



Model Name :



# Insulation Detection Module Specification

Attend to:

Accepted by Customer	
Title	
Signature (Date)	

ENDRICH Co., Ltd.			
Approved By (Date)	Check By (Date)	Check By (Date)	Originator (Date)





乾坤實業有限公司  
QIANZHONG INDUSTRIAL CO., LTD.



Model Name :

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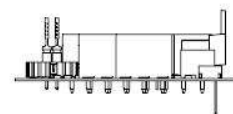
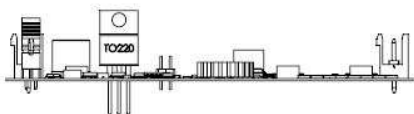
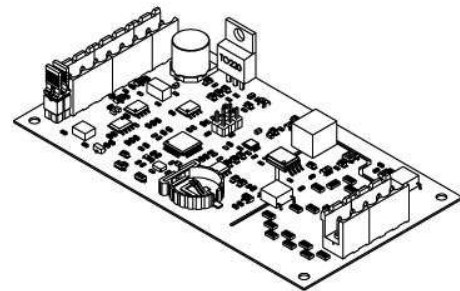
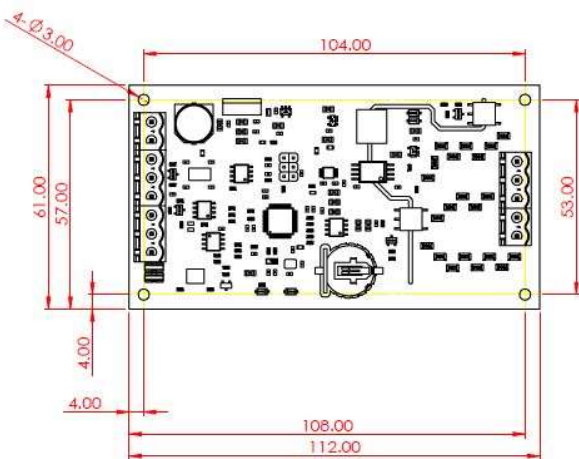
## 1. Scope:

This specification is description Insulation detection module for measuring a high voltage system's insulation resistance.

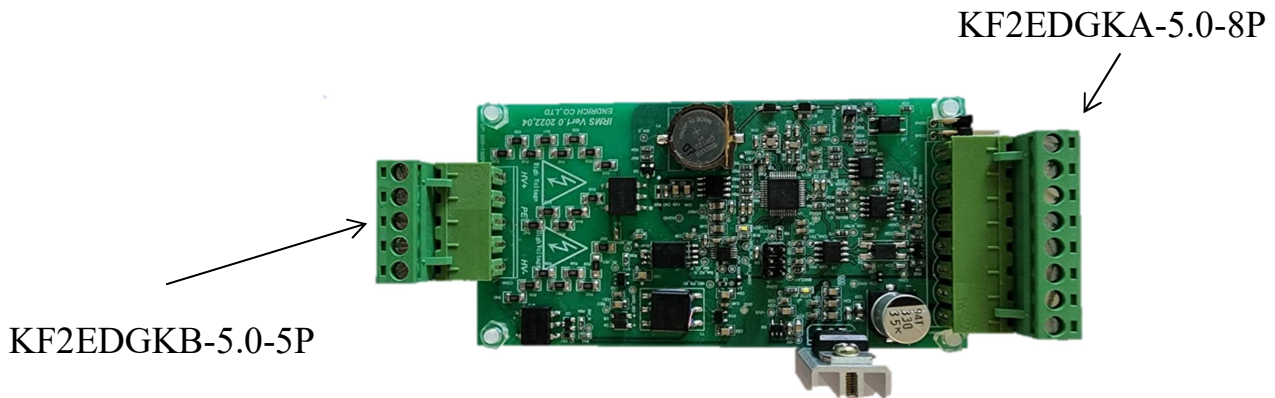
## 2. Specification

Item	Function
Operating Voltage	12-24 Vdc / 0.5A
System Function	To measure the high voltage system's resistance between system and ground.
Voltage	300-1500 Vdc $\pm 0.5\%$
	Resistance 10K-1000MOhm 3% @Riso > 1MOhm, 5% @Riso > 100KOhm
Communication	RS-485 / CAN
Protocol	CAN Bus
Spec.	19200, 8, N, 1
Data Length	8 bytes/data (Including 1 bite of checksum)
Transmission frequency	Data regularly every 1000 ms
Dimension	112L x 61W x 22H (mm)

## 3. Dimension



#### 4. Photo



#### 5. Pin Definition

- KF2EDGKB-5.0-5P

Pin	Function	Description
1	System +	Detection System Positive
2	N/A	
3	Ground	Ground
4	N/A	
5	System +	Detection System Negative

- KF2EDGKA-5.0-8P

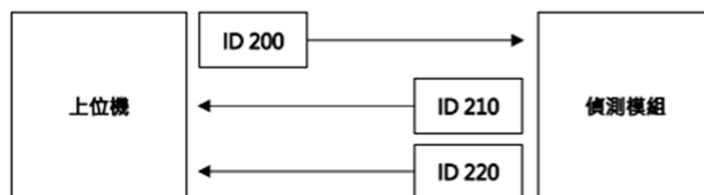
Pin	Function	Description
1	N/A	
2	N/A	
3	N/A	
4	N/A	
5	CAN H	CAN Communication
6	CAN L	CAN Communication
7	-12V or -24V	Power Negative
8	+12V or +24V	Power Positive

## 6. Communication

### 通訊規格

項目	說明
Mode	CAN 2.0A (11-Bit)
Baud Rate	100 Kbits/s
Frame Types	DATA FRAME
Data Length	8 bytes (固定長度)

### 通訊流程



### 通訊封包內容

#### ID 200 資料內容

資料欄位	資料內容
ID	0x200
Byte 1	Cycle_LSB
Byte 2	Cycle_MSB
Byte 3	Reserved
Byte 4	Reserved
Byte 5	Reserved
Byte 6	Reserved
Byte 7	Reserved
Byte 8	Reserved



Model Name :

## ID 200 資料格式說明

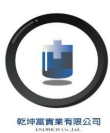
參數名稱	說明
Reserved	保留
Cycle	<ul style="list-style-type: none"> <li>● Cycle = (Byte 1)+(Byte 2)&lt;&lt;8</li> <li>● 單位: 0x1 = 1 秒</li> <li>● 單次轉換: 設定 0</li> </ul> 週期轉換: 設定秒數則進行週期轉換 (最小週期需大於等於 60 秒)

## ID 210 資料內容

資料欄位	資料內容
ID	0x210
Byte 1	Status
Byte 2	Reserved
Byte 3	Reserved
Byte 4	Reserved
Byte 5	Voltage_LSB
Byte 6	Voltage
Byte 7	Voltage
Byte 8	Voltage_MSB

## ID 210 資料格式說明

參數名稱	說明
Reserved	保留
Status	0x00 = OK 0x01 = BUSY 0x08 = ERROR 0x80 = ALARM
Voltage	<ul style="list-style-type: none"> <li>● Voltage = (Byte 5)+(Byte 6)&lt;&lt;8 + (Byte 7)&lt;&lt;16 + (Byte 8)&lt;&lt;24</li> <li>● 單位: 0x1 = 1mV</li> <li>● (EX) Voltage = 200V = 0x00030D40 Byte 5 = 0x40 Byte 6 = 0x0D Byte 7 = 0x03 Byte 8 = 0x00</li> </ul>



ID 220 資料內容

資料欄位	資料內容
ID	0x220
Byte 1	Rp_LSB
Byte 2	Rp
Byte 3	Rp
Byte 4	Rp_MSB
Byte 5	Rn_LSB
Byte 6	Rn
Byte 7	Rn
Byte 8	Rn_MSB

ID 220 資料格式說明

參數名稱	說明
Rp	<ul style="list-style-type: none"> <li>● <math>Rp = (\text{Byte } 1) + (\text{Byte } 2) \ll 8 + (\text{Byte } 3) \ll 16 + (\text{Byte } 4) \ll 24</math></li> <li>● 單位: <math>0x1 = 1\Omega</math></li> <li>● (EX)  <math>Rp = 0x12345678</math>            Byte 1 = 0x78            Byte 2 = 0x56            Byte 3 = 0x34            Byte 4 = 0x12</li> </ul>
Rn	<ul style="list-style-type: none"> <li>● <math>Rn = (\text{Byte } 5) + (\text{Byte } 6) \ll 8 + (\text{Byte } 7) \ll 16 + (\text{Byte } 8) \ll 24</math></li> <li>● 單位: <math>0x1 = 1\Omega</math></li> <li>● (EX)  <math>Rp = 0x12345678</math>            Byte 5 = 0x78            Byte 6 = 0x56            Byte 7 = 0x34            Byte 8 = 0x12</li> </ul>