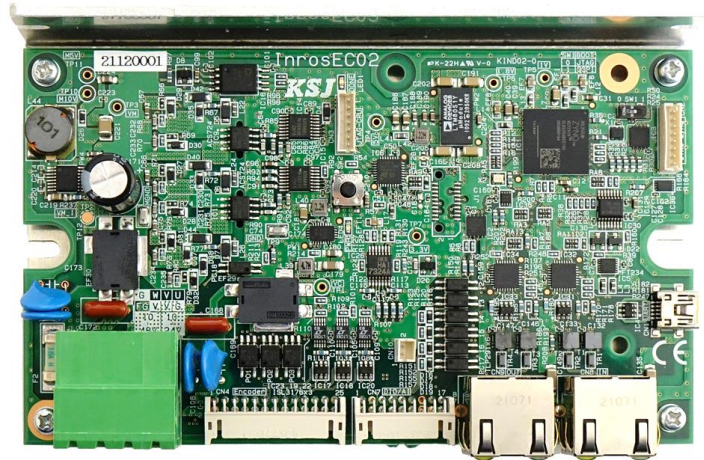


Features

- High resolution for the current value and fast current control loop.(Type Z)
- Single PCB and heat sink mounting.
- Corresponded to EtherCAT CiA402 motion profile.
- Ideal for general-purpose industrial equipment, semiconductor manufacturing equipment, and life science applications.
- Auto-tuning tool based on frequency response is available.
- Isolated power supply for high noise immunity.



Series comparison

	InrosZ	InrosF
Control cycle	25/50 μsec	150 μsec
A/D converter resolution	16 bit	12 bit
Functional safety	No	No
Number of encoder channels	2 ch.	1 ch.

Model number

Inros 1 - 2

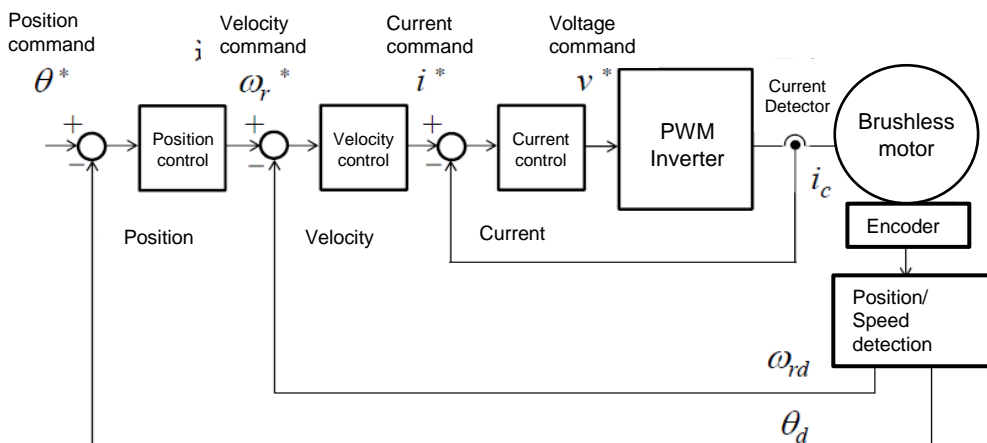
1

Z : High-performance type
F : Standard type

2

02: Rated 2 Arms/ Peak 6 Arms
06: Rated 6 Arms/ Peak 18 Arms

Control loop



Common specifications (Z · F)

EtherCAT communication specifications

Supported communication protocol	CoE, FoE
Synchronous mode	DC(Sync0), SM, FreeRun

I/O Signals (Pin functions can be assigned by settings)

Input signals (DI 6 ch., AI 2 ch.)	<p><u>DI</u></p> <ul style="list-style-type: none"> Limit signal +/– and Origin signal (Limit 1: Stop in forward rotation by ON, Limit 2: Stop in reverse rotation by ON, etc.) GPIO Input status can be read by PDO/SDO (I/O) communication of EtherCAT. <p><u>AI</u></p> <ul style="list-style-type: none"> 16bit(Z) / 12bit(F) Analog input can be read by PDO/SDO (I/O) communication of EtherCAT.
Output signals (DO 4 ch.)	<p><u>DO</u></p> <ul style="list-style-type: none"> Error signal 1 channel turns ON under any of the following conditions: Parameter error, Power error, Overcurrent error, Limit error, Overload error and Encoder error. An error cause can be read by PDO/SDO communication of EtherCAT GPIO Can be output via PDO/SDO communication of EtherCAT as a general-purpose output. Can be reserved for others (Brake signal, etc.) depends on the user requirement.

Encoder specification

Absolute encoders for SSI, BISS or Incremental encoders for ABZ can be set.

SSI encoder specification	Clock frequency 16/8/4/2/1/0.5 MHz, Data size 1 to 32-bit, Gray/Binary code
BISS encoders	Clock frequency 16/8/4/2/1/0.5 MHz, Data size 1 to 32 bits, CRC size 0 to 8 bits, Binary code
Incremental encoder specifications	A/B/Z differential encoder, Max-rate 20 Mbps, 32bit(Z) / 16bit(F) signed integer

Tuning tool

By connecting to PC via **mini USB**, users can tune the control parameters and test a motor by KSJ auto-tuning tool.

Others

Control power supply	DC 10V to 24V ± 10%
Motor power and current	DC 10V to 48V ± 10% 02type: Rated current 2 Arms, Peak current 6 Arms 06type: Rated current 6 Arms, Peak current 18 Arms
PWM frequency	20 kHz typical
CE marking	Compliant
Size	135 × 85 × 30 mm (including sheet metal) * Board size 135 × 80 mm

Sales
window



KOBOT

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