

# COMPACT WHEEL DRIVE

## CWD-1000B



### **Compact Design with Minimal Axial Length**

Exceptional power in a compact size, offering efficiency and performance in applications where space and power are critical.

### **Exceptional Radial Load Capacity**

Ensures robust support and stability in demanding applications, enabling the drives to handle heavy-duty tasks with ease while maintaining precision and efficiency.

### **Smooth Motion and High Reliability**

Delivers smooth and precise motion, coupled with high reliability - ensuring minimal downtime and maintenance.

### **Best-in-class Power Density**

Offering efficiency and performance in applications where space and power are critical.

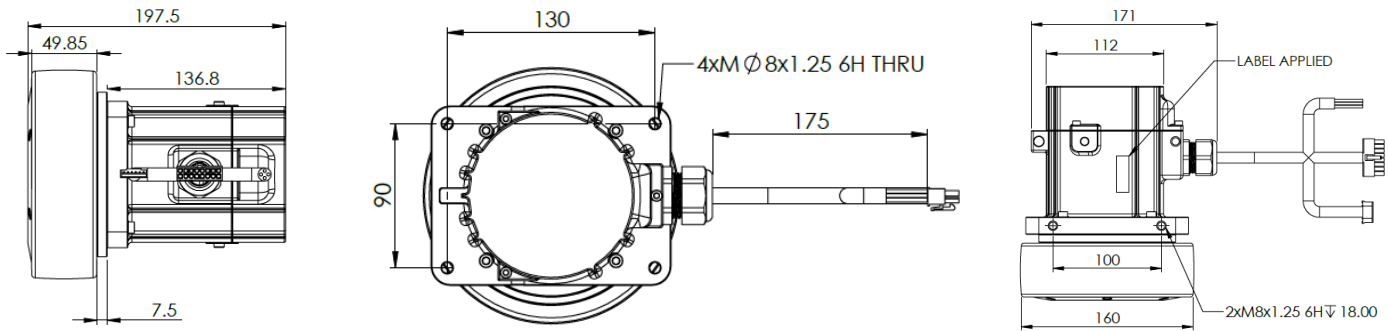
### **Low Noise Operation**

Enhancing the work atmosphere and complying with noise regulations.

## Technical Specifications

| Parameter                               | Units   | Value     |
|---|---------|-----------|
| Continuous Output Torque                | Nm      | 40        |
| Acceleration Torque                     | Nm      | 100       |
| Emergency Torque                        | Nm      | 150       |
| Nominal Output Velocity                 | rpm     | 240       |
| Maximum Output Velocity                 | rpm     | 300       |
| Ratio                                   | -       | 15:1      |
| Reducer Efficiency                      | %       | 90        |
| Noise Level @ nominal Velocity and load | dBA/1 m | <75       |
| Backlash                                | Arcmin  | <30       |
| Life expectancy                         | Hrs.    | > 30,000  |
| Bus Voltage                             | VDC     | 48        |
| Power                                   | Watts   | 1200      |
| Wheel Diameter                          | Mm      | 160       |
| Radial Load                             | N       | 8000      |
| Encoder Resolution                      | Counts  | 16,384    |
| Halls                                   | -       | Y         |
| Optional Brake Torque                   | Nm      | 10        |
| Ambient Operating Temperature           | Celsius | -10 to 40 |
| Protection Class                        |         | IP54      |

## Dimensional Drawing



## Cable and Connection

| FLYING LEADS (POWER & BRAKE) |         |         |         |                   |         |
|------------------------------|---------|---------|---------|-------------------|---------|
| FUNCTION                     | PHASE A | PHASE B | PHASE C | BRAKE 1           | BRAKE 2 |
| COLOR                        | YELLOW  | GREEN   | BLACK   | 2 CONDUCTOR CABLE |         |

| HALLS CONNECTOR: JST PHR-6 (MATES WITH XXX) |     |     |        |        |        |      |
|---|-----|-----|--------|--------|--------|------|
| FUNCTION                                    | GND | +5V | HALL A | HALL C | HALL B | TEMP |
| PIN#  | 1   | 2   | 3      | 4      | 5      | 6    |

| ENCODER CONNECTOR: 39-01-2160 USING 39-00-0184 CONTACTS (EXAMPLE MATE: 39-01-2161) |    |    |    |    |    |    |    |    |    |    |    |    |     |     |      |
|--|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|------|
| FUNCTION   | A+ | A- | B+ | B- | Z+ | Z- | U+ | U- | V+ | V- | W+ | W- | +5V | GND | SHLD |
| PIN#   | 15 | 8  | 14 | 16 | 13 | 6  | 3  | 9  | 4  | 10 | 5  | 11 | 12  | 7   | 1    |

## Motor Specifications

| <b>Parameter</b>               | <b>Unit</b>                                       | <b>Value</b> |
|--------------------------------|---|--------------|
| <i>Rated Power</i>             | W   | 1000         |
| <i>Rated Voltage</i>           | V <sub>(DC)</sub>                                 | 48           |
| <i>Continuous Stall Torque</i> | N-m   | 3.18         |
| <i>Max Torque</i>              | N-m   | 6.50         |
| <i>Rated/Max Speed</i>         | Rpm   | 3600/4300    |
| <i>Rated Current</i>           | A <sub>(peak)</sub>                               | 28.5         |
| <i>Max Current</i>             | A <sub>(peak)</sub>                               | 54           |
| <i>Ke</i>                      | V <sub>(peak)</sub> /Krpm                         | 11.2         |
| <i>Kt</i>                      | Nm/A <sub>(peak)</sub>                            | 0.12         |
| <i>Resistance</i>              | Ω   | 0.06         |
| <i>Inductance</i>              | mH  | 0.20         |
| <i>Number of Poles</i>         | #   | 8            |
| <i>Operating Environment</i>   | 0-40 °C<br>Humidity 95% RH (free from condensing) |              |
| <i>Storage Environment</i>     | 0-40 °C<br>Humidity 95% RH (free from condensing) |              |
| <i>Insulation</i>              | Class H (180 °C Winding Temperature)              |              |
| <i>Duty Class</i>              | Continuous  |              |
| <i>Feedback Sensor</i>         | 16384 counts/rev.                                 |              |