

MODEL: R7K4GUS-G16D4

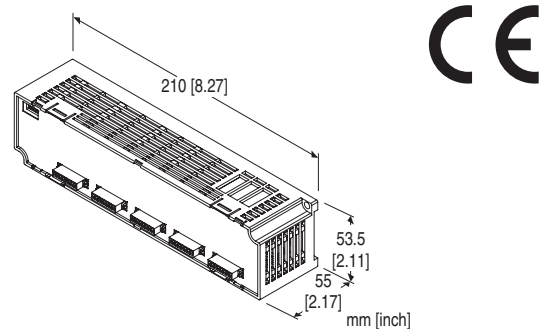
PC Recorder R7K4G Series

PC RECORDER

(Bus powered USB, 16 points DC input, 2 points dry contact, 2 points photo MOSFET relay output, tension clamp terminal)

Functions & Features

- Remote I/O module with 16 points DC input for measurement with PC
- 2 points dry contact and 2 points photo MOSFET relay output
- Available for trigger input and alarm output
- No power wiring required



MODEL: R7K4GUS-G16D4-[1]-T

ORDERING INFORMATION

- Code number: R7K4GUS-G16D4-[1]-T
- Specify a code from below for [1].
(e.g. R7K4GUS-G16D4-1-T)

I/O TYPE

G16D4: DC voltage input, 16 points,
dry contact, 2 points,
photo MOSFET relay output, 2 points
(for input range, refer to analog input specification)

[1] ANALOG INPUT RANGE

Select input range among the following combination (1 - 8 ch, 9 - 16 ch)

- 1:** DC input, 16 points (wide span voltage input, 16 points)
- 2:** DC input, 16 points
(1 - 8 ch wide span voltage input, 8 points +
9 - 16 ch middle span voltage input, 8 points)
- 3:** DC input, 16 points
(1 - 8 ch wide span voltage input, 8 points +
9 - 16 ch narrow span voltage input, 8 points)
- 4:** DC input, 16 points (middle span voltage input, 16 points)
- 5:** DC input, 16 points
(1 - 8 ch middle span voltage input, 8 points +

9 - 16 ch narrow span voltage input, 8 points)

6: DC input, 16 points (narrow span voltage input, 16 points)

POWER INPUT

DC Power

T: 5 V DC power input by USB bus powered (high powered device)

RELATED PRODUCTS

- Configurator software for PC Recorder (model: PC Recorder)
- Configurator software for PC Recorder is downloadable at our web site.
For connecting to PC, use commercially available cable.

GENERAL SPECIFICATIONS

Connection

- **Power input, communication:** USB Type-C connector (female)
- **I/O:** Tension clamp terminal

Housing material: Flame-resistant resin (gray)

Isolation: Analog input to discrete input or output to USB connector (power input or communication)

Status indicator LED: PWR, RUN
(Refer to the instruction manual)

Discrete I/O status indicator LED: Green LED turns on with I/O ON

COMMUNICATION

Standard: Full Speed USB 2.0

Connector: Type-C

Role: device

Transmission speed: 12 Mbps

Cable specification / current value: 4 m max. / ≥ 1.5 A

ANALOG INPUT SPECIFICATIONS

Input signal: DC current, 16 points

■ Wide span voltage

Input resistance: ≥ 1 M Ω

± 10 V DC to ± 0.8 V DC

Maximum input range: ± 10.5 V DC

■ Middle span voltage

Input resistance: ≥ 100 k Ω

± 0.8 V DC to ± 80 mV DC

Maximum input range: ± 0.84 V DC

■ Narrow span voltage

Input resistance: ≥ 100 k Ω

± 80 mV DC to ± 10 mV DC

Maximum input range: ± 84 mV DC

DISCRETE INPUT SPECIFICATIONS

Discrete input: Dry contact, 2 points
Common: Negative common (connect internally to 0V)
Maximum inputs applicable at once: No limit
Rated detective voltage: Approx. 5 V DC (internal supply)
ON voltage / resistance: $\geq 0.5 \text{ V} / \leq 1000 \Omega$
OFF voltage / resistance: $\leq 4.0 \text{ V DC} / \geq 20 \text{ k}\Omega$
Input current: Approx. 3.8 mA
Input resistance: Approx. 1 k Ω
ON delay: $\leq 2.0 \text{ msec.}$
OFF delay: $\leq 2.0 \text{ msec.}$

STANDARDS & APPROVALS

EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

OUTPUT SPECIFICATIONS

Photo MOSFET relay output, 2 points
Rated load voltage: 48 V peak AC / DC
Rated output current: 0.2 A per point
Output ON resistance: $\leq 1 \Omega$
Leakage current at open circuit: $\leq 0.1 \text{ mA}$
ON delay: $\leq 50 \text{ msec.}$
OFF delay: $\leq 1 \text{ msec.}$
(Recommended to protect the contact and to eliminate noise when driving an inductive load.)

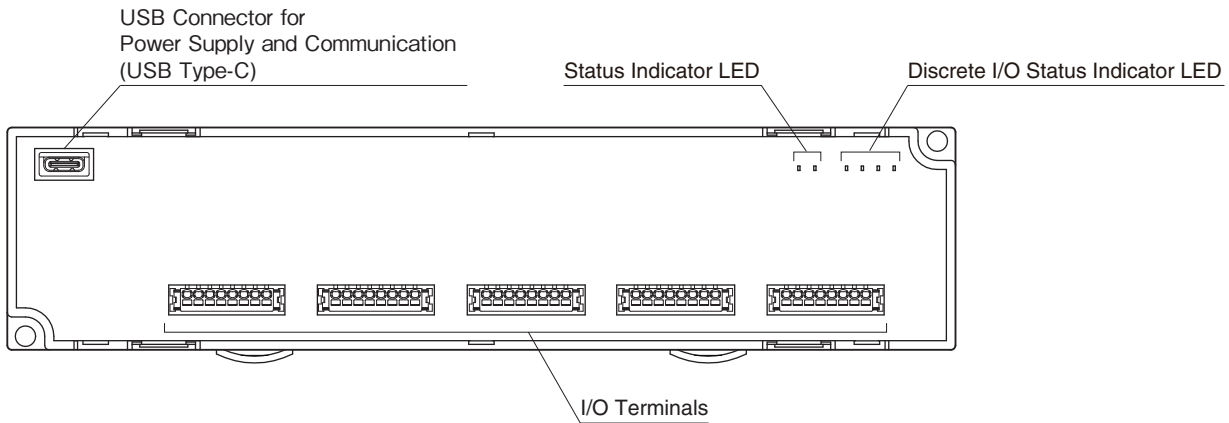
INSTALLATION

Current consumption
5 V DC power input by USB bus powered (high powered device)
 $\leq 160 \text{ mA}$
Operating temperature: -10 to +55°C (14 to 131°F)
Storage temperature: -20 to +65°C (-4 to +149°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: Desktop, surface or DIN rail (35 mm rail)
Weight: 150 g (0.33 lb)

PERFORMANCE

Conversion accuracy: $\pm 0.1 \%$ (narrow span voltage input
 $\pm 20 \text{ mV DC}$: $\pm 0.2 \%$, $\pm 10 \text{ mV DC}$: $\pm 0.3 \%$)
Conversion rate: 4 msec.
Temp. coefficient: $\pm 0.015 \%/^{\circ}\text{C}$ ($\pm 0.008 \%/^{\circ}\text{F}$)
($\pm 0.03 \%/^{\circ}\text{C}$ [$\pm 0.02 \%/^{\circ}\text{F}$] with $\pm 10 \text{ mV DC}$)
Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC
Dielectric strength: 1500 V AC @1 minute
(analog input to discrete input or output to USB connector
(power input or communication)

EXTERNAL VIEW



TERMINAL ASSIGNMENTS

■ ANALOG INPUT, DISCRETE I/O TERMINAL ASSIGNMENT

Unit side connector: PTSM0,5/8-2,5-V SMD R44 (Phoenix Contact)

Applicable wire size: 0.2 - 0.5mm²

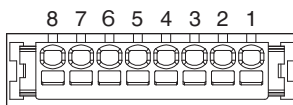
Stripped length: 6mm

Recommended solderless terminal

AI0,25-6BU 0.25mm² (Phoenix Contact)

AI0,25-6YE 0.25mm² (Phoenix Contact)

AI0,34-6TQ 0.34mm² (Phoenix Contact)



· ANALOG INPUT

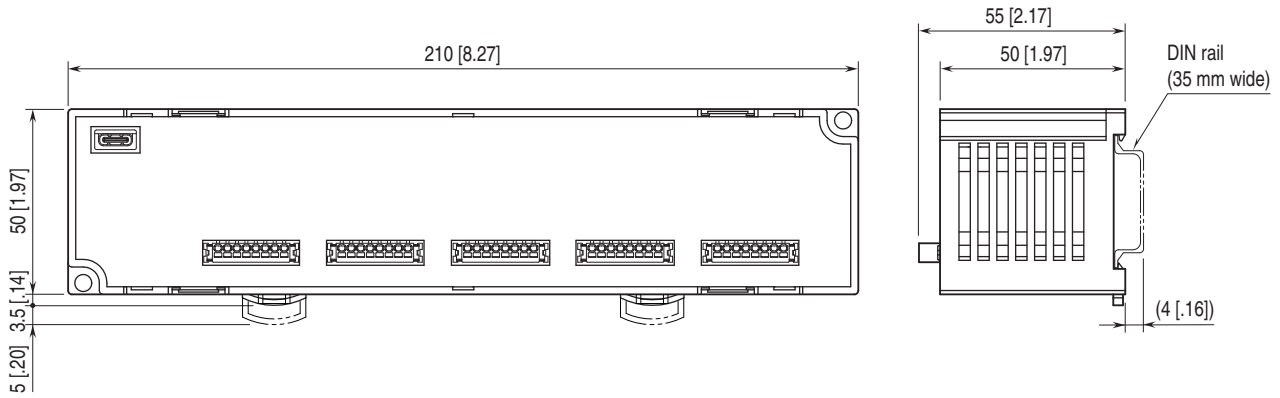
PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION	PIN NO.	ID	FUNCTION
1	AI4-	Input 4-	1	AI8-	Input 8-	1	AI12-	Input 12-	1	AI16-	Input 16-
2	AI4+	Input 4+	2	AI8+	Input 8+	2	AI12+	Input 12+	2	AI16+	Input 16+
3	AI3-	Input 3-	3	AI7-	Input 7-	3	AI11-	Input 11-	3	AI15-	Input 15-
4	AI3+	Input 3+	4	AI7+	Input 7+	4	AI11+	Input 11+	4	AI15+	Input 15+
5	AI2-	Input 2-	5	AI6-	Input 6-	5	AI10-	Input 10-	5	AI14-	Input 14-
6	AI2+	Input 2+	6	AI6+	Input 6+	6	AI10+	Input 10+	6	AI14+	Input 14+
7	AI1-	Input 1-	7	AI5-	Input 5-	7	AI9-	Input 9-	7	AI13-	Input 13-
8	AI1+	Input 1+	8	AI5+	Input 5+	8	AI9+	Input 9+	8	AI13+	Input 13+

· DISCRETE I/O

PIN NO.	ID	FUNCTION
1	DO2	Photo MOSFET output 2
2	DO2	Photo MOSFET output 2
3	DO1	Photo MOSFET output 1
4	DO1	Photo MOSFET output 1
5	-	Unused
6	DI2	Discrete input 2
7	DI1	Discrete input 1
8	COM	Common

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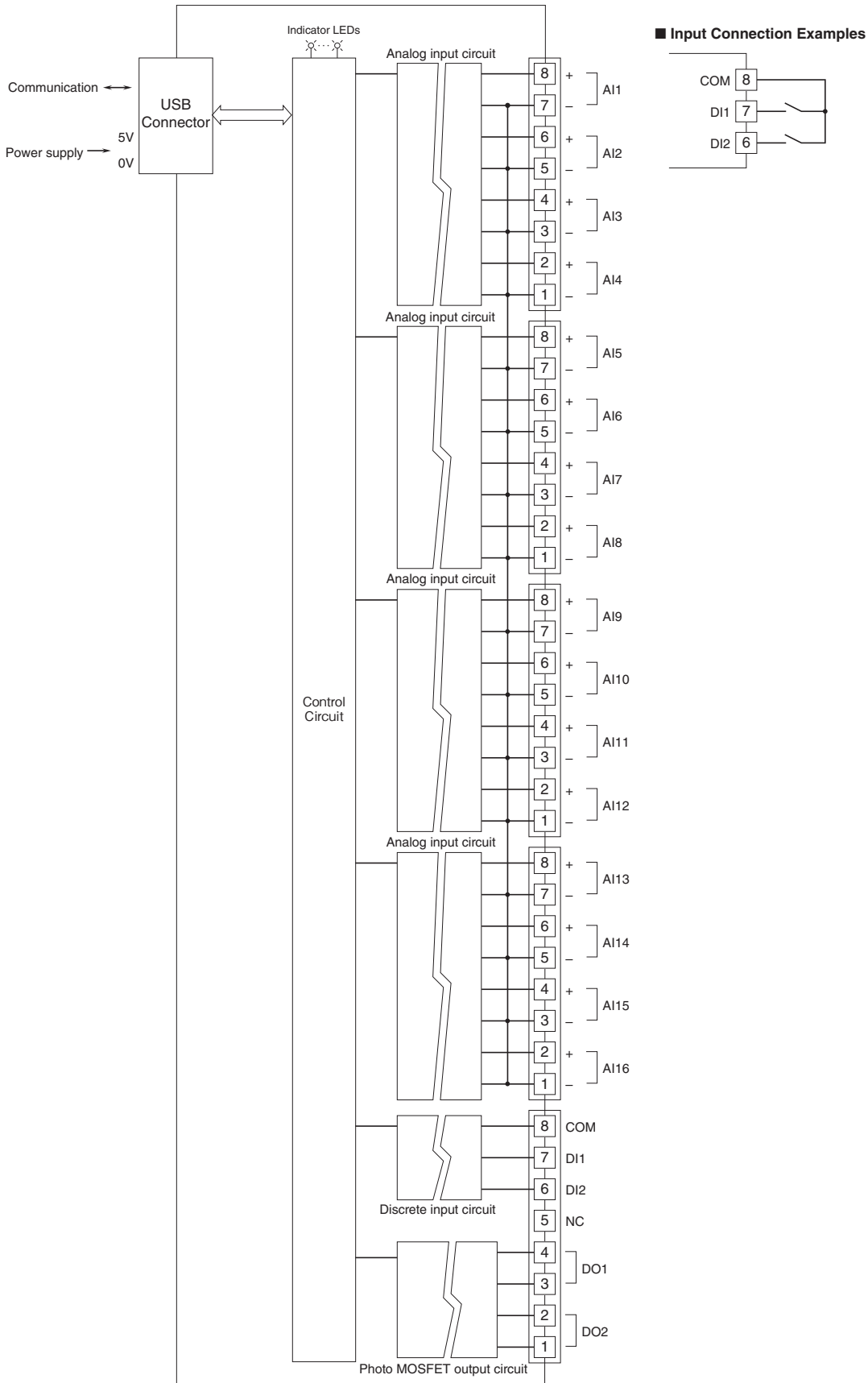
EXTERNAL DIMENSIONS unit: mm [inch]



MOUNTING REQUIREMENTS unit: mm [inch]

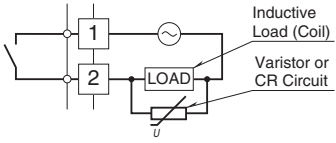


SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

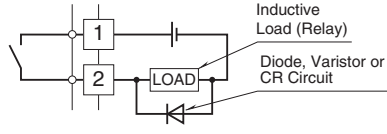


■ Relay protection

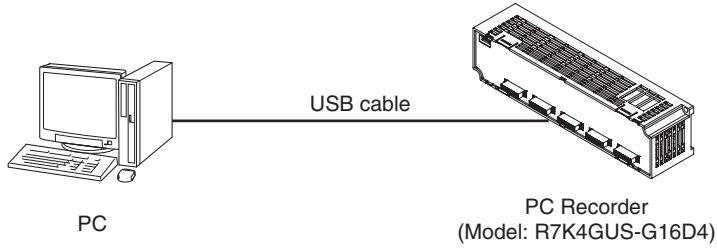
· AC Powered



· DC Powered



SYSTEM CONFIGURATION EXAMPLES



Specifications are subject to change without notice.