SAFE INSTALLATION MANUAL (ATEX APPROVAL)

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

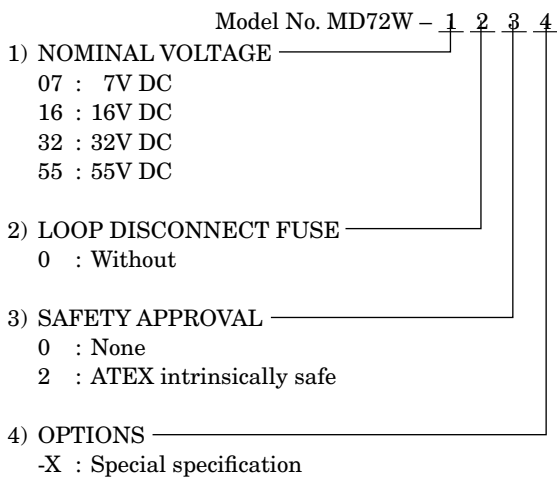MODEL **MD72W**

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.
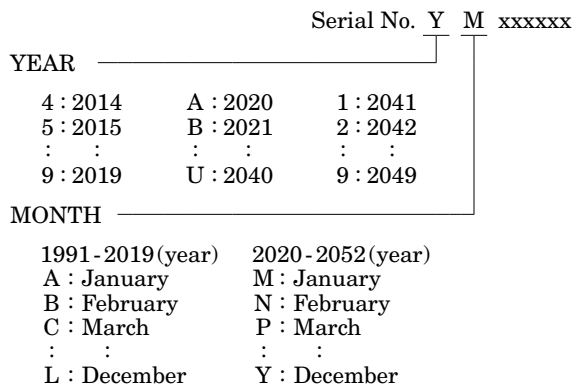
■ SPECIAL CONDITIONS FOR SAFE USE

Electrostatic charges on the enclosure shall be avoided.

■ MODEL NUMBER IDENTIFICATION

Model No. MD72W – 1 2 3 4

1) NOMINAL VOLTAGE
   - 07 : 7V DC
   - 16 : 16V DC
   - 32 : 32V DC
   - 55 : 55V DC

2) LOOP DISCONNECT FUSE
   - 0 : Without

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

4) 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

MD72W	-07	-16	-32	-55
Ui	7V	16V	32V	60V
Ii	150 mA	150mA	150mA	150mA
Ci	50 nF	35 nF	10 nF	5 nF
Li	150 µH	150 µH	150 µH	150 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)
    MD72W-07: ±7V
    MD72W-16: ±16V
    MD72W-32: ±32V
    MD72W-55: ±55V

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INSTALLATION DIAGRAM for ATEX INTRINSICALLY SAFE MODEL
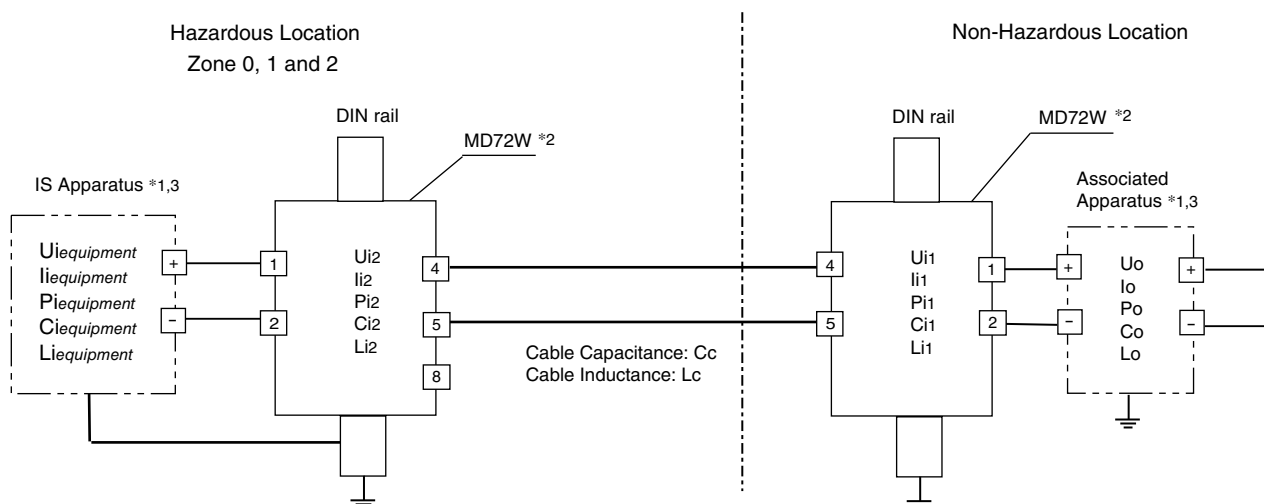
Electrical Data	MD72W-07	MD72W-16	MD72W-32	MD72W-55
Maximum Input Voltage Ui	7 V	16 V	32 V	60 V
Maximum Input Current Ii	150 mA	150 mA	150 mA	150 mA
Maximum Input Capacitance Ci	50 nF	35 nF	10 nF	5 nF
Maximum Input Inductance Li	150 µH	150 µH	150 µH	150 µH

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 MD72W shall comply with the following conditions.

   $Uo \leq Ui_1$, Ui_2 or $Ui_{equipment}$, whichever is smallest.

   $Io \leq Ii_1$, Ii_2 or $Ii_{equipment}$, whichever is smallest.

   $Po \leq Pi_1$, Pi_2 or $Pi_{equipment}$, whichever is smallest.

   $Co \geq Ci_1 + Ci_2 + Ci_{equipment} + Cc$

   $Lo \geq Li_1 + Li_2 + Li_{equipment} + Lc$

2. Either one of the two MD72W 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.

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