

# ECR60 EtherCAT®

EC series is a high-speed Fieldbus type closed-loop stepper driver developed by Rtelligent Company based on closed-loop stepper research and development, combined with EtherCAT Fieldbus technology. It supports COE(CANOpen over EtherCAT) protocol, conforms to CiA402 standard, and the Fieldbus transmission rate can reach 100Mb/s, which can realize closed loop. The real-time control and real-time data transmission of the stepping system has the advantages of high performance, high transmission speed and high reliability communication.



- Open loop and closed loop mode optional.
- Maximum Current: 6A.
- Power Voltage: 24-80V DC, 36V or 48V recommended.
- Typical Application: Production line, Li-on battery equipment, Solar energy equipment, 3C electrical equipment.

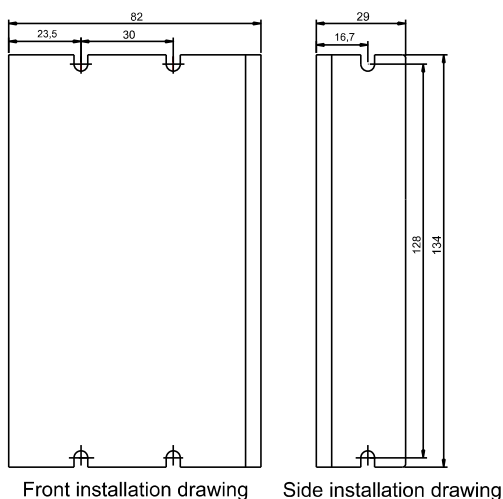
## Description of drive functions

Function	Description of operations
Indicator	The green one, a power indicator and twinkle upon the power up of drive; the red one, a fault indicator and twinkle in case of overvoltage and overcurrent. The red indicator goes off only when the fault is removed. The fault of drive can only be removed when the drive is powered on and enabled again. More details see the following table.
EtherCAT indicator	This signal indicator shows the status of EtherCAT. The specific meaning of the driver panel is described in detail.
Ethernet interface	2 Standard Ethernet interfaces.
Cn interface	4 single input port, 2 output port. More details please see the following table.
Encoder interface	GND: Internal power supply output GND. +5V: Internal power supply output 5V. when running in closed loop mode, provide 5V power supply to the encoder, the maximum current of this 5V signal should not exceed 150mA. IN2-, IN2+: Differential input signal interface, 5V~24V compatible. In open-loop external pulse mode, it can receive pulses, double pulse signals. In closed loop mode, this port is used to receive quadrature encoder A-phase signals. IN1-, IN1+: Similar as IN2 port. This port is used to receive quadrature encoder B-phase signals.
Power and motor interface	V+,V- connect the drive to the DC power supply. Recommendation voltage is 24-80VDC, Power is over 150W. A+, A-, B+, and B- are used to connect with the A,B phase winding of 2-phase motor.

## Drive working status LED indication

LED status	Drive status
● Green indicator is on for a long time	Drive not enabled
●● Green indicator is flickering	Drive working normally
●● One green indicator and one red indicator	Drive overcurrent
●● One green indicator and two red indicators	Drive input power overvoltage
●● One green indicator and three red indicators	The internal voltage of the drive is wrong
●● One green indicator and four red indicators	Tracking error exceeds limits
●● One green indicator and five red indicators	Encoder phase error
●● One green indicator and six red indicators	Parameter check error
●● One green indicator and seven red indicators	Motor phase failure alarm

## Installation dimensions



## Pin definition

pin	name	directions
1	IN3	Universal input port 3, default receiving 24V/0V level signal
2	IN4	Universal input port 4, default receiving 24V/0V level signal
3	IN5	Universal input port 5, default receiving 24V/0V level signal
4	IN6	Universal input port 6, default receiving 24V/0V level signal
5	OUT1	General purpose output port 1, optocoupler isolation, open collector
6	OUT2	General purpose output port 2, optocoupler isolation, open collector
7	COM0V	External IO signal power supply negative
8	COM24V	External IO signal power supply positive

## EtherCAT NET

