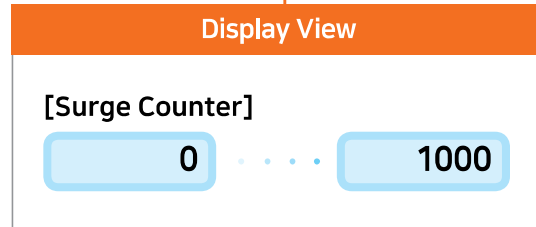


3,4-Wire Signal/Telecom Line



Signal/Telecom Counter-Type SPD



Specification

Product Features

Voltage	DC 185V / 48V / 24V / 12V / 5V	CE-certified, Patented Performance in compliance with KS C IEC standard [When 20 kV/10 kA (Voltage 1.2/50 μs, Current 8/20 μs) is applied, within 150 V-300 V] High surge capacity - 200 kA/150 kA in all, the highest in the world LCD surge counter [Battery life ≥ 10 years, Replaceable] Quadruple hybrid design - first in the world Reverse surge protection - first in the world Fastening by DIN-rail or Bolt Flame-retardant ABS case
Type	Signal/Telecom Line 3, 4-Wire Type (Serial)	
Capacity	[3-Wire Type] 150kA - total / 50kA - mode [4-Wire Type] 200kA - total / 50kA - mode	

Application

3-Wire type: RTD (Resistance Temperature Detector), RS232, etc.
 4-Wire type: RS422, Dedicated Line Modem Surge Protection

3-Wire Signal/Telecom

SPD Class	Category C1, C2, D1
Model	KOS-C-5DC [3-Wire Type]
Application	Data Line, Analog / Digital Signal Line, Telecom Line Protection
Application Field	RTD Sensor Line 4~20mA / 0~10V Analog Signal, Modem, RTU, PLC, SCADA, Load Cell etc



Electrical property

Rated voltage	Un	5V DC
Max Continuous Operating Voltage (MCOV)	Uc	8V 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-G	L2-G	L3-G
Voltage protection level Category C2 (@20kV/10kA Voltage 1,2/50μs, Current 8/20μs) – IEC 61643-21	Up	≤ 150V	≤ 150V	≤ 150V
Maximum discharge Current DM:0kA, CM:150kA (@Current 8/20μs)	I _{max}	50kA	50kA	50kA
Nominal discharge current (@Current 8/20μs)	I _n	20kA		
Response time (@10kV/μs)	t _a	Less than 5 ns		

Features

Transmission property	Free of Voltage drop, Signal attenuation, Distortion
Protection circuit	Four-stage hybrid protection circuit
Protection method	Reverse surge protection
Operation indication	LCD surge counter/Battery life ≥ 10 years, Replaceable

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

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

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

[Unit : mm]

Indicator Type / Counter Type / Normal Type

