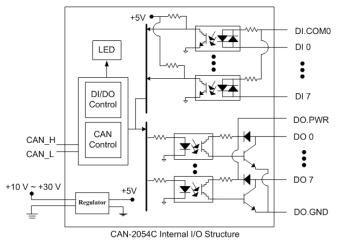




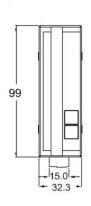
#### Introduction

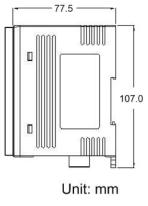
CAN-2054C module follows the CiA DS-301 version 4.02 and DSP-401 version 2.1. You can access the digital I/O status and set the configuration by using standard CANopen protocol. CAN-2054C has passed the validation of the CiA CANopen conformance test tool. Therefore, you can use it with standard CANopen master easily by applying the EDS file. CAN-2054C has 8 isolated sink/source input channels and 8 isolated sink output channels. It can be used to various applications, such as PNP, NPN, TTL, relay contact and so forth. By owing to the CANopen masters of ICP DAS, you can quickly build a CANopen network to approach your requirements.

#### Internal I/O Structure



## Dimensions





# I/O Pin&Wire Connection

| Terminal No. |    | Pin Assignment | Input Type            | ON State LED ON<br>Readback as 1 | OFF State LED OFF<br>Readback as 0 |  |
|--------------|----|----------------|-----------------------|----------------------------------|------------------------------------|--|
| ι • (        | 01 | DI.COM         | -                     | Relay On                         | Relay Off                          |  |
| L a (        | 02 | DIO            | Relay                 |                                  |                                    |  |
| <b>ا</b> ا   | 03 | DI1            | Contact               | * DLCOM                          | * DO DI.COM                        |  |
| ۱<br>۹       | 04 | DI2            | and the second second | Voltage > 10 V                   | Voltage < 4 V                      |  |
| C D (        | 05 | DI3            | TTL/CMOS<br>Logic     |                                  |                                    |  |
| C = (        | 06 | DI4            | Logic                 | Logic Level Low DE DI X          | Logie Level Low DE X               |  |
| ζ <b>α</b> ( | 07 | D15            | NON                   | Open Collector On                | Open Collector Off                 |  |
| L.           | 08 | DI6            | NPN<br>Output         |                                  |                                    |  |
| C • (        | 09 | DI7            |                       |                                  |                                    |  |
| [ = (        | 10 | DO0            | PNP                   | Open Collector On                | Open Collector Off                 |  |
| ζ. = (       | 11 | DO1            | Output                |                                  |                                    |  |
| 20           | 12 | DO2            |                       | <u>Conc.</u>                     | OFF State LED OFF<br>Readback as 0 |  |
| ζ <b>α</b> ( | 13 | DO3            | Output Type           | ON State LED ON<br>Readback as 1 |                                    |  |
| Ç u          | 14 | DO4            |                       | Relay Off                        | Relay On                           |  |
| C • (        | 15 | DO5            | Drive Relay           |                                  |                                    |  |
| [ • ]        | 16 | DO6            |                       |                                  |                                    |  |
| C = (        | 17 | DO7            |                       |                                  |                                    |  |
| ٦.           | 18 | DO.GND         | Resistance            | DO.PWR                           | DO.PWR                             |  |
| Ç 🗆          | 19 | DO.GND         | Load                  |                                  |                                    |  |
| <u>ا م</u>   | 20 | DO.PWR         |                       |                                  | De DO.GND                          |  |

## Node ID & Baud rate DIP Switch

| CAN_V+<br>CAN_H<br>CAN_Shield<br>CAN_L |                   | Pin 5<br>Pin 4<br>Pin 3<br>Pin 2<br>Bin 1 |
|--|-------------------|---|
| CAN_GND                                | $ \bullet\rangle$ | Pin 1                                     |

| B( | D, | 0  |  |
|----|----|----|--|
|    | =) | FO |  |
|    | 2  |    |  |
|    | B  |    |  |



800 kbps 1000 kbps

 
 Switch Value
 Pairconnection
 Baud Rate

 0
 8
 10 kbps

 1
 9
 20 kbps

 2
 A
 50 kbps

 3
 B
 125 kbps

 4
 C
 250 kbps

 5
 D
 500 kbps

| ICP | DAS | CO., | LTD |
|-----|-----|------|-----|
|-----|-----|------|-----|



# Specifications

| CAN Interface     |   |  |  |  |
|-------------------|---|--|--|--|
| Connector         | 5-pin screwed terminal block (CAN_GND, CAN_L, CAN_SHLD, CAN_H, CAN_V+)      |  |  |  |
| Baud Rate (bps)   | 10 k, 20 k, 50 k, 125 k, 250 k, 500 k, 800 k, 1 M                           |  |  |  |
| Terminal Resistor | Switch for 120 $\Omega$ terminal resistor                                   |  |  |  |
| Node ID           | 1~99 selected by rotary switch  |  |  |  |
| Protocol          | CANopen DS-301 ver4.02, DS-401 ver2.1                                       |  |  |  |
| No. of PDOs       | 10 Rx, 10 Tx (support dynamic PDO)  |  |  |  |
| PDO Mode          | Event Triggered, Remotely requested, Cyclic and acyclic SYNC                |  |  |  |
| Error Control     | Node Guarding protocol and Heartbeat Producer protocol                      |  |  |  |
| Emergency Message | Yes   |  |  |  |
| Digital Input     |   |  |  |  |
| Channels          | 8 (Sink / Source)   |  |  |  |
| On Voltage Level  | +3.5 ~ +30 VDC  |  |  |  |
| Off Voltage Level | +1 VDC Max.   |  |  |  |
| Response Time     | 250 us  |  |  |  |
| ESD Protection    | ion 4 kV Contact for each channel   |  |  |  |
| Digital Output    |   |  |  |  |
| Channels          | 8 (Sink)  |  |  |  |
| Load Voltage      | +5 ~ +30 VDC  |  |  |  |
| Output Type       | Open-Collector  |  |  |  |
| Reaction Time     | 200 us  |  |  |  |
| LED               |   |  |  |  |
| Round LED         | PWR LED, RUN LED, ERR LED   |  |  |  |
| I/O LED           | 8 LEDs for DI and DO individually, and 1 LED as terminal resister indicator |  |  |  |
| Power             |   |  |  |  |
| Input range       | Unregulated +10 ~ +30 VDC   |  |  |  |
| Power Consumption | 1.5 W   |  |  |  |
| Mechanism         |   |  |  |  |
| Installation      | DIN-Rail  |  |  |  |
| Dimensions        | Dimensions         32.3 mm x 99 mm x 77.5 mm (W x L x H)                    |  |  |  |
| Environment       |   |  |  |  |
| Operating Temp.   | -25 ~ +75 °C  |  |  |  |
| Storage Temp.     | -30 ~ +80 °C  |  |  |  |
| Humidity          | 10 ~ 90% RH, non-condensing   |  |  |  |

# Application



#### Ordering Information

CAN-2054C CR

CANopen module of 8-channel Digital Input and 8-channel Digital Output