The LED legs should not interfere with the switch action; i.e. the

button should be pressed and released without getting caught on the legs.

Ensure that when the switch is soldered in, the LED is correctly polarised. Round part (anode) of the LED to the circled pin; flat part (cathode) to the line:



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