

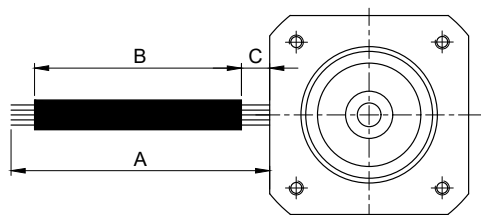
# Cable Assembly

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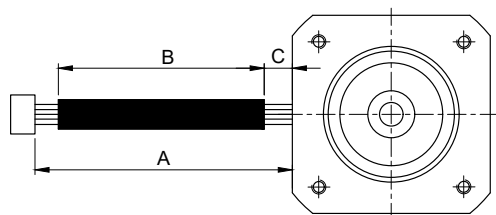
Customer name

Article number

## Shorten or extend wires



Assembly without connector



Assembly with connector (Stepper Motors only)

Wires can be extended by soldering on wires of the same color. If necessary, a protection sleeve can also be used. The standard gap **(C)** between protection sleeve and motor is 5 mm (tolerance  $\pm 5$  mm).

For motors with a connector at the cable end, replacing the connector changes the cable length tolerance from +10 mm to  $\pm 10$  mm.

**(A)** Length of the wire in mm (tolerance +10 mm)

**(B)** Length of the protection sleeve\* in mm (tolerance +10 mm)

**(C)** Gap between protection sleeve and motor (tolerance  $\pm 5$  mm)

Connector

Protection sleeve

Datasheets Connectors: [PA-F Series](#), [PH Series](#), [VH Series](#), [XH Series](#), [ZH Series](#), [Micro-Fit Series](#)

## Connect windings

Cable connection for 6- or 8-wire motors\*\*

| Pin      | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|----------|---|---|---|---|---|---|---|---|
| Function |   |   |   |   |   |   |   |   |

For series connection (one half of the winding), the unused wires are shortened to approx. 2-3 cm, twisted if necessary and soldered as well as insulated with black heat-shrink tubing. For parallel connection, the wires are shortened to approx. 3-5 cm, twisted, extended with a wire of the same color, soldered and insulated with black heat-shrink tubing. Without a connector, the wire ends are stripped  $5 \pm 1$  mm.

\* Black heat-shrink tubing, polyolefin, UL certification; spiral tubing, natural, PE

\*\* Further details in the motor datasheet (see website)

**Please note:**

- Wires will be extended with the same type and diameter of wire. Exceptions:

| Motor/Wire            | Original wire   | Original wire isolation | Substitute wire | Substitute wire isolation |
|-----------------------|-----------------|-------------------------|-----------------|---------------------------|
| DB87 Motor wire       | UL3135 (AWG 16) | Silicone                | UL1332 (AWG 16) | Teflon                    |
| DB87 Hall sensor wire | UL1332 (AWG 22) | Teflon                  | UL1430 (AWG 26) | XL PVC                    |
| DB80S/M-Motor         | UL3135 (AWG 14) | Silicone                | UL1332 (AWG 16) | Teflon                    |
| DB80-Hall             | UL2464 (AWG 26) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DB56 Motor wire       | UL1430 (AWG 18) | XL PVC                  | UL1332 (AWG 18) | Teflon                    |
| DB56 Hall sensor wire | UL3265 (AWG 28) | n.a.                    | UL1430 (AWG 26) | XL PVC                    |
| DFA68 Motor wire      | UL1430 (AWG 18) | XL PVC                  | UL1332 (AWG 18) | Teflon                    |
| DB43 Motor wire       | UL1430 (AWG 20) | XL PVC                  | UL3266 (AWG 20) | XL PE                     |
| DB42 Motor wire       | UL1430 (AWG 20) | XL PVC                  | UL3266 (AWG 20) | XL PE                     |
| DBL42 Motor wire      | UL1332 (AWG 22) | Teflon                  | UL1430 (AWG 22) | XL PVC                    |
| DB33 Motor wire       | UL1007 (AWG 16) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DB33 Hall sensor wire | UL1007 (AWG 16) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DB28 Motor wire       | UL1007 (AWG 16) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DB28 Hall sensor wire | UL1007 (AWG 16) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DB22 Motor wire       | UL1007 (AWG 16) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DB22 Hall sensor wire | UL1007 (AWG 18) | PVC                     | UL1430 (AWG 26) | XL PVC                    |
| DS28 Motor wire       | UL1332 (AWG 22) | Teflon                  | UL1430 (AWG 22) | XL PVC                    |
| DS16 Motor wire       | UL1332 (AWG 24) | Teflon                  | UL1430 (AWG 22) | XL PVC                    |
| ST2018/SCA20          | UL1061 (AWG 26) | SR-PVC                  | UL1430 (AWG 26) | XL PVC                    |
| STA14                 | UL3265 (AWG 28) | PE                      | UL1430 (AWG 26) | XL PVC                    |

|           |                                                                                                      |
|-----------|------------------------------------------------------------------------------------------------------|
| DB22      | Red motor wire will be extended with orange wire, brown motor wire will be extended with white wire. |
| DBL36     | Motor wires AWG 24 will be extended with wires AWG 22.                                               |
| ST5918D   | Yellow and yellow/white motor wires will be extended with blue and blue/white wires.                 |
| SC41-SC60 | No wires included.                                                                                   |
| DF45      | No extension possible, choose connector type.                                                        |
| DB80      | With DB80L and DB80C only extension of Hall wires possible.                                          |

- If the motor is in stock, our delivery time is approximately one week for 1-24 pieces and approx. two weeks for 25 or more pieces. Please go to our website to check the stock availability of a motor.
- If you combine your motor with a brake and/or encoder, we cannot extend the wires of the brake and/or encoder.
- For larger quantities, other cable and connector configurations are also possible. For further information, please contact our sales department: [info@us.nanotec.com](mailto:info@us.nanotec.com)

Please send the completed form via e-mail to [info@us.nanotec.com](mailto:info@us.nanotec.com).