

2-Wire Signal/Telecom

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|--------------------------|--|
| SPD Class | Category C1, C2, D1 |
| Model | KOS-A-48DC [2-Wire Type] |
| Application | Data Line, Analog / Digital Signal Line, Telecom Line Protection |
| Application Field | KT Private Modem Line 4~20mA / 0~10V Analog Signal, Modem, RTU, PLC, SCADA, Load Cell etc |



Electrical property

| | | |
|---|-----|----------------------|
| Rated voltage | Un | 48V DC |
| Max Continuous Operating Voltage (MCOV) | Uc | 68V DC |
| Nominal current | | 300 mA |
| Insulation resistance (@DC) | RIN | Above 20 MΩ |
| DC Loop resistance | R | Less than 50 Ω/1wire |

Protection property

| | | | | |
|--|------------------|----------------|--------|--------|
| Protection mode | | L1-L2 | L1-G | L2-G |
| Voltage protection level Category C2 (@20kV/10kA Voltage 1,2/50μs, Current 8/20μs) – IEC 61643-21 | Up | ≤ 100V | ≤ 150V | ≤ 150V |
| Maximum discharge Current DM:0kA, CM:100kA (@Current 8/20μs) | I _{max} | 0kA | 50kA | 50kA |
| Nominal discharge current (@Current 8/20μs) | I _n | 20kA | | |
| Response time (@10kV/μs) | t _a | Less than 5 ns | | |

Features

| | | |
|----------------|--------------------------|--|
| Common | Transmission property | Free of Voltage drop, Signal attenuation, Distortion |
| | Protection circuit | Four-stage hybrid protection circuit |
| | Protection method | Reverse surge protection |
| Indicator type | Surge counter | Input surge counter display (1,000) |
| | 4~20mA analog SPD | Analog current display |
| | RS 485 communication SPD | RS 485 communication state display |

Mechanical property

| | |
|-------------------------|----------------------------------|
| Protection rating level | IP20 (@IEC 60529), NEMA1 |
| Operating temperature | -40 ~ 90°C |
| Operating humidity | Less than 95% |
| Size | (W)32 X (L)96 X (H)95 mm cf. p63 |
| Installation | DIN-rail or Bolt fastening |
| Weight | Less than 300g |

Test standard & Reference

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|---|
| IEC 61643-21 [2015] Category A, B, C Performance and Test Criteria for Data/Telecom/Signal Line Surge Protector |
| IEC 61643-12 [2017] Lightning Protection Zone 1, 2, 3 |
| IEC 62305-1,2,3,4 [2017] |
| ANSI/IEEE Std C62.41 [2002] Category A, B, C |
| ANSI/IEEE Std C62.64 [2009] Data/Telecom/Signal Surge Line Surge Protector standard test specification |
| IEEE Std C62.36 [2016] Data/Telecom/Signal Line Surge Protector performance standard |

*DM(Differential Mode[Differential Mode])=NM(Normal Mode[Normal Mode])=Symmetrical Mode
 *CM(Common Mode[Common Mode])=LM(Longitudinal Mode[Longitudinal Mode])=Asymmetrical Mode

Size

Signal/Telecom Line [2-Wire, 3-Wire, 4-Wire]



Model List

Indicator Type / Counter Type / Normal Type
(W)32 x (L)96 x (H)95

- | | | |
|-------------|---------------|-------------------------|
| 2-Wire Type | • KOS-A-5DC | : Data Line(5V) |
| | • KOS-A-12DC | : RS 485 Telecom Line |
| | • KOS-A-24DC | : 4~20mA Analog Line |
| | • KOS-A-48DC | : KT Private Modem Line |
| | • KOS-A-185DC | : KT ADSL, VDSL Line |
| 4-Wire Type | • KOS-B-12DC | : RS 422 Telecom Line |
| | • KOS-B-48DC | : KT Private Modem Line |
| | • KOS-B-185DC | : KT ADSL, VDSL Line |
| 3-Wire Type | • KOS-C-5DC | : RTD Sensor Line |
| | • KOS-C-24DC | : RS 232 Telecom Line |

[Unit : mm]

Indicator Type / Counter Type / Normal Type

