

透科自动化

User Manual



RX



CANOPEN
Remote IO Module
IO

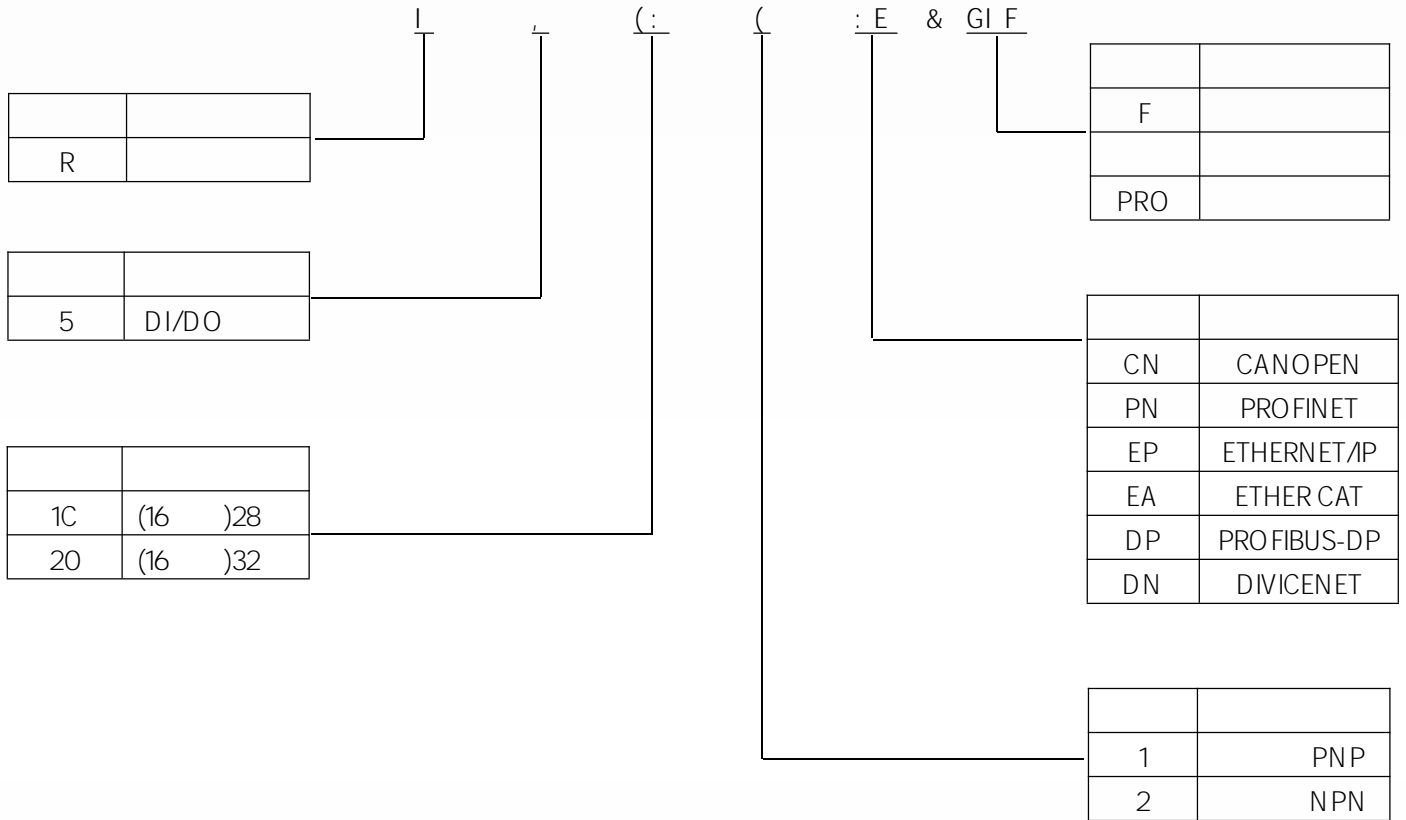
| | | |
|----------------|-------|----|
| 1. | | 3 |
| 1.1 | | 4 |
| 1.2 | | 4 |
| 1.3 | | 4 |
| 1.4 | | 4 |
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(%

) %

R51C1-CN I/O I/O CANOPEN IO



| | | |
|---|----------|-----------------------------|
| | | |
| 1 | R51C1-CN | 16DI 12DO IO CANOPEN VO I/O |

(: 8 E F G < E @ F

) % I , (: (\$ E

R51C1-CN

) % % ; @ * % %

DI 2

| | | |
|----|------|---|
| | | |
| 1 | | 16 |
| 2 | | 2 bytes |
| 3 | Ton | Type. 18uS / Max. 35uS |
| 4 | Toff | Type. 135uS / Max. 250uS |
| 5 | | |
| 6 | | |
| 7 | | 24 V DC (-15 %/+ 20 %), (IEC 61131-2, type 1) |
| 8 | "0" | -3...+5 V (IEC 61131-2, type 1) |
| 9 | "1" | 15...30 V (IEC 61131-2, type 1) |
| 10 | | Typ. 10mA/Ch(IEC 61131-2, type 1) |
| 11 | | / 500V DC |

)

) % % ; H

MOSFET DQ 3

| | | |
|----|------|---|
| | | |
| 1 | | 12 |
| 2 | | 2 bytes |
| 3 | Ton | Type. 12uS / Max. 25uS |
| 4 | Toff | Type. 10mS / Max. 20mS () |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | 24 V DC (-15 %/+ 20 %), (IEC 61131-2, type 1) |
| 9 | | Max. 0.5 A /Ch, |
| 10 | | 6A |
| 11 | | 2 2-Pin |

* D F J =<K

) % % : 8 E F G < E

| CANOPEN | | 4 |
|---------|-----|---|
| 1 | | CiA 301 V4.02, CiA 401 V2.1, CiA 303-3 V1.0 |
| 2 | PDO | TPDO 1/RPDO 1 |
| 3 | | / |
| 4 | | 20k, 50K, 125K, 250K, 500K, 1000K kbps |
| 5 | | 01~ 99 |
| 6 | | 5PIN |
| 7 | | 99 |
| 8 | | 15kV 8kV IEC61000-4-2 |
| 9 | | 2 |
| 10 | | IP20 |

+ : 8 E F G < E

) % %

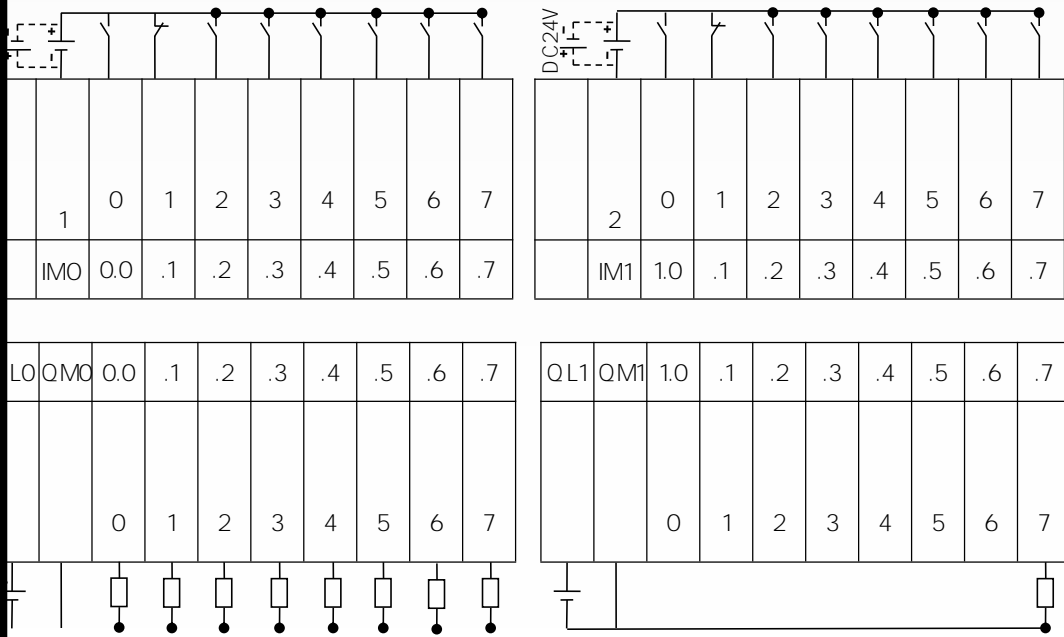
| 3 | MOSFET |
|-----------------------|------------------------------|
| 3 | |
| 24V DC (-15 %/+ 20 %) | 0.5A |
| I/O | 500V DC |
| 24V DC (-15 %/+ 20 %) | 16*10mA |
| | I/O |
| 500V DC | |
| .MOSFET | 24V DC (-15 %/+ 20 %) 8*0.5A |
| I/O | 500V DC |





+%

% I , (: (\$ E



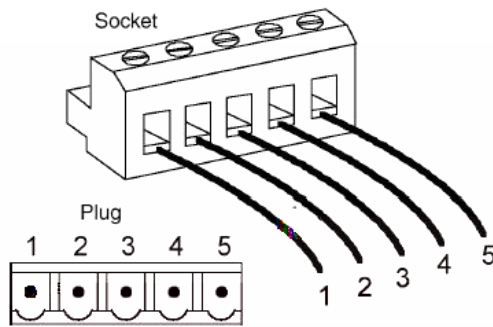
%

5PIN

CANOPEN

CiA 303_1

1.8.0 CANopen recommendation - Part 1 Cabling and connector pin assignment



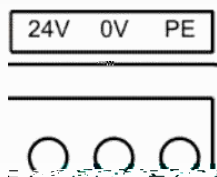
*

| | | |
|---|----|-------|
| | | |
| 1 | G | CAN |
| 2 | L | CAN L |
| 3 | SD | |
| 4 | H | CAN H |
| | NC | NC |

C24

, : 8 E F G <

+%



| | |
|-----|-----|
| 24V | 24V |
| 0V | 0V |
| PE | |

+%

@

+

@

ID

ID

01~99

ID

+%

| 9XI [i Xk\ | (|) | * |
|-------------|---|---|---|
| 20K | 0 | 1 | 0 |
| 50K | 0 | 1 | 1 |
| 125K | 1 | 0 | 0 |
| 250K | 1 | 0 | 1 |
| 500K | 1 | | |

. : 8 E F G < E

+% C<;

LED 2 I/O

+%%

| 3 | | LED | | 8 | |
|-----|--|-----|-------------------|---|--|
| PWR | | 24V | | | |
| | | ON | | | |
| | | OFF | | | |
| ERR | | ON | CAN | | |
| | | | | | |
| | | OFF | CAN | | |
| RUN | | ON | operate | | |
| | | | stop | | |
| | | | PRE - OPERATIONAL | | |

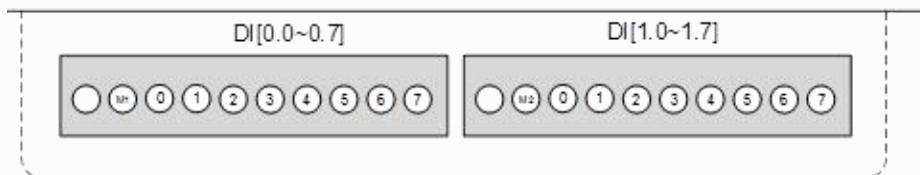
/

+% % @F

"1" / / LED "0" /

+%

10P 16 DI-0 DI-1



| ; ^`kXc@gl k\$ | | ; ^`kXc@gl k\$ | |
|----------------|--------|----------------|--------|
| M1(*) | DI 1 | M2(*) | DI 2 |
| 0 | DI-0.0 | 0 | DI-1.0 |
| 1 | DI-0.1 | 1 | DI-1.1 |
| 2 | DI-0.2 | 2 | DI-1.2 |
| 3 | DI-0.3 | 3 | DI-1.3 |
| 4 | DI-0.4 | 4 | DI-1.4 |
| 5 | DI-0.5 | 5 | DI-1.5 |
| 6 | DI-0.6 | 6 | DI-1.6 |
| 7 | DI-0.7 | 7 | DI-1.7 |

0

* M1 M2

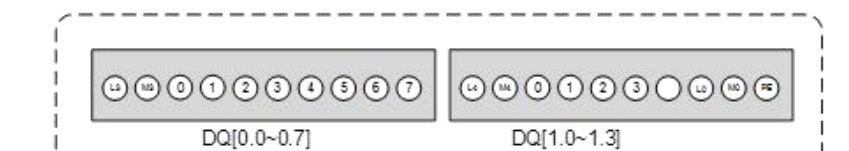
+%

10P

12

16P

0.5A



| ; ^`kXcF l kg l k \$ | | ; ^`kXcF l kg l k \$ | |
|----------------------|---------|----------------------|---------|
| L3(*) | DQ | L4(*) | DQ |
| M3(*) | DQ | M4(*) | DQ |
| 0 | DQ-0.0 | 0 | DQ-0.0 |
| 1 | DQ -0.1 | 1 | DQ -0.1 |
| 2 | DQ -0.2 | 2 | DQ -0.2 |
| 3 | DQ -0.3 | 3 | DQ -0.3 |
| 4 | DQ -0.4 | | |
| 5 | DQ -0.5 | LO | 4.3 |
| 6 | DQ -0.6 | MO | |
| 7 | DQ -0.7 | PE | |

(

* L3/M3 L4/M4

DQ

24V

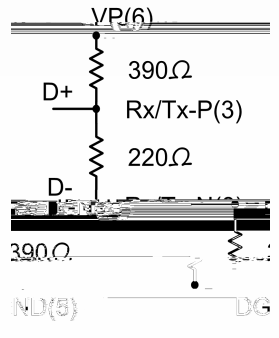


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R3 T1-O NO OPEN CAN OPEN

32
6

32



, % %

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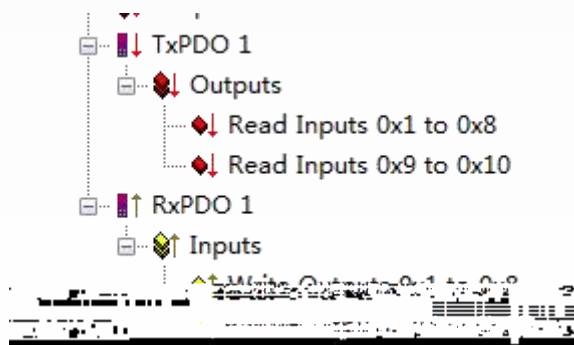
| bYgj | d |
|------|------|
| 1 M | 25 |
| 800 | 50 |
| 500 | 100 |
| 250 | 250 |
| 125 | 500 |
| 50 | 1000 |
| 20 | 2500 |
| 10 | 5000 |

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, %%

R51C1-CAN-F DI/DQ 7

16 TxPDO 1
12 RxPDO 1



- I, (: (\$ 8E

, %%

R51C1-CAN -F 6.1

, %%

, %%

| | | |
|---------------------|-----|------|
| CiA 301 | 5 | |
| Reset Node | | |
| Reset Communication | | |
| Pre-operational | | |
| | RUN | TPDO |
| operate | | |
| | RUN | |

, % %

, % %

| | | | |
|------|----------|---------------------------------------|---------------|
| 1000 | VAR | Device type | UNSIGNED32 |
| 1001 | VAR | Error register | UNSIGNED8 |
| 1003 | ARRAY | Pre-defined error field | UNSIGNED32 |
| 1005 | VAR | COB-ID SYNC | UNSIGNED32 |
| 1006 | VAR | Communication cycle period | UNSIGNED32 |
| 1007 | VAR | Synchronous window length | UNSIGNED32 |
| 1008 | VAR | Manufacturer device name | VIS-STRING |
| 1009 | VAR | Manufacturer hardware version | VIS-STRING |
| 100A | VAR | Manufacturer software version | VIS-STRING |
| 100C | VAR | Guard time | UNSIGNED16 |
| 100D | VAR | Life time factor | UNSIGNED8 |
| 1014 | VAR | COB-ID EMCY | UNSIGNED32 |
| 1015 | VAR | Inhibit time EMCY | UNSIGNED16 |
| 1016 | ARRAY | Consumer heartbeat time | UNSIGNED32 |
| 1017 | VAR | Produce heartbeat time | UNSIGNED16 |
| 1018 | RECORD | Identity object | Identity |
| 1029 | ARRAY | Error behavior | UNSIGNED8 |
| 1200 | RECORD | 1st server SDO Parameter | SDO Parameter |
| 1400 | RECORD | 1st receive PDO Parameter | PDO Parameter |
| 1600 | RECORD | 1st receive PDO mapping | PDO Parameter |
| 1800 | RECORD | 1st transmit PDO Parameter | PDO Parameter |
| 1A00 | RECORD | 1st transmit PDO mapping | PDO Parameter |
| 6000 | ARRAY | Read input 8-bit | UNSIGNED8 |
| 6002 | ARRAY | Polarity input 8-bit | UNSIGNED8 |
| 6003 | ARRAY | Filter constant input 8-bit | UNSIGNED8 |
| 6005 | VARIABLE | Global interrupt enable digital 8-bit | UNSIGNED8 |
| 6006 | ARRAY | Interrupt mask any change 8-bit | UNSIGNED8 |
| 6007 | ARRAY | Interrupt mask low-to-high 8-bit | UNSIGNED8 |
| 6008 | ARRAY | Interrupt mask high-to-low 8-bit | UNSIGNED8 |
| 6200 | ARRAY | Write output 8-bit | UNSIGNED8 |
| 6202 | ARRAY | Change polarity output 8-bit | UNSIGNED8 |
| 6206 | ARRAY | Error mode output 8-bit | UNSIGNED8 |
| 6207 | ARRAY | Error value output 8-bit | UNSIGNED8 |
| 6208 | ARRAY | Filter mask output 8-bit | UNSIGNED8 |

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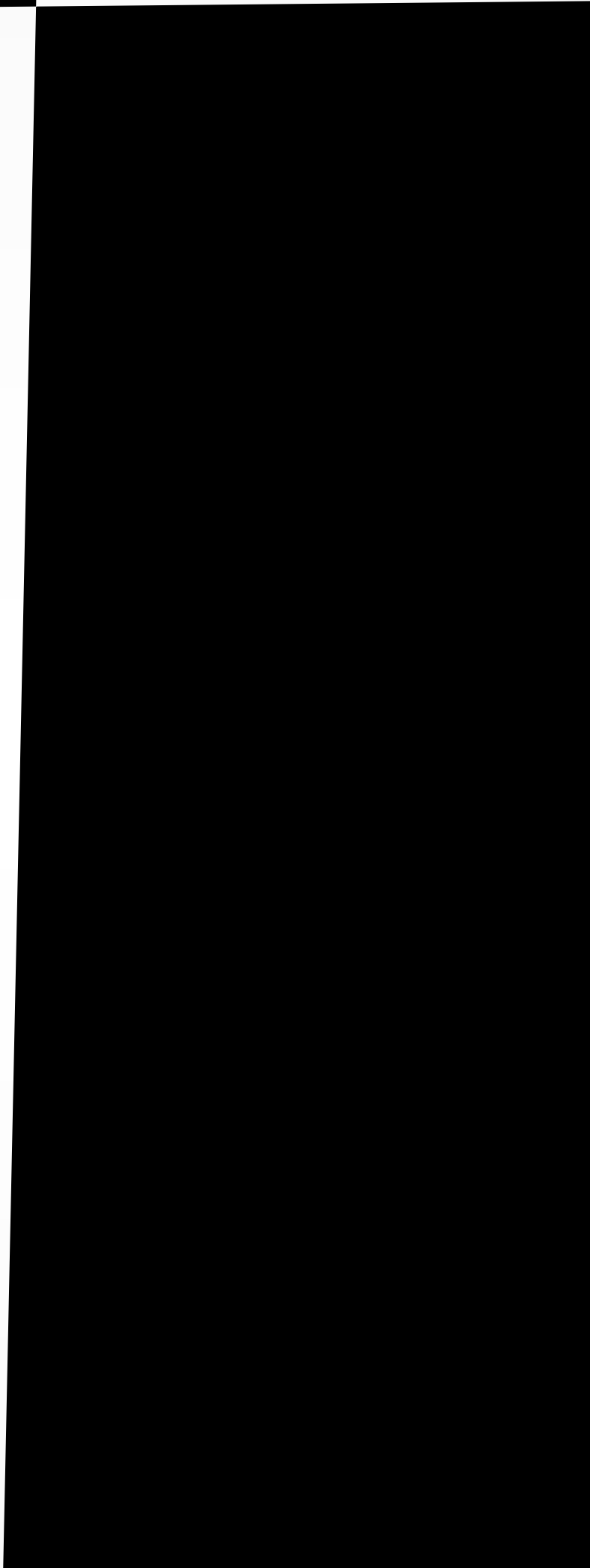
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9

3

| | |
|---------|----------------------------------|
| 6002:0 | Polarity Input 8 Bit |
| 6002:01 | Polarity Input 0x1 to 0x8 |
| 6002:02 | Polarity Input 0x9 to 0x10 |
| 6005 | Global Interrupt Enable Digital |
| 6006:0 | Interrupt Mask Any Change 8 Bit |
| 6006:01 | Interrupt Any Change 0x1 to 0x8 |
| 6006:02 | Interrupt Any Change 0x9 to 0x10 |
| 6007:0 | Interrupt Mask Low to High 8 Bit |

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