

WIRING (REMOTE MCU)

SELECTOR MOTOR WIRE

LOCAL MCU VS REMOTE MCU

When we say “local MCU” we mean a “buddy board” or other dedicated MCU that will be mounted near the ERCF. Examples include the BTT MMB (the preferred option) and the EASY BRD. Skip to [page 24](#) if you’re using a local MCU.

When we say “remote MCU” we mean the dedicated MCU(s) for your printer. It is unusual to have enough spare motor, servo, and endstop ports to run an ERCF unless you’re using a dual SKR board setup, but if that’s you, then you can save some money on the buddy board by using this option.

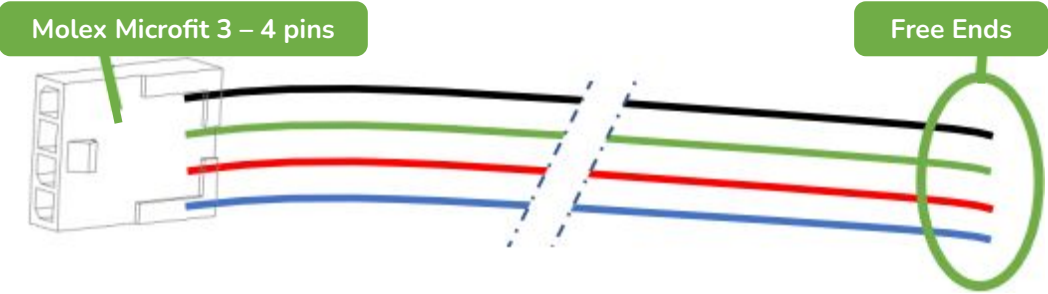
PREPARING THE WIRES FOR REMOTE MCU

For an ease of installation, it is recommended to prepare the wiring before assembly. There are two wire looms to do:

- One that goes from the connector plate to the selector motor
- One that goes from the connector plate to all the other components, namely the endstop, the servo and the encoder

SELECTOR MOTOR WIRE FOR REMOTE MCU

Prepare the 4 wire selector motor cable as shown. Don’t crimp the free ends for now.



CONNECTION TO THE SELECTOR MOTOR

When using a remote MCU, it is recommended to finish the selector motor connection later in the assembly, for ease of assembly and to ensure the crimps are done with the proper wire length.

Wire Length Chart for remote MCU

Channels	Selector Motor Wire Length (mm)
N	$175 + 25N$
4	275
5	300
6	325
7	350
8	375
9	400
10	425
11	450
12	475
13	500
14	525
15	550

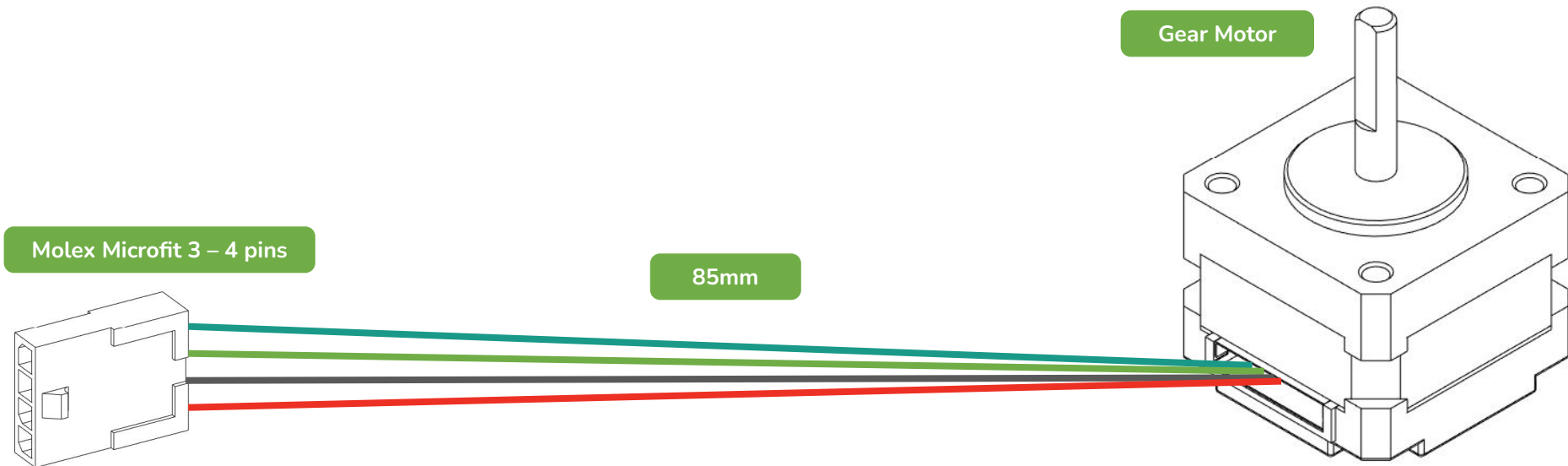
All wire lengths include approximately 25-50mm of spare length for maintenance.

WIRING (REMOTE MCU)

GEAR MOTOR WIRE

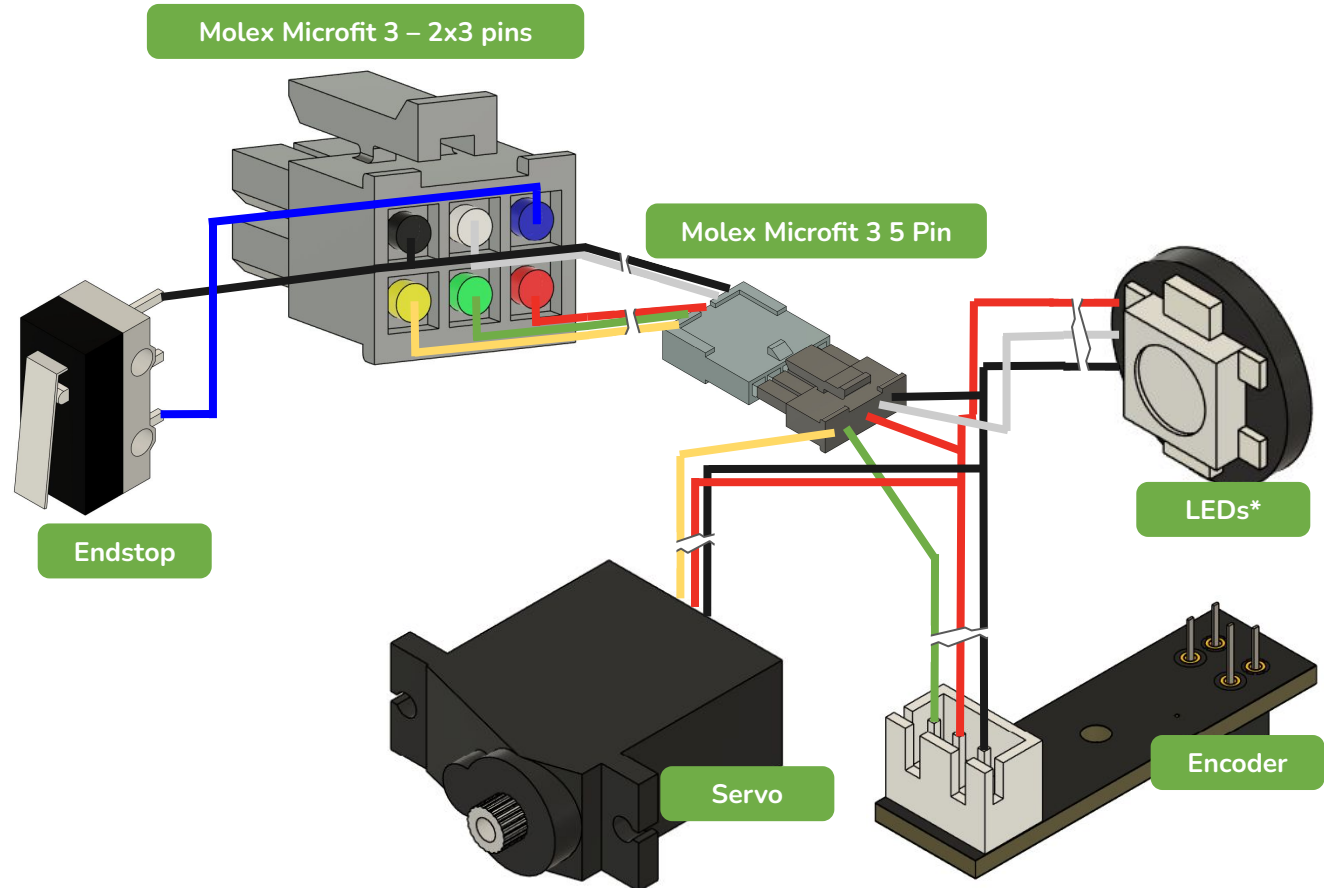
GEAR MOTOR WIRE

Trim your Gear Motor wires to 85mm, then crimp and add the 4-pin Molex Microfit connector. That's it!



WIRING (REMOTE MCU)

SENSOR AND ENCODER WIRE BUS



Channels	Wire Length (mm)		
	Endstop	Servo	Encoder/LED
N	60	350 + 50N	450 + 50N
4	60	550	650
5	60	600	700
6	60	650	750
7	60	700	800
8	60	750	850
9	60	800	900
10	60	850	950
11	60	900	1000
12	60	950	1050
13	60	1000	1100
14	60	1050	1150
15	60	1100	1200

*Optional. Other LEDs not pictured.

6 WIRE BUS

Prepare the 6 wire bus for the ERCF. The GND is shared between the Servo, the Encoder, the LEDs, and the Endstop. The +5V is shared between the Servo, the Encoder, and the LEDs. We will try to keep to this color convention: Red for +5V, Black for ground, Yellow for the Servo wire, Green for the Encoder wire, Light Gray for the LEDs, and Blue for the Endstop.

To join the multiple GND / +5V lines, either crimp them together or make a splice prior to the crimp position.

Only the Endstop is directly connected to this wire bundle, typically by soldering the wires directly on the microswitch pins. It is recommended to finish the Servo and Encoder connections later in the assembly, for ease of assembly and to ensure the crimps are done with the proper wire length to reach the end of the cable chain, where we typically put Molex connectors.