

Euro Terminal Ultra-Slim Signal Conditioners *M6D Series*

DC ALARM
(PC programmable)

MODEL **M6DXAS**

MODEL & SUFFIX CODE SELECTION

M6DXAS--R

MODEL _____

INPUT _____

Current
Z1 : Range 0 – 50mA DC

Voltage
S1 : Range -1000 – +1000mV DC
S2 : Range -10 – +10V DC

OUTPUT
Relay; SPDT or transfer contact

POWER INPUT _____

R : 24V DC

PC Configurator Software is used to change input type and precise range.

ORDERING INFORMATION

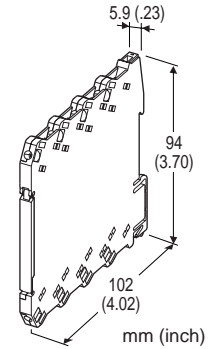
Specify code number and variables. Default setting (table below) will be used if not otherwise specified.

- **Code number** (e.g. M6DXAS-Z1-R)
- **Input range** (e.g. 4 – 20mA DC)

INPUT CODE	DEFAULT
Z1	4 – 20mA DC
S1	0 – 100mV DC
S2	1 – 5V DC

RELATED PRODUCTS

- PC configurator software (model: M6CFG)
Downloadable at M-System's web site:
<http://www.m-system.co.jp>
- PC configurator cable (model: MCN-CON)



Functions & Features

- 5.9-mm wide ultra-slim design
- Low profile allows the M6D module mounted in a 120-mm deep panel
- Provides a relay contact output at preset DC input levels
- PC programmable
- High-density mounting
- Power and status indicator LEDs

GENERAL SPECIFICATIONS

- Connection:** Euro terminal (torque 0.3 N·m)
- Applicable wire size:** 0.2 to 2.5 mm²
- Housing material:** Flame-resistant resin (black)
- Isolation:** Input to output to power
- Power LED:** Green light turns on when the power is supplied.
- Status indicator LED:** Orange LED; Flashing patterns indicate different operating status of the transmitter.
- Alarm monitor LED:** Red LED turns on when the alarm is tripped.
- Programming:** Downloaded from PC
- Configurator connection:** 2.5 dia. miniature jack; RS-232C level
- Programmable parameters:**
 - Input type and range
 - Input fine adjustments
 - Alarm setpoint (input %)
 - Trip action (High or Low)
 - Relay coil (energized or de-energized)
 - Power ON delay time (0 to 99 sec.)
 - Alarm ON delay time (0 to 999 sec.)
 - Hysteresis (deadband) (input %)
 - Alarm test, and others

Factory Setting

Alarm setpoint	80%
Trip action	High
Relay coil at alarm	Energized
Power ON delay time	5 seconds
Alarm ON delay time	0 second
Hysteresis (deadband)	1.0%

INPUT

■ **DC CURRENT:** 24.9Ω resistor incorporated (0.25W)

Operational range: 0 – 50mA DC

Minimum span: 2mA

Offset: Lower range can be any specific value within the input range provided that the minimum span is maintained.

■ **DC VOLTAGE**

Code S1 (narrow spans)

Operational range: -1000 – +1000mV DC

Minimum span: 100mV

Code S2 (wide spans)

Operational range: -10 – +10V DC

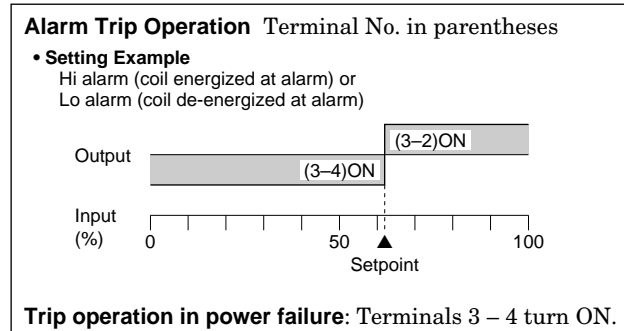
Minimum span: 1V

Offset: Lower range can be any specific value within the input range provided that the minimum span is maintained.

Input resistance: 1MΩ minimum

OUTPUT

■ **RELAY OUTPUT**



Relay rating: 250V AC @2A (cosφ=1)
30V DC @2A (resistive load)
electrical life 3×10^4 cycles (rate 6/min.)

Maximum switching voltage: 250V AC or 125V DC

Maximum switching power: 500VA or 60W

Minimum load: 5V DC @100mA

Mechanical life: 5×10^6 cycles (rate 180/min.)

INSTALLATION

Power input: Operational voltage range 24V DC $\pm 10\%$, approx. 0.5W; ripple 10% p-p max.

Operating temperature: -20 to +55°C (-4 to +131°F)

Operating humidity: 30 to 90% RH (non-condensing)

Mounting: DIN rail

Dimensions: W5.9×H94×D102 mm (0.23"×3.70"×4.02")
See General Spec. Sheet Figure A-1.

Weight: 65 g (2.3 oz)

Terminal assignment: See General Spec. Sheet Figure A-1.

PERFORMANCE

Setpoint accuracy (trip point accuracy): $\pm 0.05\%$

Setpoint accuracy is inversely proportional to the input span.

[Example] Input type 0 – 50mA, Input range 4 – 20mA

Max. Input Range (50mA) / Span (16mA) $\times 0.05\% = 0.16\%$

Temp. coefficient: $\pm 0.01\%/^{\circ}\text{C}$ ($\pm 0.006\%/^{\circ}\text{F}$) of max. span

Response time: ≤ 0.2 second (0 – 100% at 90% setpoint)

Line voltage effect: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100\text{M}\Omega$ with 500V DC

Dielectric strength: 2000V AC @1 minute
(input to output to power to ground)

STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)

EMI EN61000-6-4

EMS EN61000-6-2

Low Voltage Directive (2006/95/EC)

EN61010-1

Overvoltage category II

Pollution degree 2

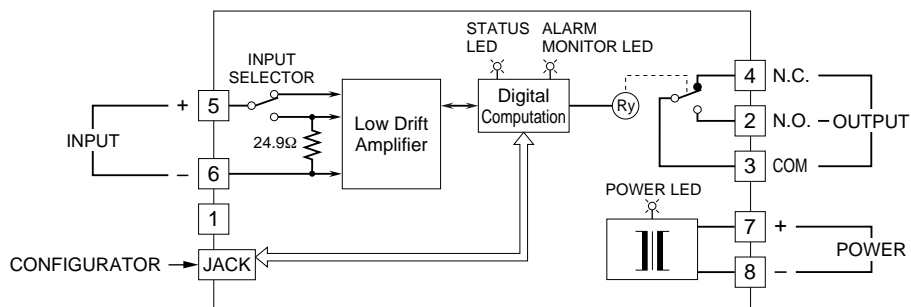
Max. operating voltage 250V

(relay output circuit)

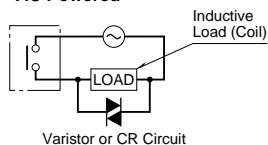
Input or output to power – Reinforced insulation

Input to output – Basic insulation

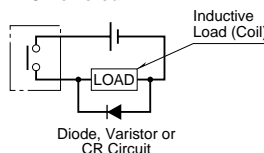
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



■ Relay Protection •AC Powered

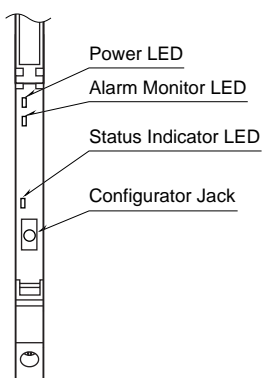


•DC Powered

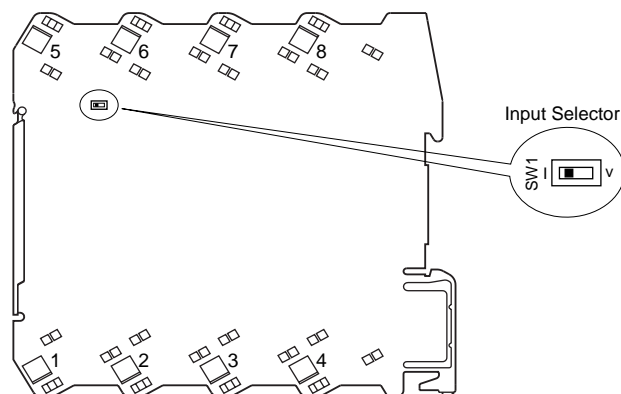


EXTERNAL VIEWS

■ FRONT VIEW (with the cover open)



■ SIDE VIEW



INPUT RANGING

The internal DIP switch setting is required to select input types before setting a precise input range using PC Configurator Software (model: M6CFG).

For detailed information on the PC configuration, refer to the M6CFG instruction manual.

Table 1. DIP switch setting: Input type

Input	SW1
0 – 50mA	I
-1000 – +1000mV	V
-10 – +10V	