

# DYNASERVO

Reliable, Affordable and High Performance



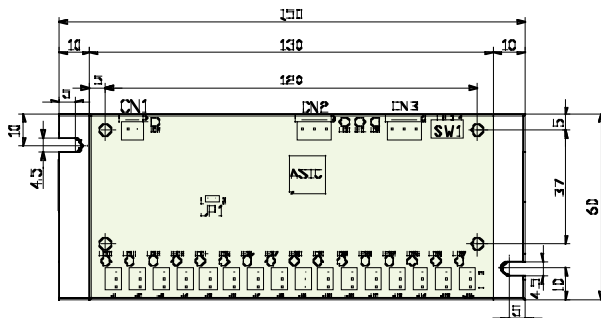
## Fics-IOM/CN

### Serial Network I/O Modules with Crimp Style Connectors

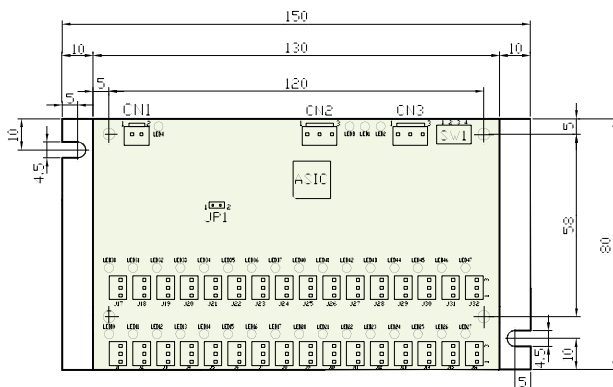
*Fics-IOM/CN* is a series of DI and DO modules with detachable crimp style connectors for I/O expansion of *Fics* serial controllers. *Fics-IOM/8.8CN*, *Fics-IOM/16CN*, and *Fics-IOM/16.16CN* has respectively 8DI&8DO, 16DI, and 16DI&16DO. They communicate with *Fics* serial controllers via a serial link that transfers data via standard RS422 protocol at rates up to 1.25Mbps. With just a twisted pair of wires, costs can be greatly reduced and machine reliability increased

#### FEATURES

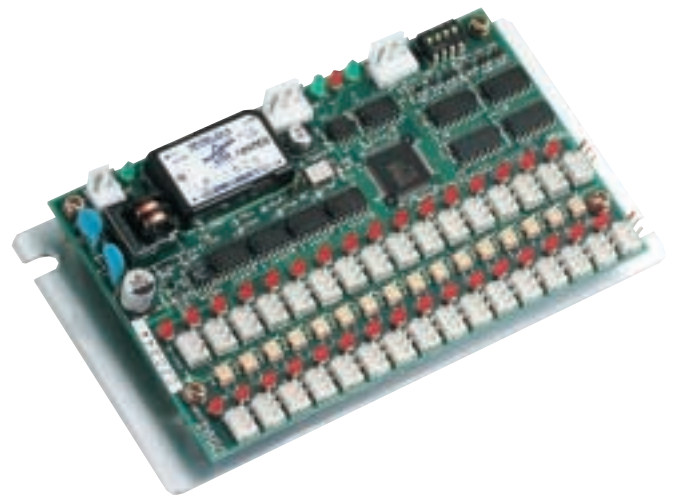
- RS422 communication with *Fics*-serial controllers at 1.25Mbps
- Minimal wiring and high reliability
- Max 16 modules can be connected in one link
- Opto-isolated DI and DO
- LED indicators
- 24V power supply



**Fics-IOM/8.8CN**  
**Fics-IOM/16CN**



**Fics-IOM/16.16CN**



# Fics -IOM/CN

## Electrical Input

- **Number of inputs:** 16 (*Fics-IOM/16CN, Fics-IOM/16.16CN*)  
8 (*Fics-IOM/8.8CN*)
- **Input circuit:** opto-isolated
- **Input voltage:** 0V ~ power voltage +0.5V
- **Max input current:** -10mA/input
- **Min input current:** -2mA/input
- **Input indicator:** 1LED/input, ON when photo-coupler ON

## Electrical Output

- **Number of outputs:** 8 (*Fics-IOM/8.8CN*)  
16(*Fics-IOM/16.16CN*)
- **Output circuit:** opto-isolated open collector
- **Output voltage:** 0V ~ power voltage
- **Max rated output:** 150mA/300V
- **Output saturation voltage:** less than 1V
- **Leak current when OFF:** less than 20m A
- **Output indicator:** 1LED/input, ON when photo-coupler ON

## Communication Interface: RS422

- **Speed:** 1.25Mbps
- **Protocol:** IO-Ring
- **Address setting:** 4 bits DIP switch (SW1)
- **Status indicator:** Green LEDx2: sending,receiving  
Red LEDx1:error
- **Max cable length:** 40m (with more than 0.5mm<sup>2</sup> shielded twisted cable)

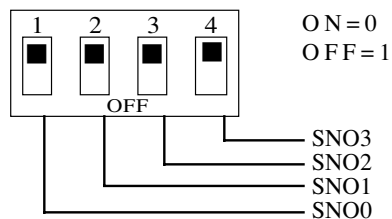
## Electrical Specifications

- **Power supply:** 24V±10%
- **Current consumption:** 200mA (*Fics-IOM/16CN, 8.8CN*)  
250mA (*Fics-IOM/16.16CN*)

**Working Environment:** 0°C~40°C/35~85%RH  
(free from dew)

## Switches, Jumpers

**SW1:** setting the module numbers between 0~15

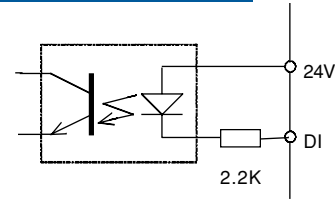


**JP1:** 2pin open, fixed.

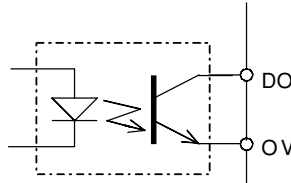
## LED

- LED1 (red): wire disconnected error
- LED2 (green): signal transferring
- LED3 (green): signal receiving
- LED4 (green): power-on
- LED 10~17, 20~27 (red): DI monitoring
- LED 30~37, 40~47 (red): DO monitoring

## Input Interface Circuit



## Output Interface Circuit



## Power Supply

CN1: VHR-2N(JST)

Pin	Signal Name	IN/OUT
1	+24V	IN
2	0V	IN

## RS422 Input

CN2: VHR-3N(JST)

Pin	Signal Name	IN/OUT
1	RD+	IN
2	RD-	IN
3	GND	-

## RS422 Output

CN3: VHR-3N(JST)

Pin	Signal Name	IN/OUT
1	SD+	OUT
2	SD-	OUT
3	GND	-

## Isolated Input and Output

J1-J32: H3P-SHF-AA(JST)

Pin	Signal Name	IN/OUT
1	+24V	OUT
2	DI/DO	IN/OUT
3	0V	-

*Fics-IOM/8.8CN*

J1 - J8 << DI 0-7 >>

J9 - J16 << DO 0-7 >>

*Fics-IOM/16CN*

J1 - J16 << DI 0-15 >>

*Fics-IOM/16.16CN*

J1 - J16 << DI 0 - 15>>

J17- J32 << DO 0 - 15>>

**Attachment:** Connectors are attached.