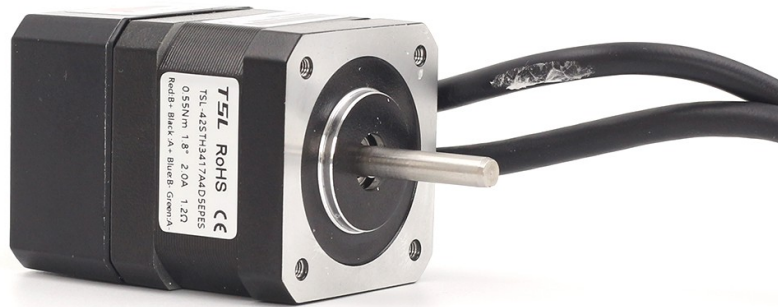




## Product Highlights

STEP ANGLE

**1.8 deg**

FRAME SIZE

**42 mm**

HOLDING TORQUE

**0.3-1.0 N.m**

ENCODER SIGNAL

**PA+/PA-  
PB+/PB-**

BODY LENGTH L\*

**54 / 60 / 68 / 80  
mm**

ENCODER CABLE

**8-pin male**

Integrated encoder feedback

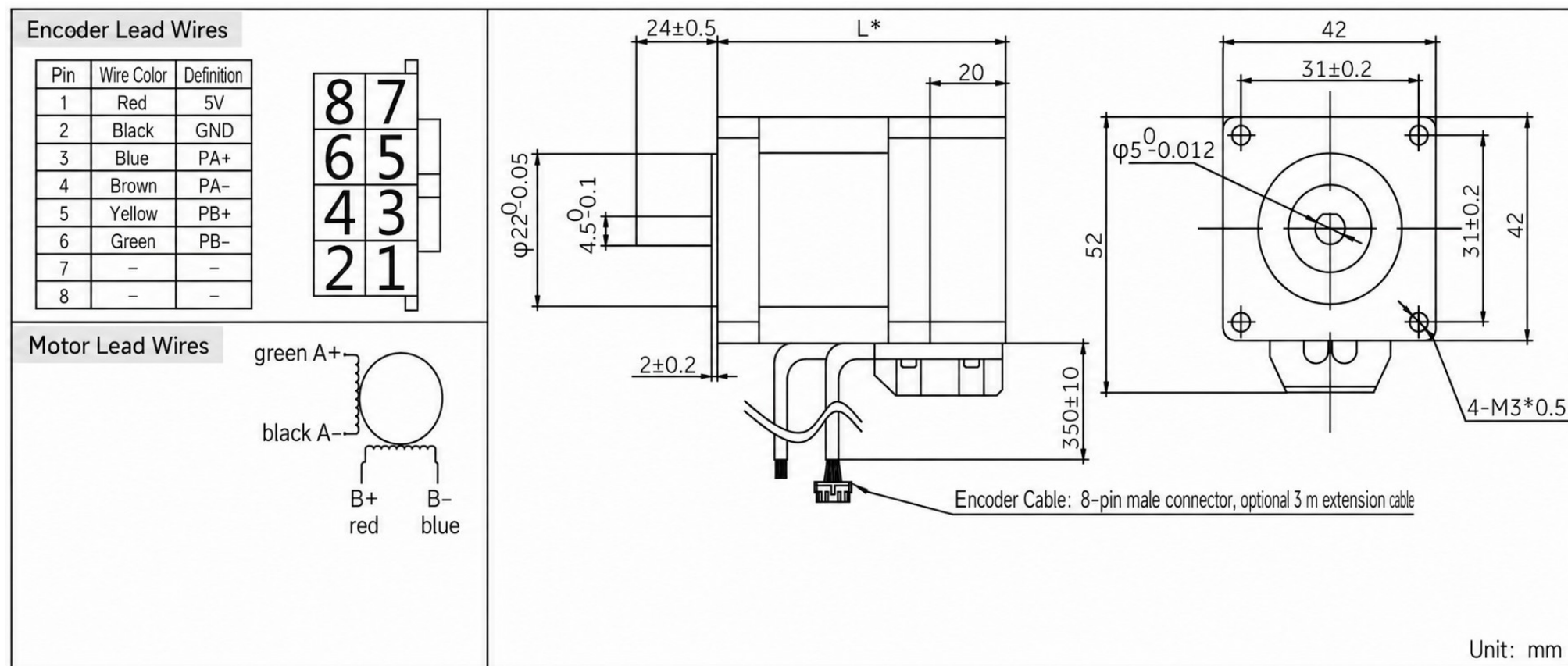
4-wire bipolar motor connection

Optional 3 m encoder extension cable

Four standard body lengths available

| Motor Model           | TSL-42STH3417A4ES | TSL-42STH4020A4ES | TSL-42STH4820A4ES | TSL-42STH6025A4ES |
|-----------------------|-------------------|-------------------|-------------------|-------------------|
| Step Angle (deg)      | 1.8               | 1.8               | 1.8               | 1.8               |
| Holding Torque (N.m)  | 0.3               | 0.6               | 0.7               | 1.0               |
| Resistance (ohm)      | 2.2               | 3.0               | 3.2               | 2.9               |
| Inductance (mH)       | 3.0               | 3.1               | 7.0               | 6.2               |
| Rotor Inertia (g.cm2) | 57.0              | 57.0              | 82.0              | 128.0             |
| Body Length L* (mm)   | 54                | 60                | 68                | 80                |
| Weight (g)            | 281               | 342               | 420               | 546               |

Note: Values above are the standard configurations provided for the TSL-42STH-ES series. Confirm final electrical and mechanical requirements before ordering.



$L^*$  = body length according to model: 54 / 60 / 68 / 80 mm

|                     |                         |                     |                          |                                                     |
|---------------------|-------------------------|---------------------|--------------------------|-----------------------------------------------------|
| FRAME<br>42 x 42 mm | SHAFT<br>Dia. 5 x 20 mm | PILOT<br>Dia. 22 mm | MOUNTING<br>4 x M3 x 0.5 | ENCODER CABLE<br>8-pin male; optional 3 m extension |
|---------------------|-------------------------|---------------------|--------------------------|-----------------------------------------------------|

## Encoder Lead Wires

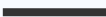
| Pin | Wire Color | Definition |
|-----|------------|------------|
| 1   | Red        | 5V         |
| 2   | Black      | GND        |
| 3   | Blue       | PA+        |
| 4   | Brown      | PA-        |
| 5   | Yellow     | PB+        |
| 6   | Green      | PB-        |
| 7   | -          | -          |
| 8   | -          | -          |

Encoder Cable

**8-pin male connector**  
**Optional 3 m extension cable**

## Motor Lead Wires

 **Green A+**

 **Black A-**

 **Red B+**

 **Blue B-**

**4-wire bipolar  
motor connection**

## Wiring Notes

- 1 Set the driver SW6 DIP switch to ON.
- 2 The encoder phase sequence must match the motor winding sequence.
- 3 If the driver gives a 7-flash alarm, swap the A+ and A- motor leads, then power the system on again.

**Confirm wiring before applying power.**