

# Интегрированный серводвигатель iWMC

По вопросам продаж и поддержки обращайтесь:

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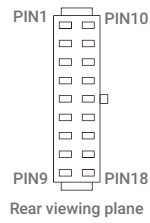
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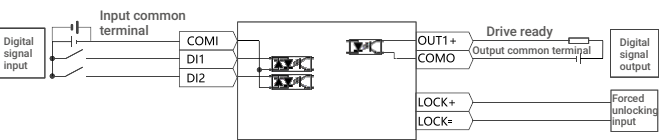
эл.почта: [kof@nt-rt.ru](mailto:kof@nt-rt.ru) || сайт: <https://kinco.nt-rt.ru/>

■ Terminal definition

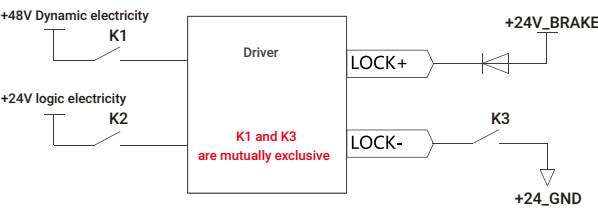


| PIN | signal | PIN | signal |
|-----|--------|-----|--------|
| 1   | 24V    | 10  | GND    |
| 2   | LOCK+  | 11  | LOCK-  |
| 3   | CANH   | 12  | CANL   |
| 4   | CANH   | 13  | CANL   |
| 5   | 485A   | 14  | 485B   |
| 6   | 485A   | 15  | 485B   |
| 7   | OUT1+  | 16  | COMO   |
| 8   | COMI   | 17  | DI1    |
| 9   | Empty  | 18  | DI2    |

iWMC Integrated Servo Wheel Control Wiring Diagram

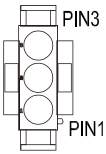


Wiring Diagram of Recommended Circuit for Forced Unlocking Brake



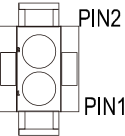
Note: The forced unlocking function needs to be used after the power supply of the servo wheel is cut off.

Power port

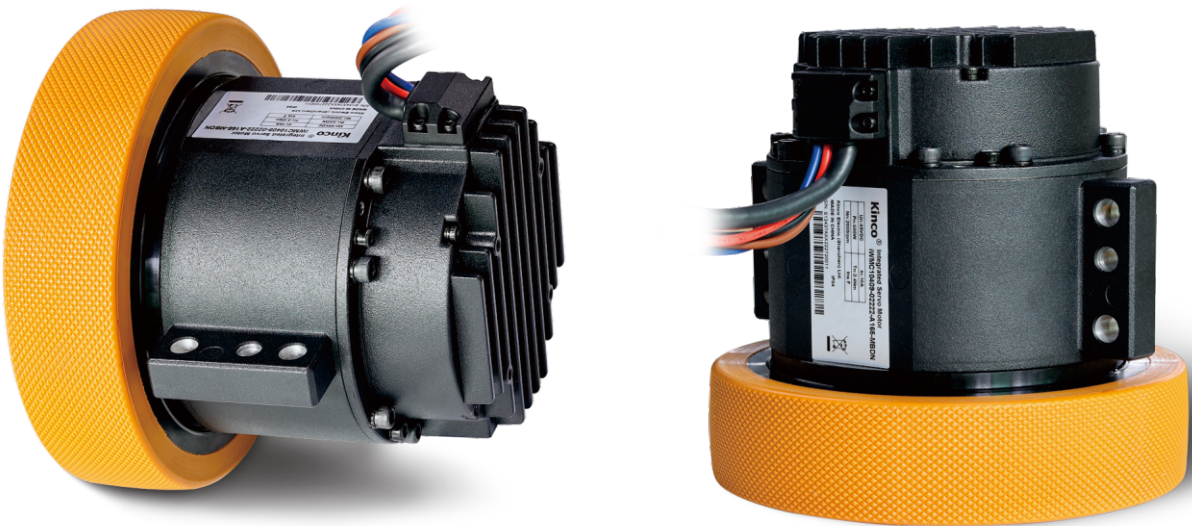


| Pin number | Pin name | Pin function                                                      |
|------------|----------|-------------------------------------------------------------------|
| 3          | DC-      | The input end of the power supply of the driver must be connected |
| 1          | DC+      | Input voltage: 24~60VDC                                           |

Brake resistance port



| Pin number | Pin name | Pin function                             |
|------------|----------|------------------------------------------|
| 1          | RB+      | External braking resistor input terminal |
| 2          | RB-      |                                          |



■ Superiority

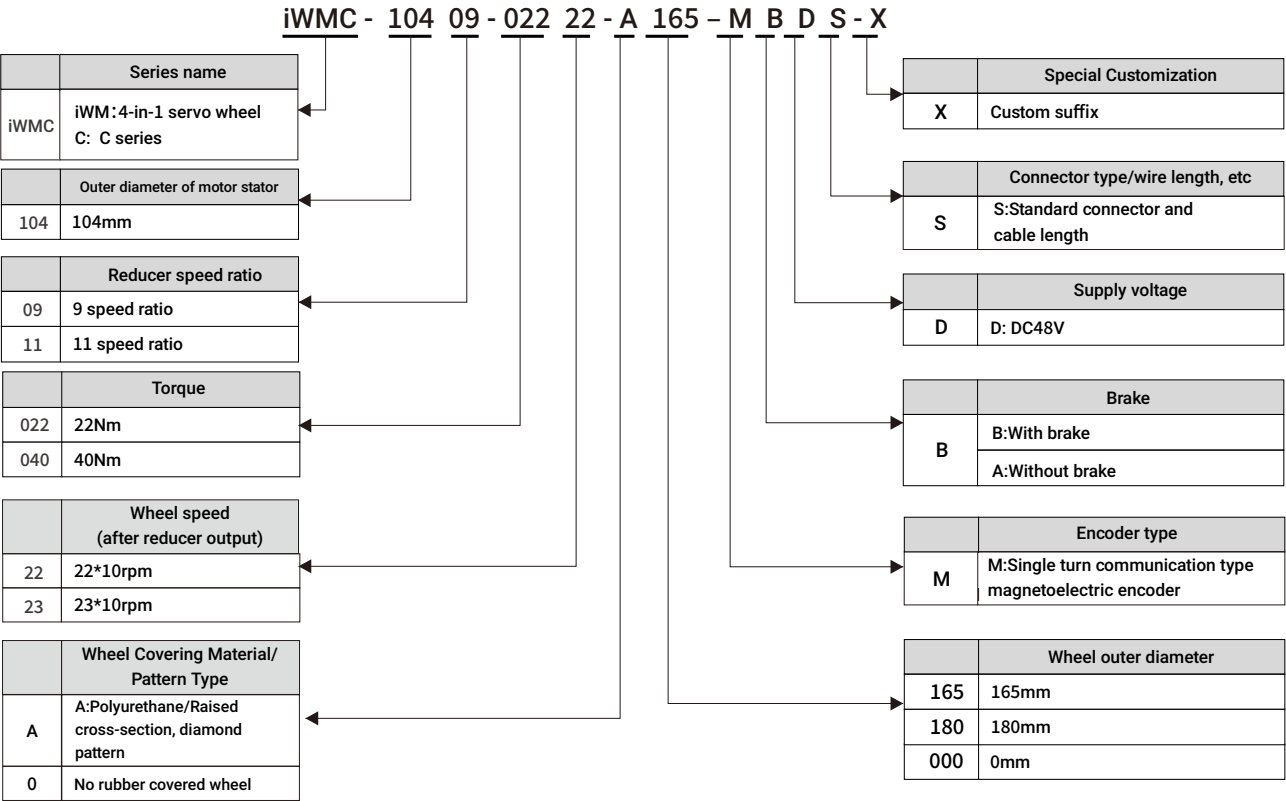
- Highly integrated**: The four main components of the driver, motor, gearhead, and wheel are highly integrated, resulting in a compact structure that facilitates downsizing;
- High mounting accuracy**: Supported mounting, simple and convenient mounting method, high mounting accuracy, and high control accuracy;
- High reliability**: The integrated module, with only external power supply and communication cables, is resistant to nickel-contacts and improves the stability and reliability of the entire system;
- Compatible design & seamless switching**: the communication and usage modes of the servo wheel products are no different from those of the standard Kinco products, allowing seamless switching;
- Good maintainability**: A single supplier for the integrated product facilitates the maintenance of the product at a later stage and reduces supply chain and after-sale costs.

■ Application Scenario

- Power Servo Wheel Module for Mobile Machines with Loads up to 600 kg
- Power Servo Wheel Module for Mobile Machines with Loads up to 1 T

iWMC Integrated Servo Wheel

Naming convention



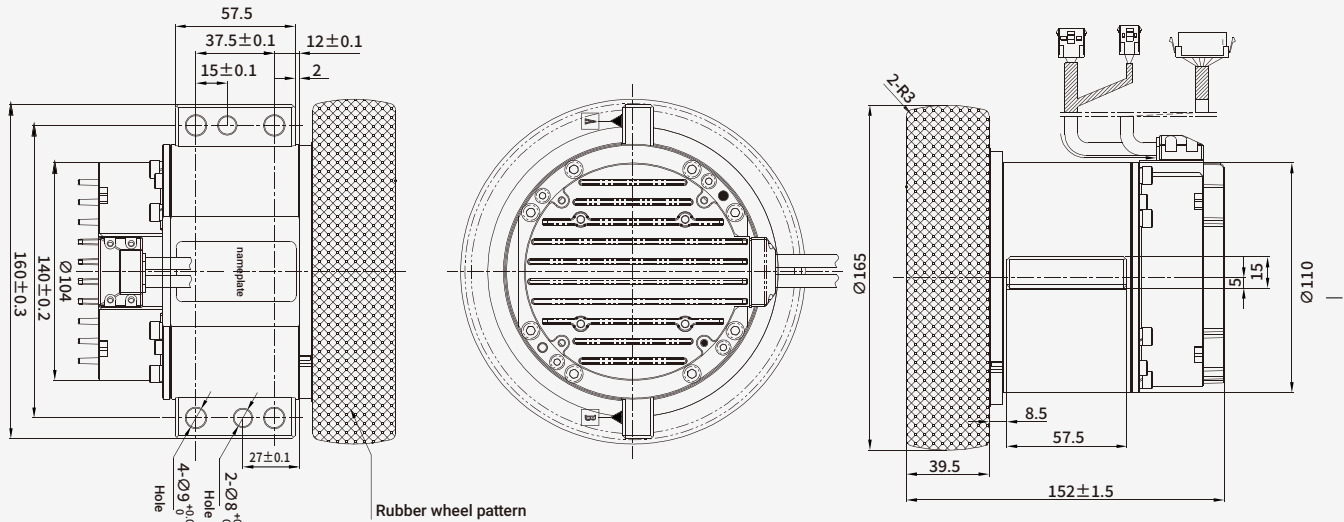
Product Parameters

| iWMC Integrated Servo Wheel Model Number            |                                      | iWMC10409-02222-A165-M■DS                                                                                                                                                                                                               | iWMC10411-04023-A180-M■DS |
|-----------------------------------------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Power                                               | Power Supply                         | 24VDC~60VDC                                                                                                                                                                                                                             |                           |
|                                                     | Logic Supply                         | 24VDC                                                                                                                                                                                                                                   |                           |
| Rated Linear Speed (m/s)                            |                                      | 1.9                                                                                                                                                                                                                                     | 2.14                      |
| Rated Torque Tn(Nm)                                 |                                      | 21                                                                                                                                                                                                                                      | 40                        |
| Peak Torque Tn(Nm)                                  |                                      | 60                                                                                                                                                                                                                                      | 99                        |
| Tire Diameter (mm)                                  |                                      | 165                                                                                                                                                                                                                                     | 180                       |
| Tire Width(mm)                                      |                                      | 39.5                                                                                                                                                                                                                                    | 50                        |
| Tire Material                                       |                                      | Polyurethane (optional)                                                                                                                                                                                                                 |                           |
| Tire Hardness Rating                                |                                      | 85A                                                                                                                                                                                                                                     | 90A                       |
| Energy Consumption Braking                          |                                      | External braking resistor is required (depending on the operating conditions, mainly used for rapid starting and stopping)                                                                                                              |                           |
| Energy Consumption Braking Voltage Absorption Point |                                      | DC63V ± 2V(Default, settable)                                                                                                                                                                                                           |                           |
| Overvoltage alarm point                             |                                      | DC68V ± 2V                                                                                                                                                                                                                              |                           |
| Undervoltage alarm point                            |                                      | DC18V ± 2V                                                                                                                                                                                                                              |                           |
| Input Specifications                                |                                      | 2 digital inputs / Common COMI terminal / High level: 12.5-30VDC / Low level: 0-5VDC / Maximum frequency: 1KHz / Input impedance: 5KΩ.                                                                                                  |                           |
| Output Specifications                               |                                      | 1 digital output common COMO terminal / Maximum output current: 100mA                                                                                                                                                                   |                           |
| Brake                                               |                                      | Built-in brake and control circuit                                                                                                                                                                                                      |                           |
| Forced Unlock Interface                             |                                      | 1-way forced unlock interface, only for use when there is no power input to the servo wheel                                                                                                                                             |                           |
| RS485 Debug Port                                    |                                      | Maximum support for 115.2Kbps baud rate                                                                                                                                                                                                 |                           |
| CAN BUS                                             |                                      | Maximum support for 1Mbps baud rate, CANopen protocol can be used to communicate with the controller                                                                                                                                    |                           |
| Drive Current                                       | Max. continuous output current (rms) | 16A                                                                                                                                                                                                                                     | 26A                       |
|                                                     | Peak Current (PEAK)                  | 100Ap(<2s)                                                                                                                                                                                                                              | 100Ap(<2s)                |
| Motor                                               | Rated RPM nN(rpm)                    | 2000                                                                                                                                                                                                                                    | 2500                      |
|                                                     | Rated Torque Tn(Nm)                  | 2.4                                                                                                                                                                                                                                     | 4                         |
|                                                     | Brake Holding Torque T(Nm)           | 4                                                                                                                                                                                                                                       |                           |
| Noise                                               |                                      | <65dB                                                                                                                                                                                                                                   |                           |
| Cooling Methods                                     |                                      | Natural cooling & Body-assisted cooling                                                                                                                                                                                                 |                           |
| Operating Environment                               | Operating Temperature                | 0~40°C                                                                                                                                                                                                                                  |                           |
|                                                     | Storage Temperature                  | -20°C~60°C                                                                                                                                                                                                                              |                           |
|                                                     | Humidity (non-condensing)            | 90%RH below                                                                                                                                                                                                                             |                           |
|                                                     | Protection Level                     | IP54                                                                                                                                                                                                                                    |                           |
|                                                     | Altitude                             | The rated working altitude is up to 1000m above sea level. For working altitudes above 1000m, a reduction of 1.5% is required for every 100 meters of rise in altitude, with a maximum working altitude of 2000 meters above sea level. |                           |
|                                                     | Atmospheric Pressure                 | 86kpa~106kpa                                                                                                                                                                                                                            |                           |

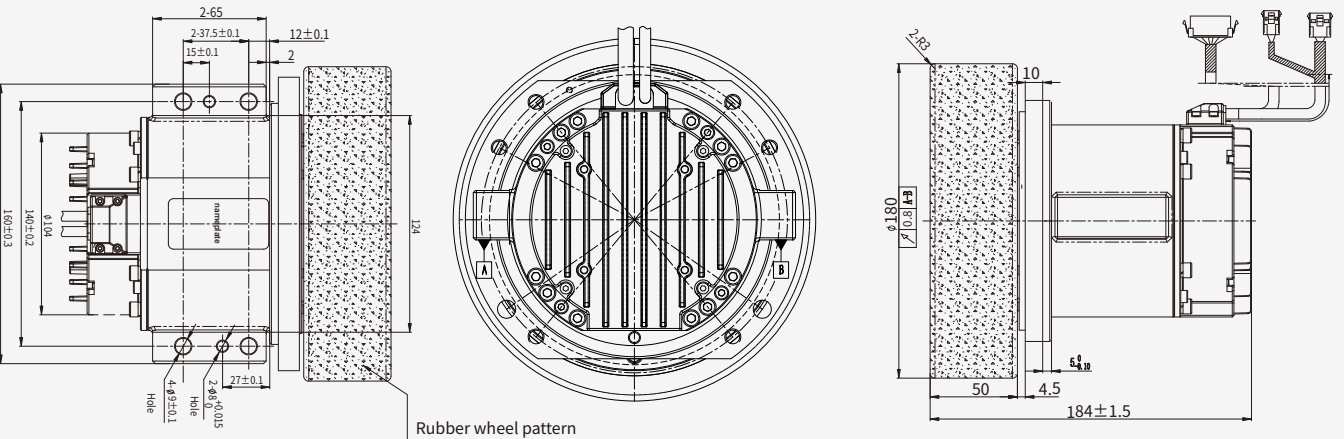
Note: ■ = A : Without brake    B : With brake

iWMC Integrated Servo Wheel

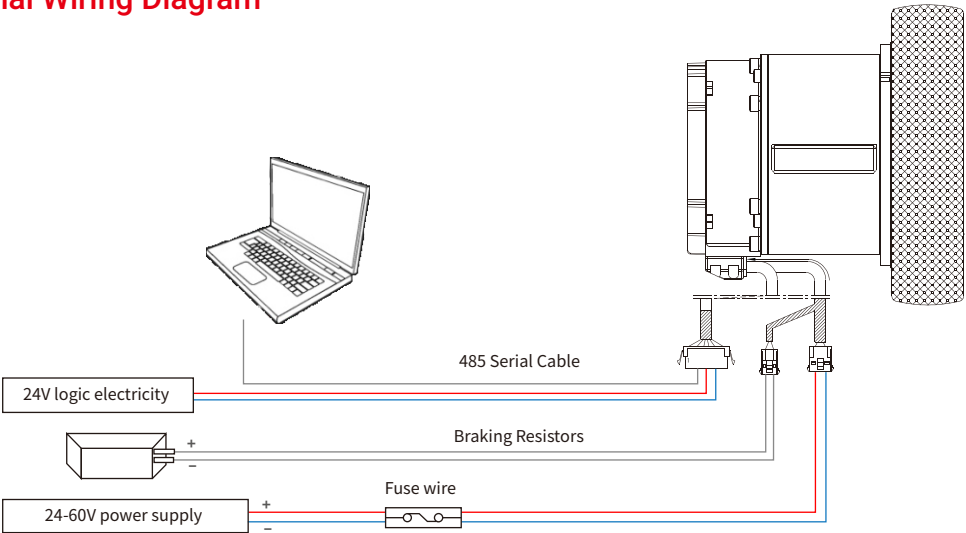
iWMC10409-02222-A165-M■DS



iWMC10411-04023-A180-M■DS



External Wiring Diagram



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