LIGHTNING SURGE PROTECTOR FOR TWO-WIRE SIGNAL LOOP (ultra-slim; 2 channels)

MODEL **MD72WD**

BEFORE USE ....

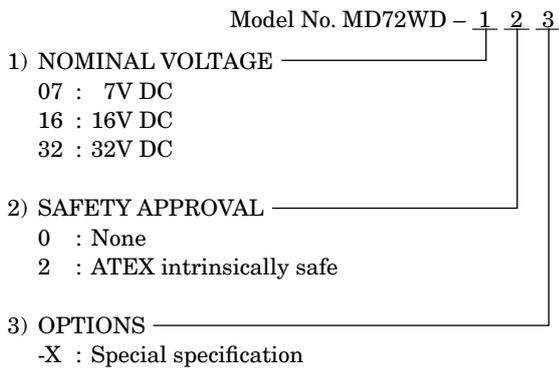### ■SAFETY PRECAUTIONS

This manual describes important points of caution for safe use of this product in potentially explosive atmosphere. Please read this manual carefully before installing and operating the product.
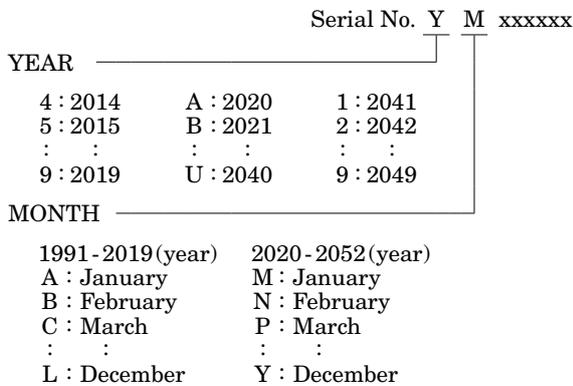
■SPECIAL CONDITIONS FOR SAFE USE

Electrostatic charges on the enclosure shall be avoided.

■MODEL NUMBER IDENTIFICATION

Model No. MD72WD – 1 2 3

1) NOMINAL VOLTAGE
   07 : 7V DC
   16 : 16V DC
   32 : 32V DC

2) SAFETY APPROVAL
   0 : None
   2 : ATEX intrinsically safe

3) OPTIONS
   -X : Special specification

■MANUFACTURED DATE CODE IDENTIFICATION

The manufactured year and month can be identified by the serial number described on the specification marking.

Serial No. Y M xxxxxx

YEAR

4 : 2014	A : 2020	1 : 2041
5 : 2015	B : 2021	2 : 2042
: :	: :	: :
9 : 2019	U : 2040	9 : 2049

MONTH

1991 - 2019 (year)	2020 - 2052 (year)
A : January	M : January
B : February	N : February
C : March	P : March
: :	: :
L : December	Y : December

⚠ WARNING

Explosions could result in death or serious injury:

- Before you remove the unit or mount it, or before you connect or disconnect the wiring, turn off the power supply and the input signal for safety. Do not disconnect unless the area is known to be non-explosive.
- Whenever you need to measure voltage across the terminals or apply a simulated input signal to the terminals, make sure that there is no danger of explosion in the atmosphere.
- Verify the certification of the product described on the specification marking on the product.
- Verify that the operating atmosphere of the product is consistent with the appropriate hazardous locations certifications.
- Verify that the environmental temperature is within the temperature class required for the area.

Failure to follow these installation guidelines could result in death or serious injury:

- Make sure only qualified personnel perform the installation.

⚠ SAFETY FEATURES & CAUTIONS

■INTRINSICALLY SAFE APPROVAL

- ATEX
  EU-Type Examination Certificate: KEMA 08ATEX0166 X

  ⟨Ex⟩ II 1G Ex ia IIC T4, T5 Ga
  Zone 0
- Applicable Standards
  EN 60079-0
  EN 60079-11
- IS Data

ELECTRICAL DATA	MD72WD-07	MD72WD-16	MD72WD-32
Ui	7V	16V	32V
Ii	any	any	any
Ci	50 nF	35 nF	15 nF
Li	0 µH	0 µH	0 µH

Pi : For T4 and Ta = -25 to 40°C : 1.3W
For T4 and Ta = -25 to 60°C : 1.2W
For T4 and Ta = -25 to 80°C : 1.0W
For T5 and Ta = -25 to 40°C : 1.0W

- Install the product according to the installation diagram.
- Install the product according to local installation codes.
- DO NOT RUB the surface of the plastic enclosure with a dry cloth. Electrostatic charge generated by the friction may cause an explosion.
- Maximum continuous voltage (Uc)
  (Line to Line, Line to Earth)
      MD72WD-07: ±7V
      MD72WD-16: ±16V
      MD72WD-32: ±32V

INSTALLATION DIAGRAM for ATEX INTRINSICALLY SAFE MODEL
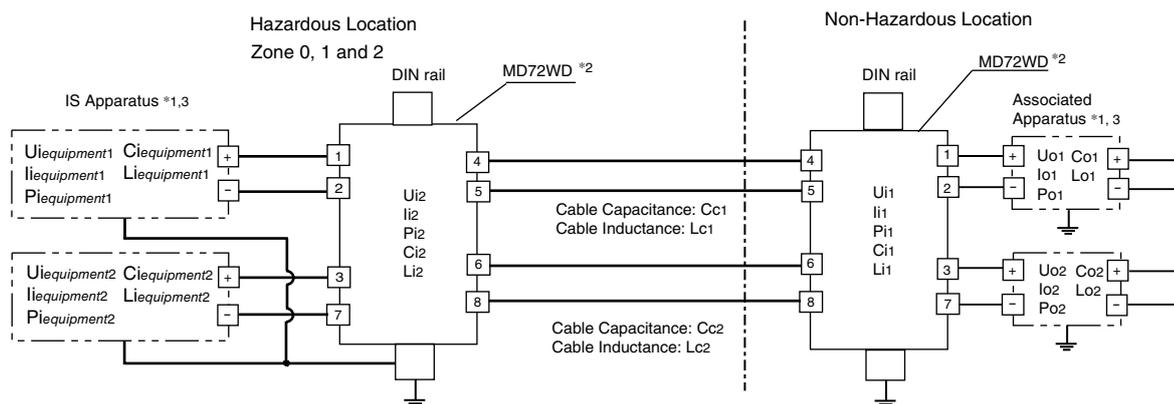
Electrical Data	MD72WD-07	MD72WD-16	MD72WD-32
Maximum Input Voltage Ui	7V	16 V	32 V
Maximum Input Current Ii	any	any	any
Maximum Input Capacitance Ci	50 nF	35 nF	15 nF
Maximum Input Inductance Li	0 µH	0 µH	0 µH

Maximum Input Power Pi:
For T4 and Ta=-25 to 40°C: 1.3W
For T4 and Ta=-25 to 60°C: 1.2W
For T4 and Ta=-25 to 80°C: 1.0W
For T5 and Ta=-25 to 40°C: 1.0W

NOTES
1. The parameters of AA and IS apparatus protected by the MD72WD shall comply with the following conditions.

$U_{o1} \leq U_{i1}$, U_{i2} or $U_{iequipment1}$, whichever is smallest.

$I_{o1} \leq I_{i1}$, I_{i2} or $I_{iequipment1}$, whichever is smallest.

$P_{o1} \leq P_{i1}$, P_{i2} or $P_{iequipment1}$, whichever is smallest.

$C_{o1} \geq C_{i1}+ C_{i2} + C_{iequipment1} + C_{c1}$

$L_{o1} \geq L_{i1} + L_{i2} + L_{iequipment1} + L_{c1}$

$U_{o2} \leq U_{i1}$, U_{i2} or $U_{iequipment2}$, whichever is smallest.

$I_{o2} \leq I_{i1}$, I_{i2} or $I_{iequipment2}$, whichever is smallest.

$P_{o2} \leq P_{i1}$, P_{i2} or $P_{iequipment2}$, whichever is smallest.

$C_{o2} \geq C_{i1}+ C_{i2} + C_{iequipment2} + C_{c2}$

$L_{o2} \geq L_{i1} + L_{i2} + L_{iequipment2} + L_{c2}$

2. Either one of the two MD72WD may be a different lightning surge protector certified by a notified body under ATEX directive 2014/34/EU.

3. The associated apparatus and the IS apparatus must be certified by a notified body under ATEX directive 2014/34/EU.
In case of isolated associated apparatus, the earth is not required.

MSYSTEM
M-SYSTEM CO., LTD.