



Explosion proof Signal Conditioner

DB1000-M Series

Approved by Technology Institution of Industrial Safety (TIIS) ([Ex ia] IIC)

Line up

- DB1011-M...For switch
Certification No. TC20801
- DB1021-M...For solenoid
Certification No. TC20802
- DB1031-M...For transmitter
Certification No. TC21136
- DB1041-M...For positioner
Certification No. TC20804
- DB1051-M...For temperature transmit
Certification No. TC20805
(PC link adapter
DB10C-USB Test NO. TC20806
be sold separately)



FEATURE

- Occupation Safety and Health Law approved by TIIS[Ex ia] IIC)
- Made in Japan
- Associated Apparatus for intrinsic safe system [Ex ia]
- Do not need A-class grounding
- Isolated between input、 output and power、 to avoid ground loop
- Thickness 12.5 mm
- Can be connected with any machine which conform to intrinsically safe parameter
- Easy for maintenance by using the connector terminal
- 35mm DIN rail mounting
- SIL2(IEC61508) equivalent

DB1011-M

Intrinsic safety isolated barrier for switch

- Operation: Turning on and off output according to input current.
- Alarm: Line fault detection (LFD).
- Switching point Operation: 1.2mA to 2.1mA .

DB1041-M

Isolated barrier (intrinsically safe isolation barrier for 4 to 20mA driver)

- Operation: Current source (providing 4 to 20mA signal current to intrinsically safe equipment)
- Alarm: Available.

DB1021-M

Intrinsic safety isolated barrier for solenoid

- Operation: Turning ON/OFF power supply to output according to input ON/OFF.
- Looped power can be selected.

DB1051-M

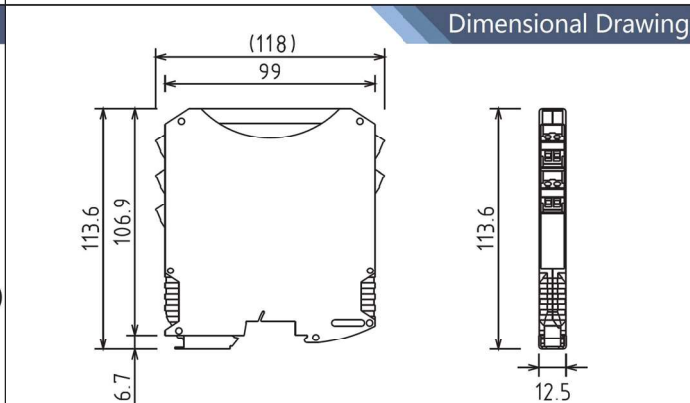
Isolated barrier (intrinsically safe isolation barrier for temperature sensor)

- Operation: Converting TC/RTD signals to current output .
- Alarm: Available.

DB1031-M

Isolated barrier (Intrinsic safety isolator for 4 to 20mA repeater)

- Operation Current repeater: Transmitting current signal from 2-wire/3-wire intrinsically safe equipment to non-intrinsically safe area.



Explosion Proof Spec	DB1011-M	DB1021-M	DB1031-M	DB1041-M	DB1051-M
Explosion-proof Construction	[Ex ia]IIC	[Ex ia]IIC	[Ex ia]IIC	[Ex ia]IIC	[Ex ia]IIC
Uo	10.5V	24.15V	26.1V	25.2V	5.36V
Io	13mA	137.6mA	93mA	93mA	2.35mA
Po	34.2mW	831mW	607mW	586mW	3.2mW
Co	2.4 μF	122nF	0.098 μF	0.107 μF	65 μF
Lo	210mH	1.41mH	3.29mH	3.38mH	1.0H
Um	250V	250V	250V	250V	250V
Operating Temperature	-20 ~ +60°C	-20 ~ +45°C	-20 ~ +55°C	-20 ~ +50°C	-20 ~ +60°C
Conformity NO.	SHE x C18.0810U	SHE x C18.0841U	SHE x C18.0812U	SHE x C18.0843U	SHE x C18.0844U
Standard Spec	DB1011-M	DB1021-M	DB1031-M	DB1041-M	DB1051-M
Power	24V	24V	24V	24V	24V
Operating Humidity	10 to 90%RH	10 to 90%RH	10 to 90%RH	10 to 90%RH	10 to 90%RH
Power Consumption	1.0W max(DB1011-22)	2.0W max	2.3W max	1.1W max	1.3W max
Intrinsically Safe Side No-Load Voltage	8V	—	—	—	—
Intrinsically Safe Side S/C Current	8mA	—	—	—	—
Intrinsically Safe Side Rated Voltage	—	12V	16V (20mA)	15V (20mA)	—
Intrinsically Safe Side Rated Current	—	45mA	—	—	—
Non-Intrinsically Safe Side Rated Voltage	—	—	17V (20mA)	—	—

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