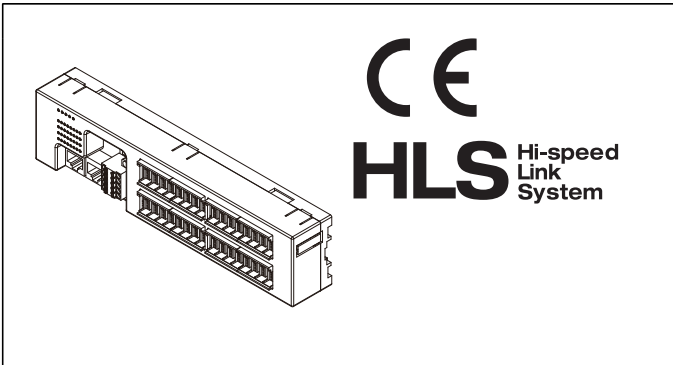


## Remote I/O R7K4D Series

### HIGH-SPEED LINK SYSTEM I/O MODULE



### MODEL: R7K4DH-1-[1]-R[2]

#### ORDERING INFORMATION

- Code number: R7K4DH-1-[1]-R[2]
- Specify a code from below for each [1] and [2].  
(e.g. R7K4DH-1-DAC32A-R/H)

#### TERMINAL BLOCK

- 1: Tension clamp terminal block for power supply  
RJ-45 Modular jack for communication  
e-CON connector for I/O

#### [1] I/O TYPE

- DAC32A:** PNP discrete input & NPN transistor output, 16 points
- DAC32B:** NPN discrete input & PNP transistor output, 16 points each
- DAC32C:** NPN discrete input & NPN transistor output, 16 points each
- DAC32D:** PNP discrete input & PNP transistor output, 16 points each

#### POWER INPUT

- DC Power**  
R: 24 V DC

#### [2] OPTIONS

- Communication Mode**  
blank: Full-duplex  
/H: Half-duplex

#### FUNCTIONS & FEATURES

The R7K4DH interfaces discrete I/O signals with a PLC via HLS.  
(HLS is the abbreviation for “High-speed Link System” of Step Technica Co., Ltd.)

#### GENERAL SPECIFICATIONS

- **Common Specifications**
- Power input:** 24 V DC  $\pm 10\%$ ; ripple 10 %p-p max. connector current rating 8 A
- Sensor excitation:** 24 V DC  $\pm 10\%$ ; ripple 5 %p-p max.,  $\leq 2$  A (including discrete I/O load charge) connector current rating 8 A
- Insulation resistance:**  $\geq 100$  M $\Omega$  with 500 V DC
- Dielectric strength:** 1500 V AC @1 minute (between isolated circuits)
- Operating temperature:** -10 to +55°C (14 to 131°F)
- Operating humidity:** 30 to 90 %RH (non-condensing)
- Atmosphere:** No corrosive gas or heavy dust
- Mounting:** DIN rail or wall
- Status indicator:** Power LED on with power supplied
- Discrete I/O status indicator:** Red LED on in contact.
- Communication Failure Detection:** At communication error, the output status until normal data is received (Hold or OFF) can be set with the DIP SW. (only for output devices; factory setting: Hold)
- **Current Consumption & Weight**
- R7K4DH-x-DAC32A: Approx. 95 mA/185 g (0.41 lb)
- R7K4DH-x-DAC32B: Approx. 95 mA/185 g (0.41 lb)
- R7K4DH-x-DAC32C: Approx. 95 mA/185 g (0.41 lb)
- R7K4DH-x-DAC32D: Approx. 95 mA/185 g (0.41 lb)
- (Discrete I/O load charge is not included in the above-mentioned current consumption.)

#### HLS COMMUNICATION

- Communication mode:** Full-duplex or half-duplex
- Network cable**
- Shielded cable:**
- Full-duplex communication:  
ZHY262PS and ZHT262PS (Shinko Seisen Industry Co., Ltd.)
- Half-duplex communication:  
ZHY221PS (Shinko Seisen Industry Co., Ltd.)
- Dual shielded cable:**  
ZHY262PBA (Shinko Seisen Industry Co., Ltd.)
- Transmission distance:**
- 12 Mbps: 100 meters (328 ft)  
6 Mbps: 200 meters (656 ft)  
3 Mbps: 300 meters (984 ft)
- (Baud rate configurable with DIP SW; factory setting: 12 Mbps)
- Terminating resistor:** Built-in (Selected with the DIP SW;



factory setting: disabled)

**Status indicator:** Run LED on in normal communication

**Station address:** Set with rotary switch

(Refer to the instruction manual for details.)

## STANDARDS & APPROVALS

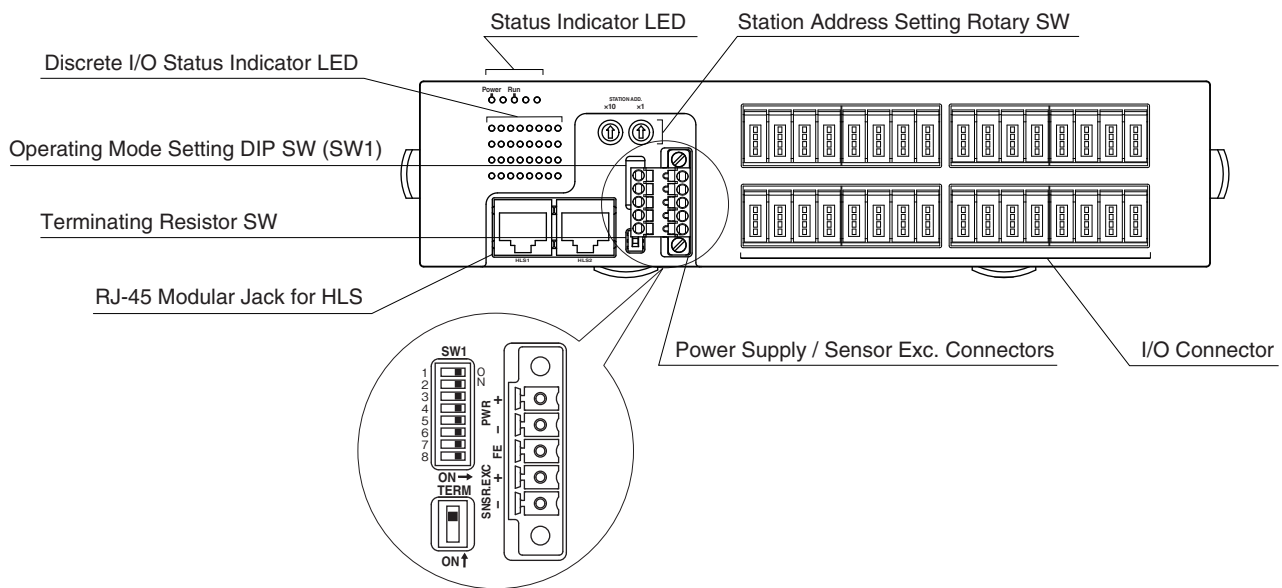
**CE conformity:**

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

## EXTERNAL VIEW



## CONNECTION DIAGRAMS

■ I/O connection (Refer to each model terminal assignment)

- e-CON connector

**Recommended cable connector:** 37104-( )-000FL (3M Company)

(The cable connector is not included in the package.)

Specify wire size instead of ( ); refer to the specifications of the product.)



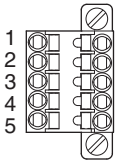
## ■ POWER SUPPLY

**Cable connector:** TFMC1,5 / 5-STF-3,5  
(Phoenix Contact) (included in the package)

**Applicable wire size:** 0.2 – 1.5 mm<sup>2</sup>; stripped length 10 mm

### Recommended solderless terminal

- AI0,25–12BU 0.25 mm<sup>2</sup> (Phoenix Contact)
- AI0,34–12TQ 0.34 mm<sup>2</sup> (Phoenix Contact)
- AI0,5–10WH 0.5 mm<sup>2</sup> (Phoenix Contact)
- AI0,75–10GY 0.75 mm<sup>2</sup> (Phoenix Contact)
- A1–10 1.0 mm<sup>2</sup> (Phoenix Contact)
- A1,5–10 1.5 mm<sup>2</sup> (Phoenix Contact)

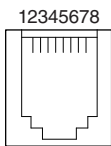


- |              |                   |
|--------------|-------------------|
| 1. PWR+      | Power Supply      |
| 2. PWR-      | Power Supply      |
| 3. FE        | Functional earth  |
| 4. SNSR.EXC+ | Sensor excitation |
| 5. SNSR.EXC- | Sensor excitation |

## ■ NETWORK

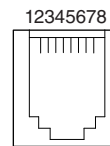
**Recommended cable connector:** TM21P-88P (Hirose Electric)  
(not included in the package)

### • Full-duplex communication



- |         |                                  |
|---------|----------------------------------|
| 1. NC   | Unused                           |
| 2. NC   | Unused                           |
| 3. TXD+ | Network (slave, transmission +)  |
| 4. TXD- | Network (slave, transmission -)  |
| 5. RXD+ | Network (master, transmission +) |
| 6. RXD- | Network (master, transmission -) |
| 7. NC   | Unused                           |
| 8. SLD  | Shield                           |

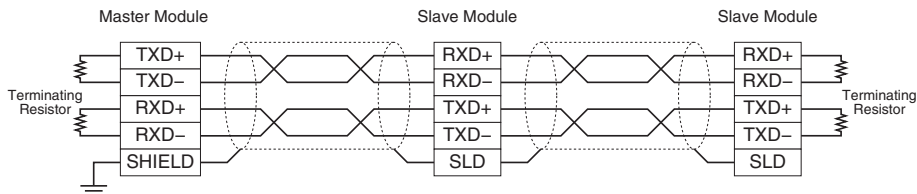
### • Half-duplex communication



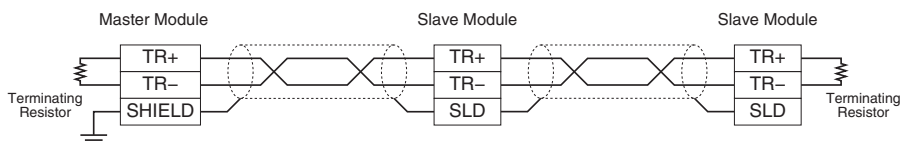
- |        |             |
|--------|-------------|
| 1. NC  | Unused      |
| 2. NC  | Unused      |
| 3. TR+ | Network (+) |
| 4. TR- | Network (-) |
| 5. NC  | Unused      |
| 6. NC  | Unused      |
| 7. NC  | Unused      |
| 8. SLD | Shield      |

## ■ MASTER CONNECTION

### • Full-duplex communication



### • Half-duplex communication



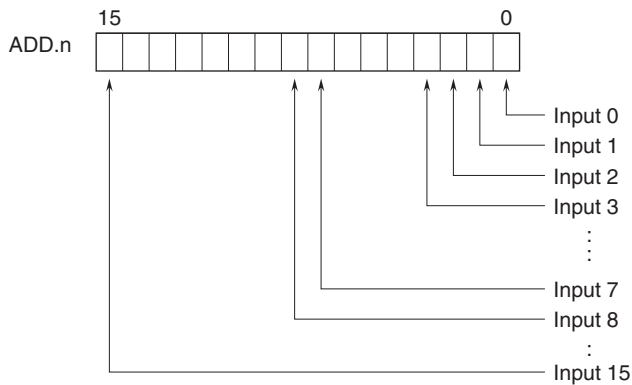
Note: Be sure to turn ON the switch of the terminating resistor located at both ends of the modules.



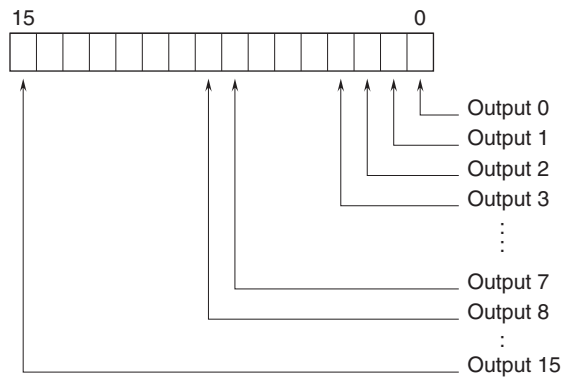
## I/O DATA DESCRIPTIONS

### ■ DISCRETE I/O

• Di

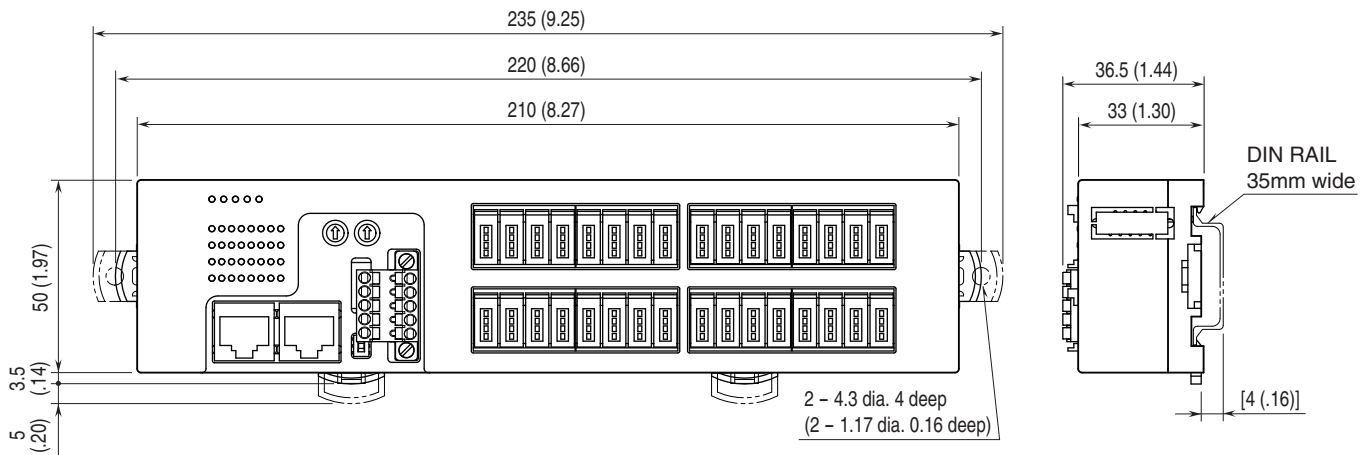


• Do

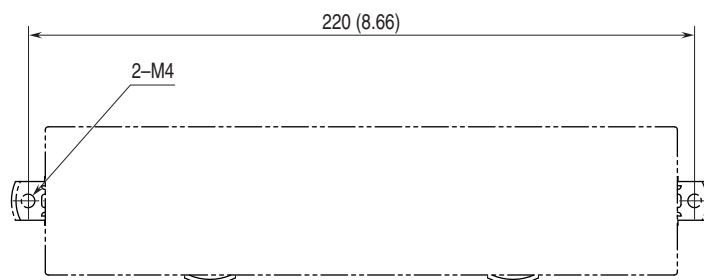


0: OFF  
1: ON

## DIMENSIONS unit: mm (inch)



## MOUNTING REQUIREMENTS unit: mm (inch)



## PNP DISCRETE INPUT & NPN TRANSISTOR OUTPUT MODULE, 16 points each (e-CON connector)

### MODEL: R7K4DH-1-DAC32A

#### SPECIFICATIONS

##### COMMON SPECIFICATIONS

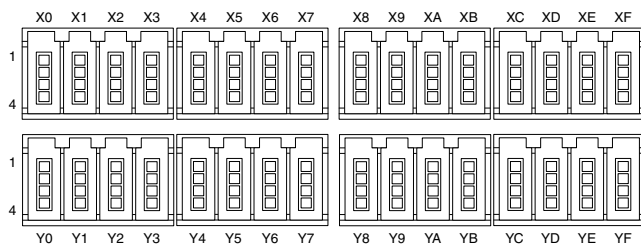
**Common:** Negative common per 32 points  
**Input rating/load voltage:** 24 V DC  $\pm 10\%$ , ripple 5 %p-p max.  
**Number of I/O:** Input, 16 points; Output, 16 points  
**Maximum I/O applicable at once:** No limit (at 24 V DC)  
**I/O status indicator:** LED turns ON with contact ON  
**Isolation:** I/O or sensor excitation to HLS to power input to FE  
**Data allocation:** 1

**INPUT**  
**ON voltage / current:**  $\geq 15$  V DC (X0 through XF to GND) /  $\geq 3.5$  mA  
**OFF voltage / current:**  $\leq 5$  V DC (X0 through XF to GND) /  $\leq 1$  mA  
**Input current:**  $\leq 5.5$  mA per point at 24 V DC  
**Input resistance:** Approx. 4.4 k $\Omega$   
**ON delay:**  $\leq 0.5$  msec.  
**OFF delay:**  $\leq 0.5$  msec.

**OUTPUT**  
**Rated output current:** 0.1 A per point, 1.6 A per common  
**Residual voltage:**  $\leq 1.2$  V  
**Leakage current:**  $\leq 0.1$  mA  
**ON delay:**  $\leq 0.5$  msec.  
**OFF delay:**  $\leq 0.5$  msec.  
**Overload current protection function:** Limits the current value when overcurrent is detected  
**Overheat Protection Function:** Turns OFF the output when overheat is detected

#### TERMINAL ASSIGNMENTS

##### I/O Terminal



No.	ID	FUNCTION	No.	ID	FUNCTION
X0	1	+24V 24V DC	X8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X0 Input 0		4	X8 Input 8
X1	1	+24V 24V DC	X9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X1 Input 1		4	X9 Input 9
X2	1	+24V 24V DC	XA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X2 Input 2		4	XA Input 10
X3	1	+24V 24V DC	XB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X3 Input 3		4	XB Input 11
X4	1	+24V 24V DC	XC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X4 Input 4		4	XC Input 12
X5	1	+24V 24V DC	XD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X5 Input 5		4	XD Input 13
X6	1	+24V 24V DC	XE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X6 Input 6		4	XE Input 14
X7	1	+24V 24V DC	XF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X7 Input 7		4	XF Input 15

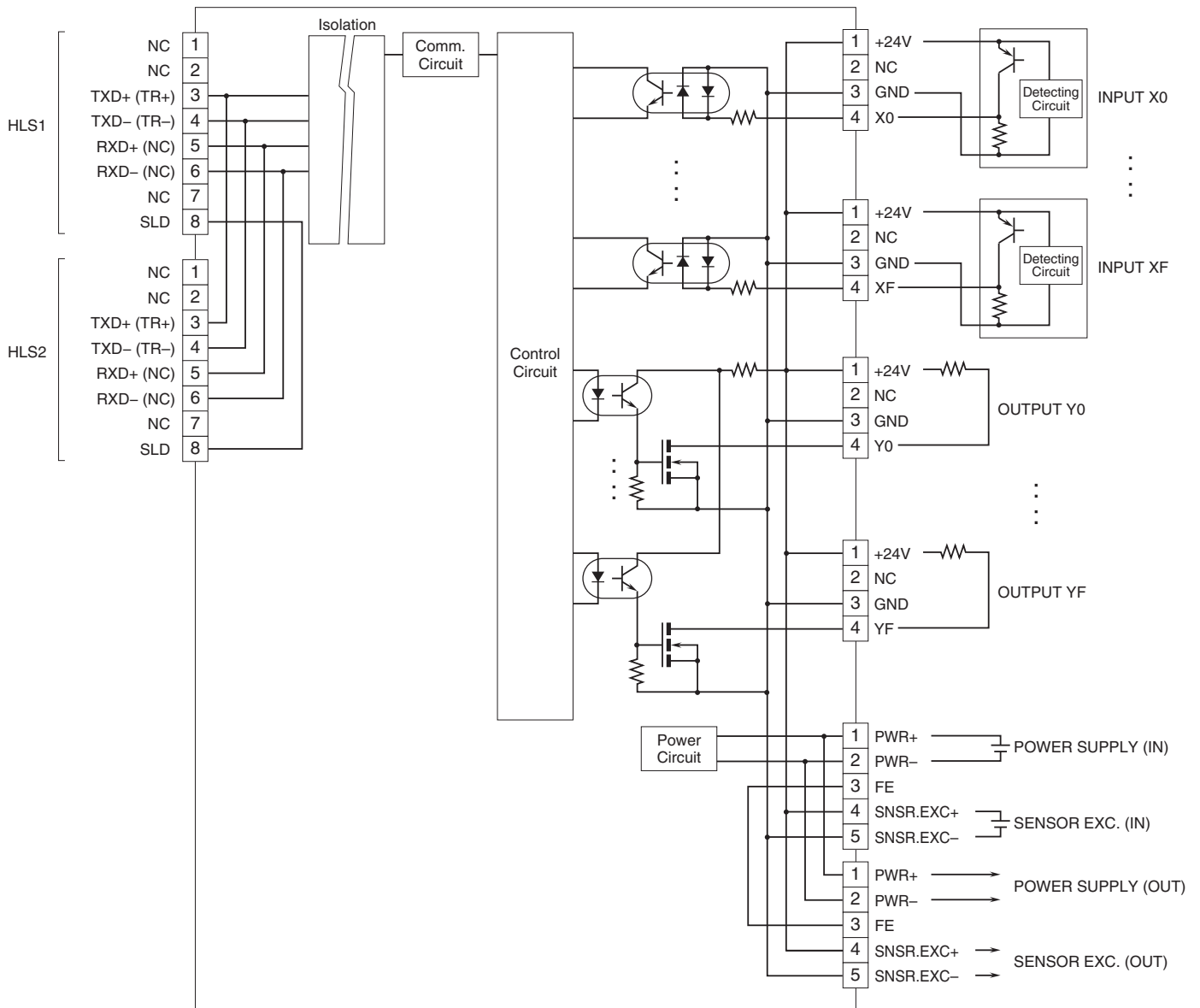
No.	ID	FUNCTION	No.	ID	FUNCTION
Y0	1	+24V 24V DC	Y8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y0 Output 0		4	Y8 Output 8
Y1	1	+24V 24V DC	Y9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y1 Output 1		4	Y9 Output 9
Y2	1	+24V 24V DC	YA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y2 Output 2		4	YA Output 10
Y3	1	+24V 24V DC	YB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y3 Output 3		4	YB Output 11
Y4	1	+24V 24V DC	YC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y4 Output 4		4	YC Output 12
Y5	1	+24V 24V DC	YD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y5 Output 5		4	YD Output 13
Y6	1	+24V 24V DC	YE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y6 Output 6		4	YE Output 14
Y7	1	+24V 24V DC	YF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y7 Output 7		4	YF Output 15



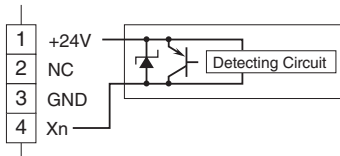
## SCHEMATIC CIRCUITRY

Note: In order to improve EMC performance, bond the FE terminal to ground.

Caution: FE terminal is NOT a protective conductor terminal.



### ■ 2-Wire Sensor



## NPN DISCRETE INPUT & PNP TRANSISTOR OUTPUT MODULE, 16 points each (e-CON connector)

### MODEL: R7K4DH-1-DAC32B

#### SPECIFICATIONS

##### COMMON SPECIFICATIONS

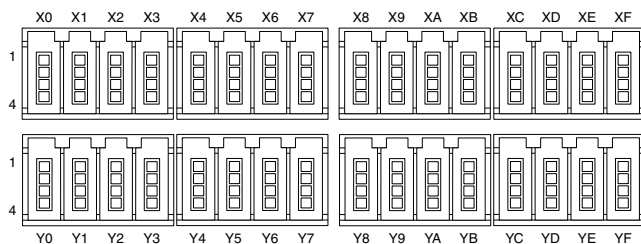
**Common:** Positive common per 32 points  
**Input rating/load voltage:** 24 V DC  $\pm 10\%$ , ripple 5 %p-p max.  
**Number of I/O:** Input, 16 points; Output, 16 points  
**Maximum I/O applicable at once:** No limit (at 24 V DC)  
**I/O status indicator:** LED turns ON with contact ON  
**Isolation:** I/O or sensor excitation to HLS to power input to FE  
**Data allocation:** 1

**INPUT**  
**ON voltage / current:**  $\geq 15$  V DC (X0 through XF to +24 V) /  $\geq 3.5$  mA  
**OFF voltage / current:**  $\leq 5$  V DC (X0 through XF to +24 V) /  $\leq 1$  mA  
**Input current:**  $\leq 5.5$  mA per point at 24 V DC  
**Input resistance:** Approx. 4.4 k $\Omega$   
**ON delay:**  $\leq 0.5$  msec.  
**OFF delay:**  $\leq 0.5$  msec.

**OUTPUT**  
**Rated output current:** 0.1 A per point, 1.6 A per common  
**Residual voltage:**  $\leq 1.2$  V  
**Leakage current:**  $\leq 0.1$  mA  
**ON delay:**  $\leq 0.5$  msec.  
**OFF delay:**  $\leq 0.5$  msec.  
**Overload current protection function:** Limits the current value when overcurrent is detected  
**Overheat Protection Function:** Turns OFF the output when overheat is detected

#### TERMINAL ASSIGNMENTS

##### I/O Terminal



No.	ID	FUNCTION	No.	ID	FUNCTION
X0	1	+24V 24V DC	X8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X0 Input 0		4	X8 Input 8
X1	1	+24V 24V DC	X9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X1 Input 1		4	X9 Input 9
X2	1	+24V 24V DC	XA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X2 Input 2		4	XA Input 10
X3	1	+24V 24V DC	XB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X3 Input 3		4	XB Input 11
X4	1	+24V 24V DC	XC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X4 Input 4		4	XC Input 12
X5	1	+24V 24V DC	XD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X5 Input 5		4	XD Input 13
X6	1	+24V 24V DC	XE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X6 Input 6		4	XE Input 14
X7	1	+24V 24V DC	XF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X7 Input 7		4	XF Input 15

No.	ID	FUNCTION	No.	ID	FUNCTION
Y0	1	+24V 24V DC	Y8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y0 Output 0		4	Y8 Output 8
Y1	1	+24V 24V DC	Y9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y1 Output 1		4	Y9 Output 9
Y2	1	+24V 24V DC	YA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y2 Output 2		4	YA Output 10
Y3	1	+24V 24V DC	YB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y3 Output 3		4	YB Output 11
Y4	1	+24V 24V DC	YC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y4 Output 4		4	YC Output 12
Y5	1	+24V 24V DC	YD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y5 Output 5		4	YD Output 13
Y6	1	+24V 24V DC	YE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y6 Output 6		4	YE Output 14
Y7	1	+24V 24V DC	YF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y7 Output 7		4	YF Output 15

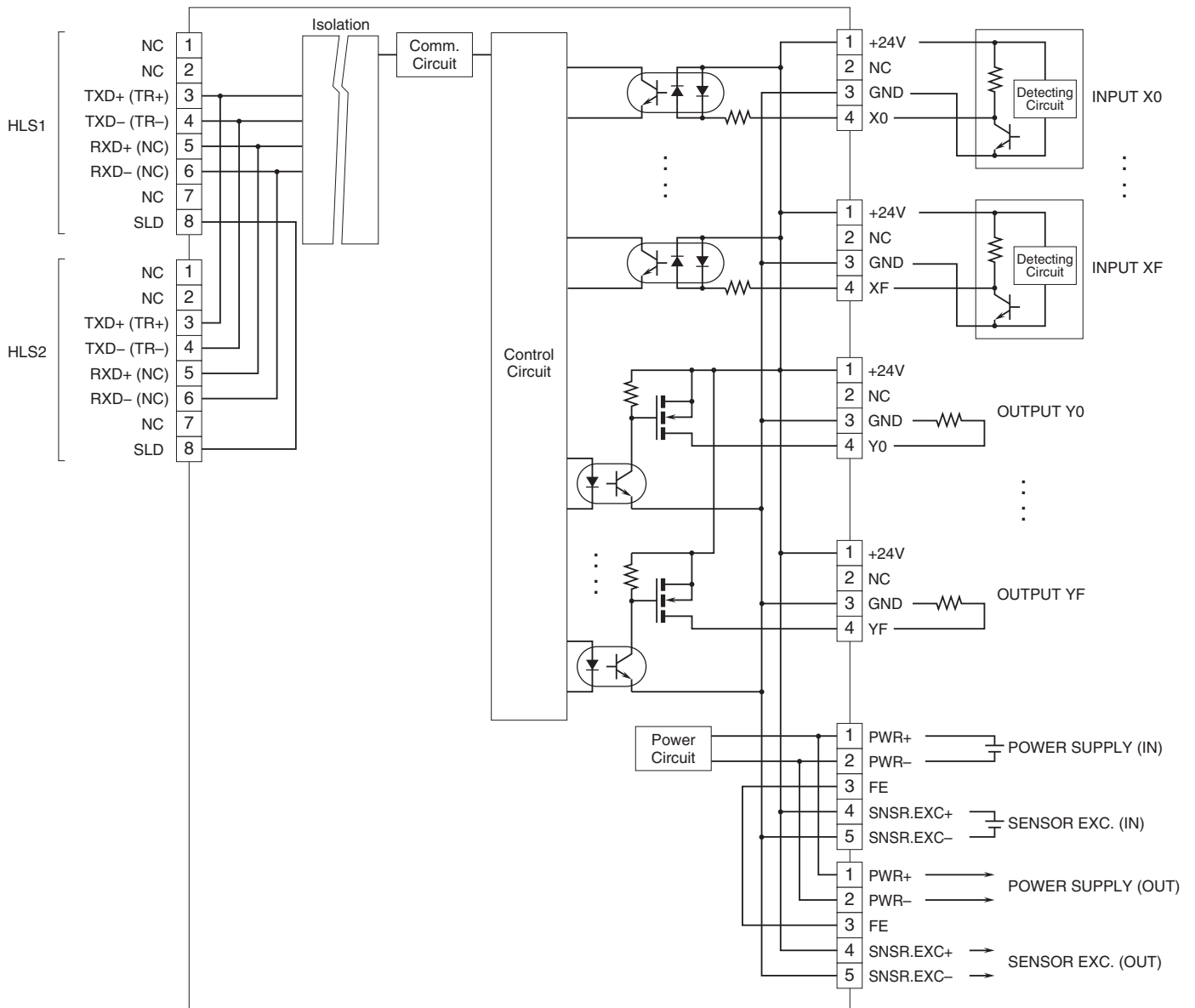




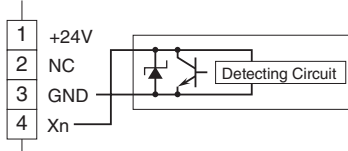
## SCHEMATIC CIRCUITRY

Note: In order to improve EMC performance, bond the FE terminal to ground.

Caution: FE terminal is NOT a protective conductor terminal.



### ■ 2-Wire Sensor





## NPN DISCRETE INPUT &

### NPN TRANSISTOR OUTPUT MODULE, 16 points each

(e-CON connector)

## MODEL: R7K4DH-1-DAC32C

### SPECIFICATIONS

#### COMMON SPECIFICATIONS

**Input common:** Positive common per 16 points

**Output common:** Negative common per 16 points

**Input rating/load voltage:** 24 V DC  $\pm 10\%$ , ripple 5 %p-p max.

**Number of I/O:** Input, 16 points; Output, 16 points

**Maximum I/O applicable at once:** No limit (at 24 V DC)

**I/O status indicator:** LED turns ON with contact ON

**Isolation:** I/O or sensor excitation to HLS to power input to FE

**Data allocation:** 1

**INPUT**

#### INPUT

**ON voltage / current:**  $\geq 15$  V DC (X0 through XF to +24 V) /  $\geq 3.5$  mA

**OFF voltage / current:**  $\leq 5$  V DC (X0 through XF to +24 V) /  $\leq 1$  mA

**Input current:**  $\leq 5.5$  mA per point at 24 V DC

**Input resistance:** Approx. 4.4 k $\Omega$

**ON delay:**  $\leq 0.5$  msec.

**OFF delay:**  $\leq 0.5$  msec.

#### OUTPUT

**Rated output current:** 0.1 A per point, 1.6 A per common

**Residual voltage:**  $\leq 1.2$  V

**Leakage current:**  $\leq 0.1$  mA

**ON delay:**  $\leq 0.5$  msec.

**OFF delay:**  $\leq 0.5$  msec.

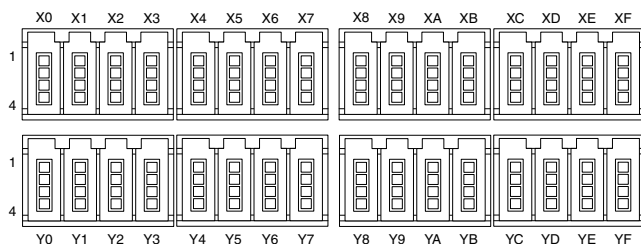
**Overload current protection function:** Limits the current value when overcurrent is detected

**Overheat Protection Function:**

Turns OFF the output when overheat is detected

### TERMINAL ASSIGNMENTS

#### I/O Terminal



No.	ID	FUNCTION	No.	ID	FUNCTION
X0	1	+24V 24V DC	X8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X0 Input 0		4	X8 Input 8
X1	1	+24V 24V DC	X9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X1 Input 1		4	X9 Input 9
X2	1	+24V 24V DC	XA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X2 Input 2		4	XA Input 10
X3	1	+24V 24V DC	XB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X3 Input 3		4	XB Input 11
X4	1	+24V 24V DC	XC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X4 Input 4		4	XC Input 12
X5	1	+24V 24V DC	XD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X5 Input 5		4	XD Input 13
X6	1	+24V 24V DC	XE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X6 Input 6		4	XE Input 14
X7	1	+24V 24V DC	XF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X7 Input 7		4	XF Input 15

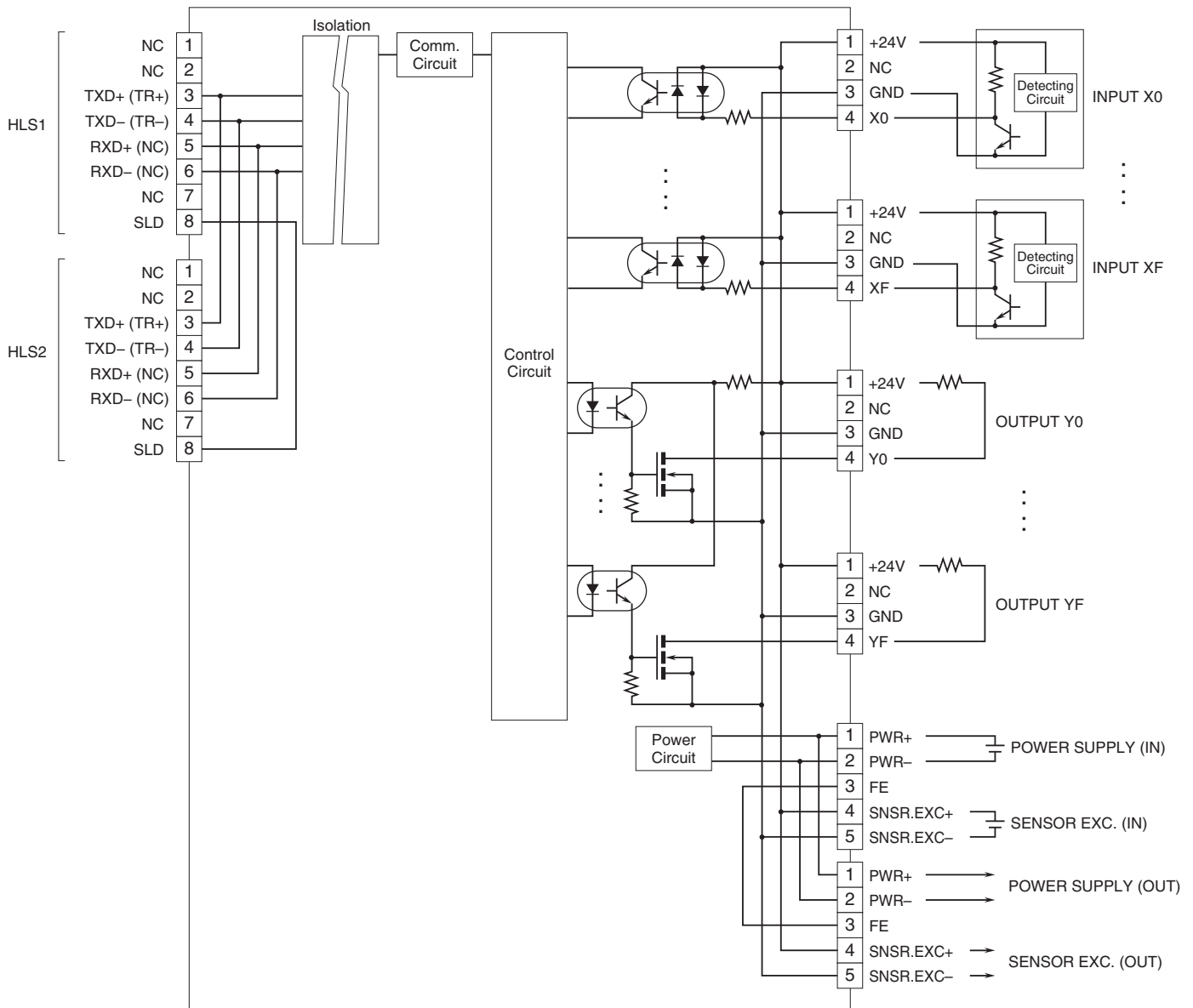
No.	ID	FUNCTION	No.	ID	FUNCTION
Y0	1	+24V 24V DC	Y8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y0 Output 0		4	Y8 Output 8
Y1	1	+24V 24V DC	Y9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y1 Output 1		4	Y9 Output 9
Y2	1	+24V 24V DC	YA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y2 Output 2		4	YA Output 10
Y3	1	+24V 24V DC	YB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y3 Output 3		4	YB Output 11
Y4	1	+24V 24V DC	YC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y4 Output 4		4	YC Output 12
Y5	1	+24V 24V DC	YD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y5 Output 5		4	YD Output 13
Y6	1	+24V 24V DC	YE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y6 Output 6		4	YE Output 14
Y7	1	+24V 24V DC	YF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y7 Output 7		4	YF Output 15



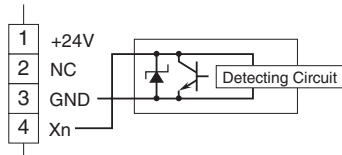
## SCHEMATIC CIRCUITRY

Note: In order to improve EMC performance, bond the FE terminal to ground.

Caution: FE terminal is NOT a protective conductor terminal.



### ■ 2-Wire Sensor



## PNP DISCRETE INPUT &

### PNP TRANSISTOR OUTPUT MODULE, 16 points each

(e-CON connector)

### MODEL: R7K4DH-1-DAC32D

#### SPECIFICATIONS

##### COMMON SPECIFICATIONS

**Input common:** Negative common per 16 points

**Output common:** Positive common per 16 points

**Input rating/load voltage:** 24 V DC  $\pm 10\%$ , ripple 5 %p-p max.

**Number of I/O:** Input, 16 points; Output, 16 points

**Maximum I/O applicable at once:** No limit (at 24 V DC)

**I/O status indicator:** LED turns ON with contact ON

**Isolation:** I/O or sensor excitation to HLS to power input to FE

**Data allocation:** 1

##### INPUT

**ON voltage / current:**  $\geq 15$  V DC (X0 through XF to GND) /  $\geq 3.5$  mA

**OFF voltage / current:**  $\leq 5$  V DC (X0 through XF to GND) /  $\leq 1$  mA

**Input current:**  $\leq 5.5$  mA per point at 24 V DC

**Input resistance:** Approx. 4.4 k $\Omega$

**ON delay:**  $\leq 0.5$  msec.

**OFF delay:**  $\leq 0.5$  msec.

##### OUTPUT

**Rated output current:** 0.1 A per point, 1.6 A per common

**Residual voltage:**  $\leq 1.2$  V

**Leakage current:**  $\leq 0.1$  mA

**ON delay:**  $\leq 0.5$  msec.

**OFF delay:**  $\leq 0.5$  msec.

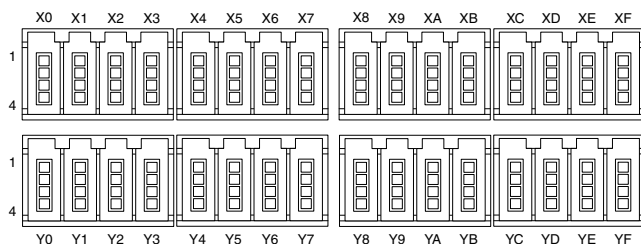
**Overload current protection function:** Limits the current value when overcurrent is detected

**Overheat Protection Function:**

Turns OFF the output when overheat is detected

#### TERMINAL ASSIGNMENTS

##### I/O Terminal



No.	ID	FUNCTION	No.	ID	FUNCTION
X0	1	+24V 24V DC	X8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X0 Input 0		4	X8 Input 8
X1	1	+24V 24V DC	X9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X1 Input 1		4	X9 Input 9
X2	1	+24V 24V DC	XA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X2 Input 2		4	XA Input 10
X3	1	+24V 24V DC	XB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X3 Input 3		4	XB Input 11
X4	1	+24V 24V DC	XC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X4 Input 4		4	XC Input 12
X5	1	+24V 24V DC	XD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X5 Input 5		4	XD Input 13
X6	1	+24V 24V DC	XE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X6 Input 6		4	XE Input 14
X7	1	+24V 24V DC	XF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	X7 Input 7		4	XF Input 15

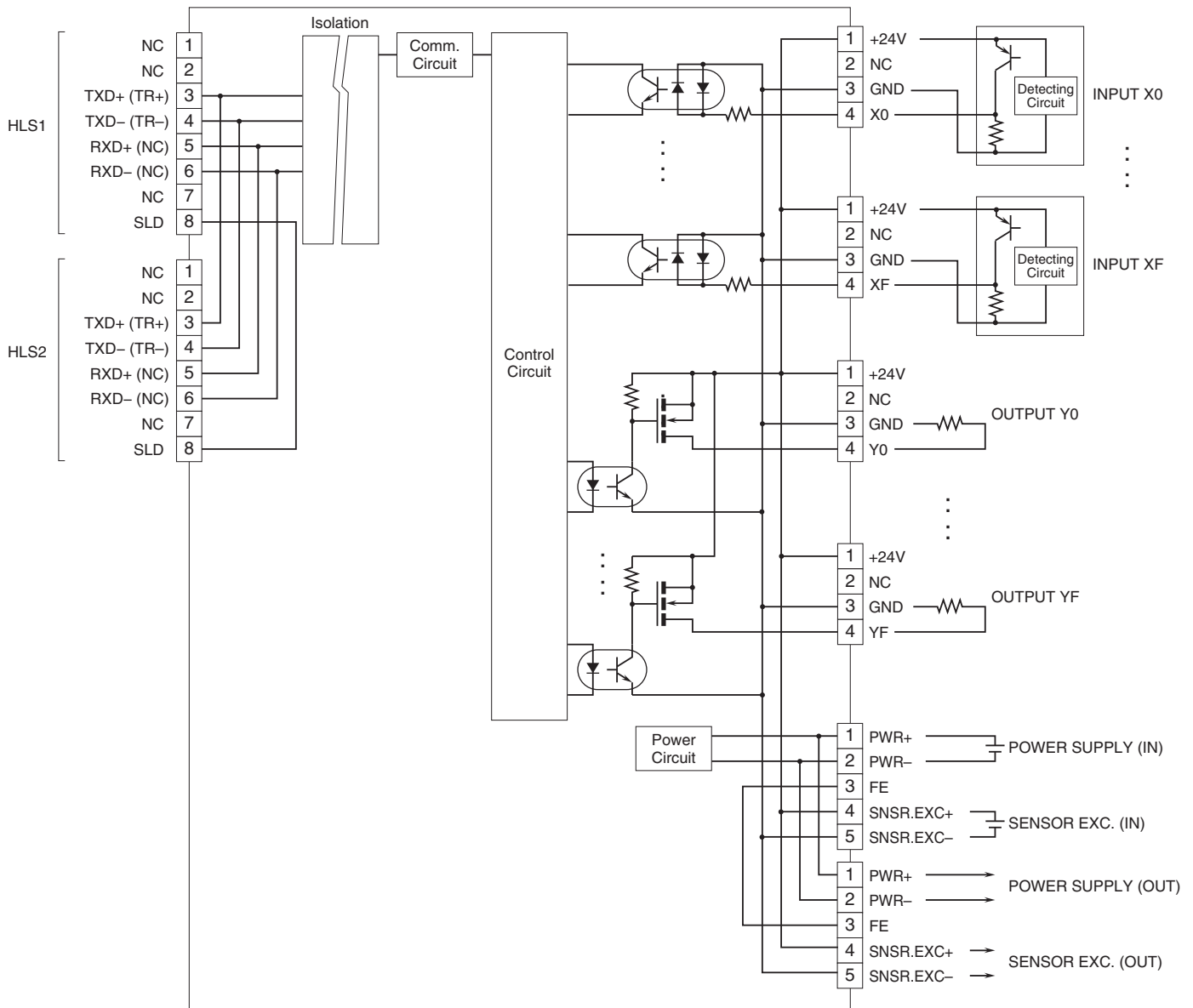
No.	ID	FUNCTION	No.	ID	FUNCTION
Y0	1	+24V 24V DC	Y8	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y0 Output 0		4	Y8 Output 8
Y1	1	+24V 24V DC	Y9	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y1 Output 1		4	Y9 Output 9
Y2	1	+24V 24V DC	YA	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y2 Output 2		4	YA Output 10
Y3	1	+24V 24V DC	YB	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y3 Output 3		4	YB Output 11
Y4	1	+24V 24V DC	YC	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y4 Output 4		4	YC Output 12
Y5	1	+24V 24V DC	YD	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y5 Output 5		4	YD Output 13
Y6	1	+24V 24V DC	YE	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y6 Output 6		4	YE Output 14
Y7	1	+24V 24V DC	YF	1	+24V 24V DC
	2	NC Unused		2	NC Unused
	3	GND 0V		3	GND 0V
	4	Y7 Output 7		4	YF Output 15



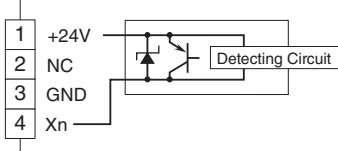
## SCHEMATIC CIRCUITRY

Note: In order to improve EMC performance, bond the FE terminal to ground.

Caution: FE terminal is NOT a protective conductor terminal.



### ■ 2-Wire Sensor



Specifications are subject to change without notice.