

Koenone Company Profile



Your Guardian from Surge

K-surge Power, Signal, Telecom, Coaxial Line, LAN Line Surge Protector

Surge & Protection

SURGE?

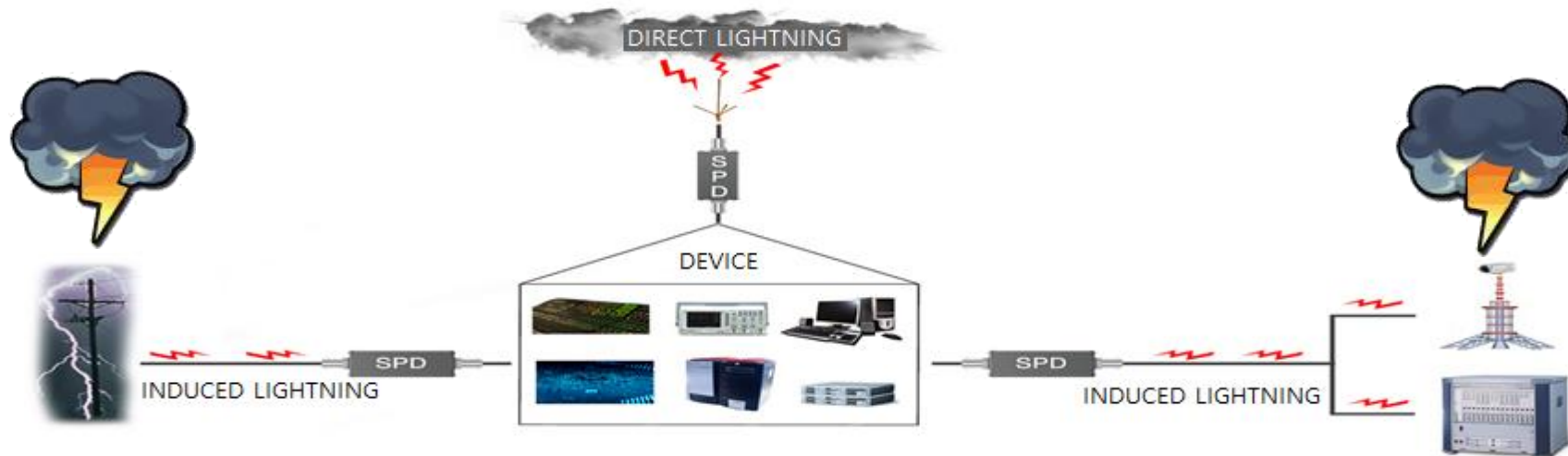
An abnormal voltage transients phenomenon caused from lightning power noise through power lines, telecom lines and signal lines etc..

Surge damage

Failure or malfunctions of various electronic equipment caused by surge through conductors.

Precaution

To install the surge protector for reducing the surge above the conductor and protect the electric field





K-SURGE/KOENONE CO., LTD

Established in 2008

Address : 587-9 Iksan-daero, Iksan-si,
Jeollabuk-do, 54535 Korea

Tel : +82-63-853-7615 Fax : +82-63-853-7618

PRODUCTS

- Surge protector
Power line, signal line, data line, telecom line, video line, Ethernet line, load cell line, temperature sensor line, RF line, ultrasonic sensor line, electronic sensor line ...
- Smart power supply system
- Cable communication type hour meter
- Auto recovery circuit breaker

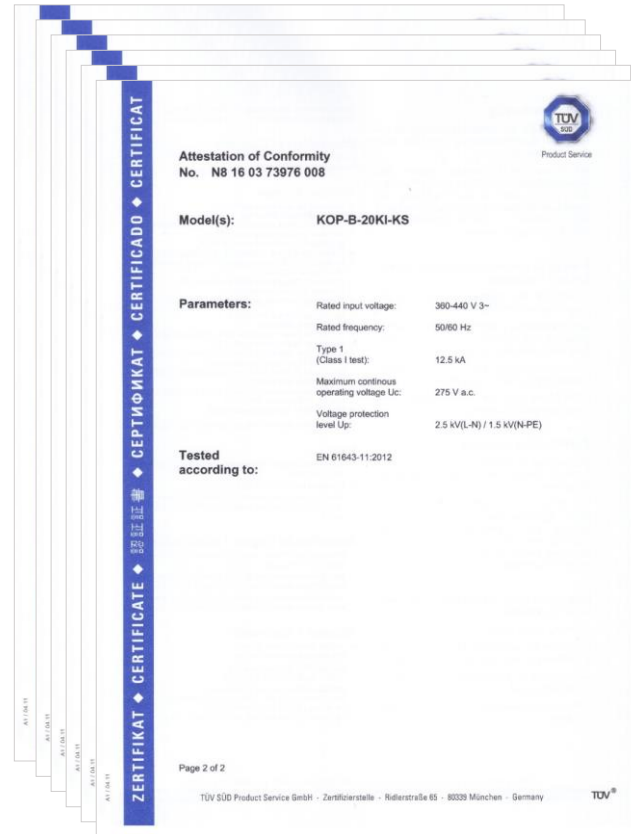
CERTIFICATES



- CE - 13 / KS - 6 TYPE / ISO9001 / Patents - 8




CE CERTIFICATES - 13




CERTIFICATED MODEL

- KOP-B-20KI-KS
- KOP-B-500K-KS
- KOP-B-400K-KS
- KOP-A-240K-KS
- KOP-B-400K-P
- KOP-A-360K-S
- KOP-A-360K-P
- KOP-C-40P
- KOP-C-80P
- KOP-D-40P
- KOP-D-80P
- KOS-A-12DC
- KOS-A-24DC

SPD KS CERTIFICATE – 6 TYPE



인증번호: 제 15-0432 호



Certificate

제 품 인 증 서

1. 제조업체명 : 코엔원 주식회사

2. 대표자성명 : 이준일

3. 공장소재지 : 전라북도 익산시 익산대로 587-9(신용동)

4. 인증제품

가. 표준명 : 저압 서지보호장치·제11부: 저압전력 계통의 저압 서지보호장치·요구사항 및 시험방법

나. 표준번호 : KS C IEC 61643-11

다. 종류·등급·호칭 또는 모델 :

I 등급 임펄스 전류(Iimp), 20kA이하, Uc:275V이하, 단상 2선식, 조합형, TT, TN, 금속재

I 등급 임펄스 전류(Iimp), 삼상 4선식, 조합형, TT, TN, 12.5kA, 3.0kV(L-N), 3.5kV(N-PE) 275V

II 등급 공칭방전전류(In), 삼상 4선식, 조합형, TT, TN, 40kA, 3.0kV(L-N), 3.5kV(N-PE) 275V


II 등급 공칭방전전류(In), 단상 2선식, 조합형, TT, TN, 금속재, 20kA이하, 275V~320V


II 등급 공칭방전전류(In), 삼상 3선식, 조합형, TT, TN, 금속재, 20kA이하, 275V~320V

II 등급 공칭방전전류(In), 삼상 4선식, 조합형, TT, TN, 금속재, 20kA이하, 275V~320V, 골.

「산업표준화법」 제17조 제1항에 따른 인증심사를 실시한 결과 한국 산업표준(KS)과 인증심사기준에 적합하므로, 「산업표준화법」 제15조 및 같은 법 시행규칙 제10조 제1항에 따라 위와 같이 한국산업표준(KS)에 적합함을 인증합니다.

2019 년 04 월 30 일





한국표준협회

1. 최초 인증일 : 2015-07-08
 2. 차기심사 완료기한 : 2021-09-09
 3. 최종 변경일 : 2019-04-30 종류 추가

CERTIFICATED MODEL

- I class impulse current(Iimp) below20kA 1phase 2wire
- I class impulse current (Iimp) 12.5kA 3phase 4wire
- II class nominal discharge current(In) 40kA 3phase 4wire
- II class nominal discharge current(In) 20kA 1phase 2wire
- II class nominal discharge current(In) 20kA 3phase 3wire
- II class nominal discharge current(In) 20kA 3phase 4wire

K-surge SPD strength

1. Big Surge Capacity | 800kA ~ 120kA / total [Power line], 20kV/10kA [Signal Telecom line]

2. Outstanding protection

3. Longevity

4. Reduce SPD replacement cost

5. Various measuring function built-in



Power surge protector

- Self diagnosis function – voltage, over-v, under-v, temperature
- Communication and surge monitoring • Aluminum case for fire

Signal surge protector

- Surge counter • ABS case for fire
- Telecom state display-Tel' SPD / Analog(4~20mA)display-Sig' SPD



Smart surge protector

– power line special type

- ▶ **High surge capacity**
- ▶ **RS485 / LAN communication**
- ▶ **Various diagnosis function**

IF, SPD installed far away?

- Can't check SPD information immediately
- Need to visit SPD installation site
- Need to spend time and cost



RS485 telecom
LAN telecom

Thus! need K-surge smart SPD

Real-time check

- Immediate action against surge damage
- Remote SPD diagnosis
- Various data management
 - surge event record, voltage monitoring, leakage current check, over-V•under-V record, temperature monitoring



Mobile Monitoring Program

SPD information
real time check!!

SPD information report



Bluetooth™



PDF file
download

K-SURGE SPD STATUS REPORT DATE: 2019.06.04

INSTALLATION SITE: koenone ID: KO_SPD4

FUSE 1: NORMAL FUSE 2: NORMAL FUSE 3: NORMAL

SURGE COUNT	8	SPD TEMPERATURE	33°C
OVER VOLTAGE	0	HOUR METER	829.2(1/10h)
LOW VOLTAGE	9	LEAKAGE CURRENT	0.0mA

LINE VOLTAGE

L-N	L-G	N-G
1V	1V	1V




INSTALLATION SITE PHOTOS

SURGE RECORD: HIGH VOLTAGE RECORD: LOW VOLTAGE RECORD:

1: 19/05/22 15:56:40	SPD data is empty!!	1: 19/06/04 15:40:22-19/06/04 15:42:07
2: 19/05/22 15:56:37		2: 19/06/04 15:38:37-19/06/04 15:40:22
3: 19/05/22 15:56:35		3: 19/06/04 15:37:06-19/06/04 15:38:37
4: 19/05/22 15:56:34		4: 19/06/04 15:35:32-19/06/04 15:37:06
5: 19/05/22 15:56:32		5: 19/06/04 15:34:11-19/06/04 15:35:32
6: 19/05/22 15:56:31		6: 19/06/04 15:33:09-19/06/04 15:34:11
7: 19/05/22 15:56:30		7: 19/06/04 15:32:47-19/06/04 15:33:09
8: 19/05/22 15:56:28		8: 19/06/04 15:30:38-19/06/04 15:32:47
		9: 19/06/04 15:29:28-19/06/04 15:30:38

K-surge

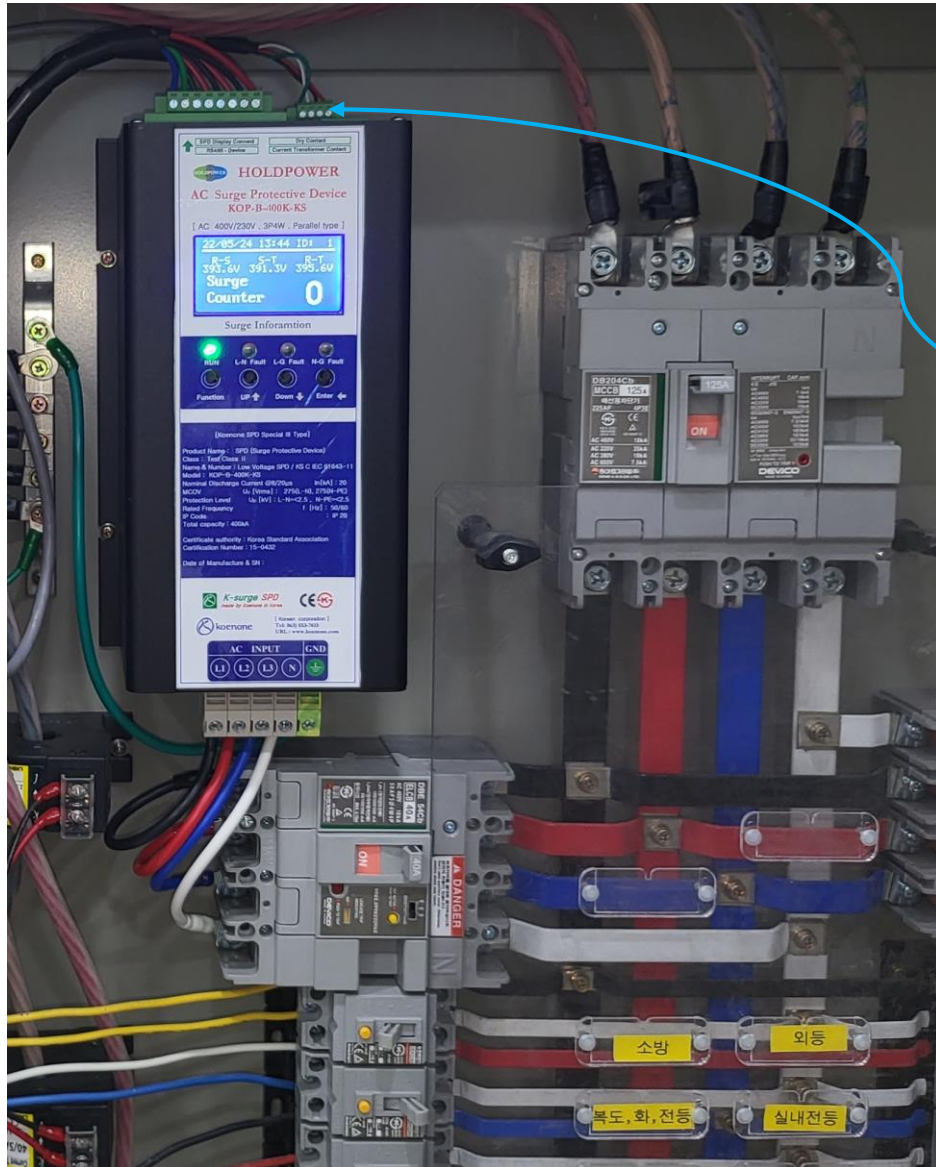
COMPARISON [Power line – K-surge/normal SPD]

Feature	K-surge SPD	Normal SPD
Surge counter	0~999	<p style="text-align: center; font-size: 2em; font-weight: bold;">None</p> 
Event record	Surge, Over voltage, Under voltage input event record	
SPD state check	Leakage current (SPD condition diagnostic system)	
Voltage Display	Line-Line, Line-ground	
Mobile Monitoring System	Bluetooth (SPD information real-time check)	
Computer Monitoring System	 RS485 / LAN 	
Power Quality Checking	Active Power, Reactive Power, Apparent Power, Power Factor, watt hour meter	

Power line SPD - special type 1, 2, 3

Function	Special 1 type	Special 2 type	Special 3 type
Surge counter	Ok	Ok	Ok
Leakage current	Ok	Ok	Ok
Normal & abnormal display Lamp	Ok	Ok	Ok
Fault alarm function	Ok	Ok	Ok
Voltage Display	Ok	Ok	Ok
RS485/LAN communication		Ok	Ok
Surge event memory		Ok	Ok
Over-V, Under-V event memory		Ok	Ok
SPD internal temperature		Ok	Ok
APP(Bluetooth)		Ok	Ok
Hour meter		Ok	Ok
Current (R, S, T, Z)			Ok
Active Power, Reactive Power, Apparent Power			Ok
Power Factor, watt hour meter			Ok

Special 3 Type Power SPD



RS 485
Telecommunications



Voltage(R-S S-T R-T R-N S-N T-N)
Current (R, S, T, Z)
Active Power, Reactive Power, Apparent Power
Power Factor, watt hour meter

Computer Monitoring Program -1

K-SURGE SPD MONITORING SYSTEM



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산외배수지

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ID	Location	Fault			Voltage			Input				Output				SC	OV	UV	Leak C	Temp'	Hour M	Address	Port	Comm
01	내장배수지	1	2	3	392.5	394.2	390.9	1	2	3	4	1	2	3	4	21	0	0	2	35.7	532	10.116.104.13	502	TCP
02	장명배수지	1	2	3	389	389.1	386.8	1	2	3	4	1	2	3	4	5	0	0	2.1	33.3	531	10.116.107.13	502	TCP
03	태인배수지	1	2	3	392.4	390.8	390	1	2	3	4	1	2	3	4	1	0	1	1.9	35.5	552	10.116.101.13	502	TCP
04	정우배수지	1	2	3	395.2	396.8	394.5	1	2	3	4	1	2	3	4	14	0	0	2.4	34.6	551	10.116.111.13	502	TCP
05	소성배수지	1	2	3	388.5	390.8	387.5	1	2	3	4	1	2	3	4	13	0	0	2.2	33.4	529	10.116.110.13	502	TCP
06	신태인배수지	1	2	3	396.2	395	398	1	2	3	4	1	2	3	4	1	0	1	2	35.5	553	10.116.102.13	502	TCP
07	영원배수지	1	2	3	393.8	394.3	395.1	1	2	3	4	1	2	3	4	1	0	0	1.9	33	483	10.116.103.13	502	TCP
08	산외배수지	1	2	3	382.3	380.5	376.5	1	2	3	4	1	2	3	4	0	0	1	2	35.5	556	10.116.105.13	502	TCP

2020-08-13 06:15:44 10.116.80.99 L:080

KOENONE CO.,LTD (<http://k-surge.com>)

한국어 Login Program Exit

Computer Monitoring Program -2

K-SURGE SPD MONITORING SYSTEM



08▲
▼

산외배수지


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ID	Location	Fault			Voltage			Input				Output				SC	OV	UV	Leak C	Temp'	Hour M	Address	Port	Comm
01	내장배수지	1	2	3	392.5	394.2	390.9	1	2	3	4	1	2	3	4	21	0	0	2	35.7	532	10.116.104.13	502	TCP
02	장명배수지	1	2	3	389	389.1	386.8	1	2	3	4	1	2	3	4	5	0	0	2.1	33.3	531	10.116.107.13	502	TCP
03	태인배수지	1	2	3	392.4	390.8	390	1	2	3	4	1	2	3	4	1	0	1	1.9	35.5	552	10.116.101.13	502	TCP
04	정우배수지	1	2	3	395.2	396.8	394.5	1	2	3	4	1	2	3	4	14	0	0	2.4	34.6	551	10.116.111.13	502	TCP
05	소성배수지	1	2	3	388.5	390.8	387.5	1	2	3	4	1	2	3	4	13	0	0	2.2	33.4	529	10.116.110.13	502	TCP
06	신태인배수지	1	2	3	396.2	395	398	1	2	3	4	1	2	3	4	1	0	1	2	35.5	553	10.116.102.13	502	TCP
07	영원배수지	1	2	3	393.8	394.3	395.1	1	2	3	4	1	2	3	4	1	0	0	1.9	33	483	10.116.103.13	502	TCP
08	산외배수지	1	2	3	382.3	380.5	376.5	1	2	3	4	1	2	3	4	0	0	1	2	35.5	556	10.116.105.13	502	TCP

2020-08-13
06:15:44
10.116.80.99
L:080
KOENONE CO.,LTD (<http://k-surge.com>)
한국어
Login
Program Exit

Computer Monitoring Program -3

K-SURGE SPD MONITORING SYSTEM



07

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▼

영원배수지

Main
Trend
Event
Print

☰

Surge Counter		Over Voltage					Under Voltage				
No	Time	No	Time	Phase	Voltage	Cycle	No	Time	Phase	Voltage	Cycle
1	2020-07-31 05:17:58						1	2020-07-23 15:19:25	T-R	290.1	8
							2	2020-07-23 15:19:25	S-T	288.3	8
							3	2020-07-23 15:19:24	R-S	285.8	9

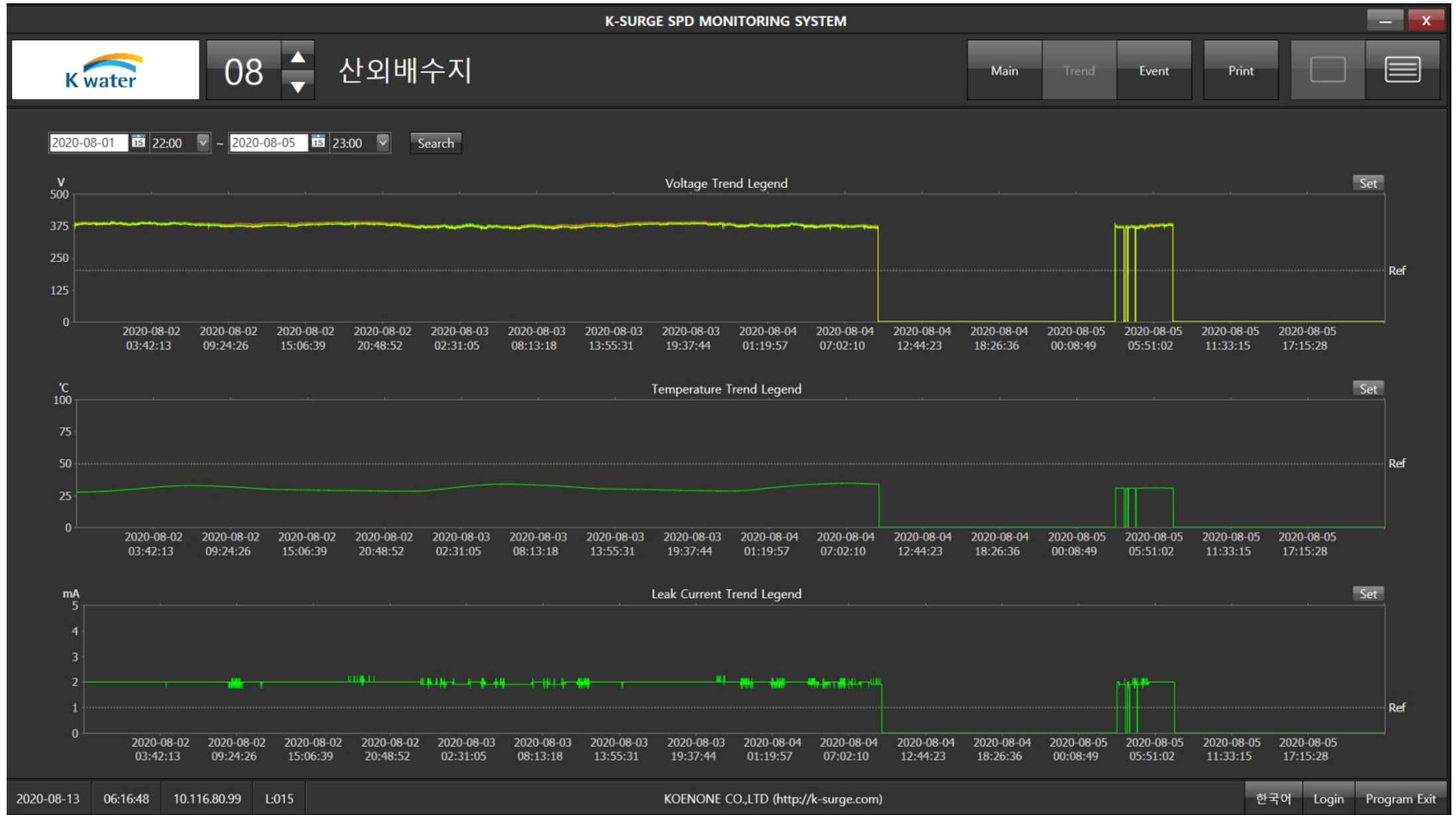
Communication History	
Time	Message
2020-08-12 17:46:24.134	Disconnect
2020-08-08 07:17:05.620	=====
2020-08-05 23:16:04.092	Connect
2020-08-05 23:15:59.546	=====
2020-08-05 04:33:23.383	Connect
2020-08-05 04:31:27.133	Disconnect
2020-08-05 03:59:03.037	Connect
2020-08-05 03:57:06.828	Disconnect
2020-08-05 03:48:44.858	Connect
2020-08-05 03:40:28.776	Disconnect
2020-08-05 03:02:05.168	Connect
2020-08-05 03:02:03.447	=====
2020-08-04 07:33:00.159	Connect

2020-08-13
06:16:16
10.116.80.99
L:099

KOENONE CO.,LTD (<http://k-surge.com>)

한국어
Login
Program Exit

Computer Monitoring Program -4





Smart surge protector

– signal line Indicator type

- ▶ **High surge capacity**
- ▶ **Surge counter**
- ▶ **Telecom state / Analog display**

IF, can't measure?

Complex steps
high cost and low efficiency

1. Remove the surge protector.
2. Test the surge protector operation.
3. Check cable connection.
4. Connect instrument or computer.
5. Check the signal value or telecom status.



Complicated procedure



Thus! easy and quick check

Simple steps
low cost and high efficiency

Just press Button! 

easy and simple

Analog signal/ telecom state
checking system smart SPD



Simple procedure

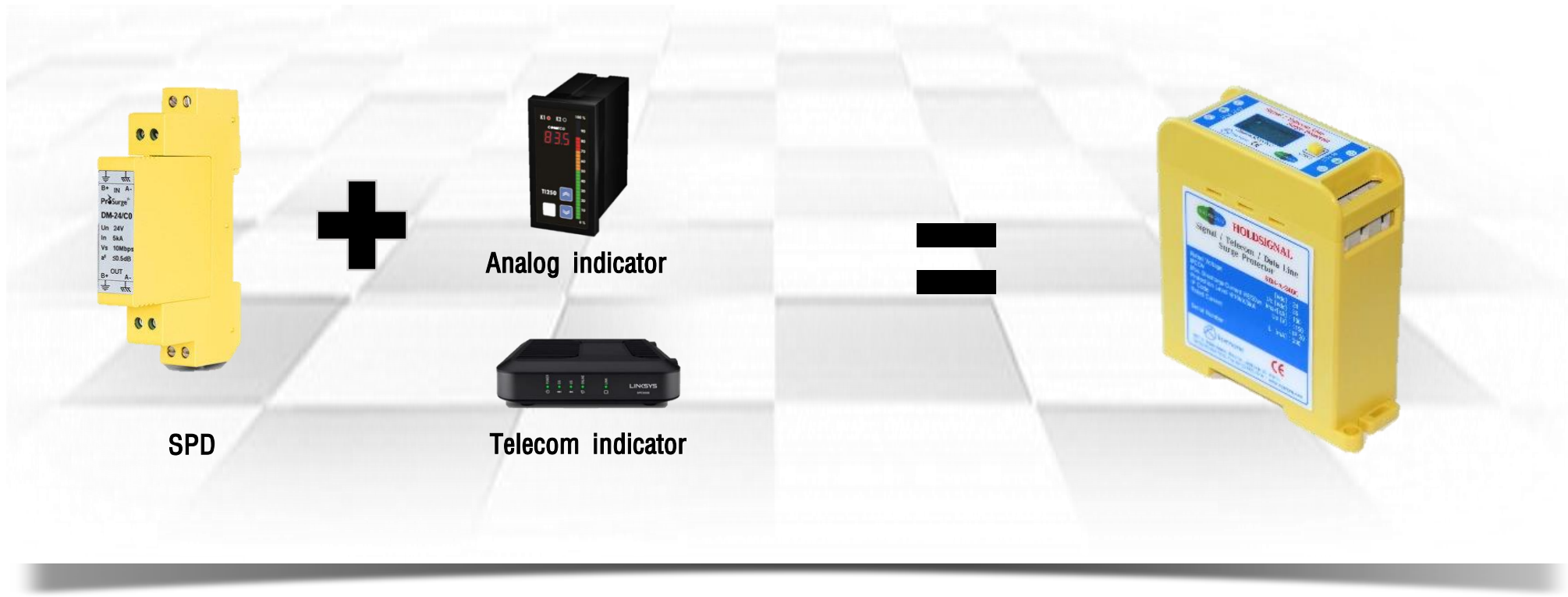
K-surge signal line SPD

Surge protector + surge counter function + analog display / telecom check function

Surge protector + Indicator

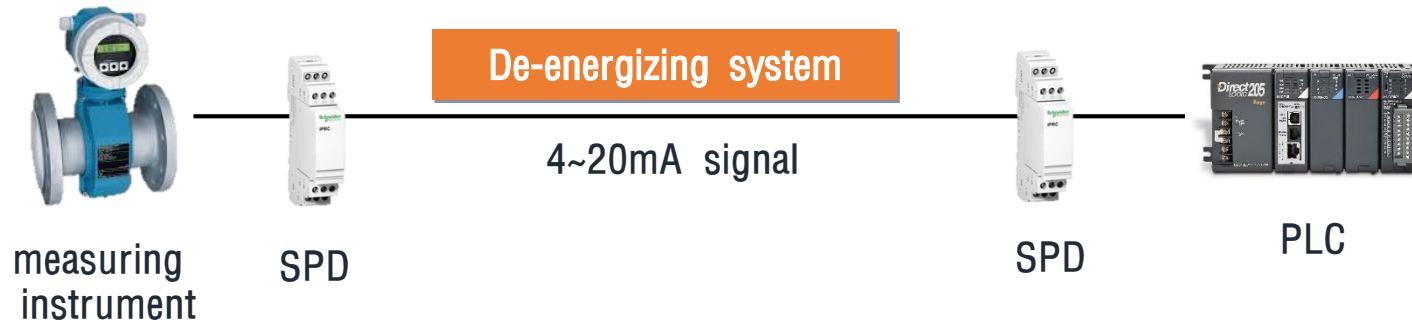


Smart SPD



How to use K-surge Signal Telecom SPD?

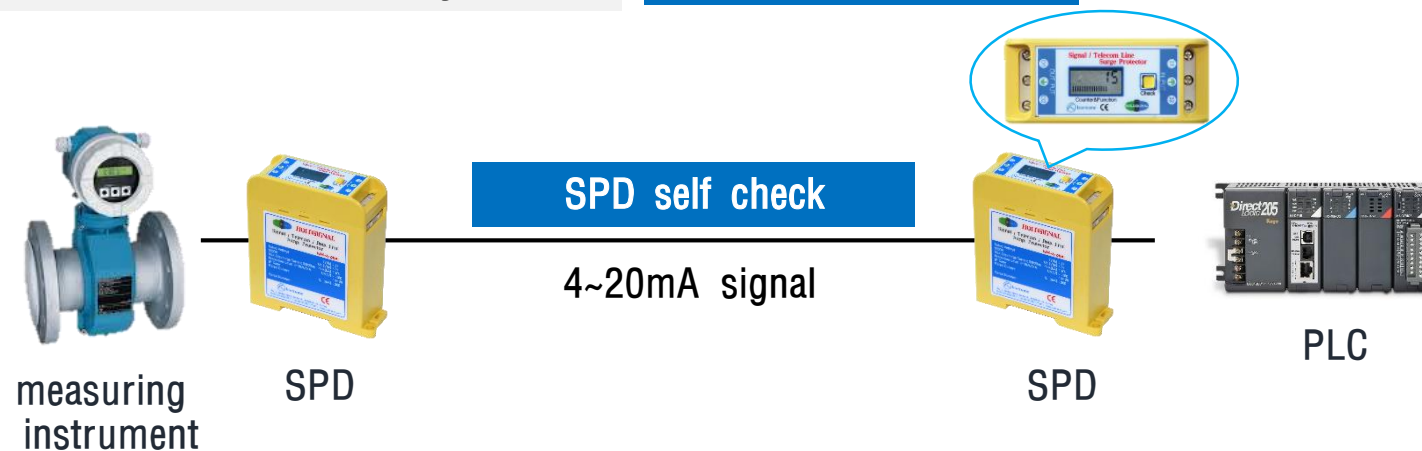
General SPD : Fault checking time **About 3 hours**



Hard Check







K-surge SPD : Fault checking time **About 3 minutes**



Easy Check



COMPARISON [Power line – K-surge/normal SPD]

Feature	K-surge SPD	General SPD
Surge protection tested	20kV/10kA Double value of IEC61643-21 max	10kV/5kA
Surge capacity for Mode	50kA/mode	25kA/mode
Protection stage	4~5 stage hybrid	1~3 stage hybrid
Surge counter		
4~20mA function		
Tel' function		



Economical surge protector

– power line normal type counter

- ▶ **High surge protection**
- ▶ **Surge counter**
- ▶ **Affordable price**

K-surge power line normal type counter SPD



specification

- Economical surge protector
- Ce certificates
- Surge counter
- Surge capacity : 40kA mode / 80kA mode
- Perfect protection - Dual safety Fuse design
- Steel case for safety against fire
- High quality surge protection components applied



Large capacity surge protector

– power line 50kA SPD

- ▶ **High surge capacity**
- ▶ **Surge counter**
- ▶ **Various diagnosis function**

K-surge power line SPD Class 1 / 50kA (5OKI-KS)



Specification

- High surge capacity product
- Imp 50kA @ 10/350μs
- Perfect protection - safety thermal fuse design
- Surge counter, Leakage current check
- [SP2] self diagnosis(voltage, over voltage, under voltage, temperature check)
- [SP2] communication and surge monitoring
- Aluminum case for safety against fire
- High quality surge protection components applied

Installation site

Field	Use area	Use part
Water treatment field	Water & sewage facility, Rainwater treatment facility and so on...	Power panel, Control panel, Water gauge, Flowmeter, Security system, CCTV etc..
Railroad	High speed rail, Subway, Railway and so on..	Power panel, Control panel, Fire protection system, Electronic display, Computer system, Security system, CCTV etc..
Security facilities	CCTV, Traffic control system, Parking facility and so on..	Power panel, Control panel, Control system, Signaling system, Communication system etc.
Traffic equipment	Traffic lights, Streetlight control system, Signal control system, Electronic display and so on..	Power panel, Control panel, Control system, Signaling system, Communication system etc..
Industrial facility	Factory automation facility, Farming - Livestock - Fishing industry(farm, greenhouse..) and so on..	Power panel, Control panel, control equipment, Computer system, Security system etc..
Safety equipment	Extinguishing facility, Emergency equipment, Elevator, Escalator and so on...	Power panel, Control panel, Computer system, Security system etc..
Construction	Apartment, School, Gym, Public facility and so on..	Power panel, Control panel, Security system, Computer system, Lightning system, Broadcasting system, Security(fire) system, Elevator system, Electronic display, Communication system etc..
etc	Solar power plant, Hydroelectric power generation, Wind power plant and so on	Power panel, Control panel, Security system, Computer system, Lightning system, Broadcasting system, Security(fire) system, Elevator system, Electronic display, Communication system etc..



[http:// www.koenone.com](http://www.koenone.com)

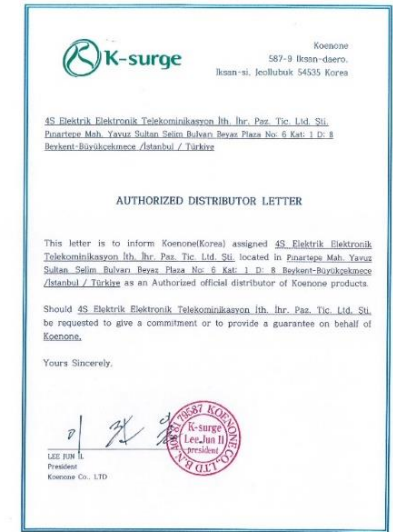
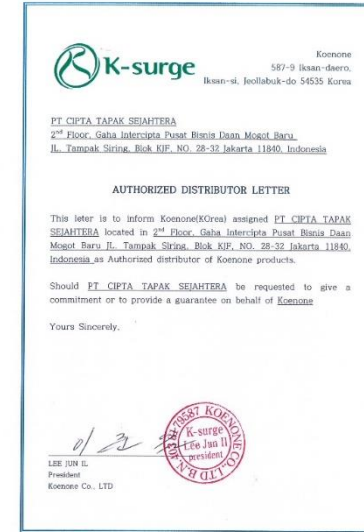


K-surge SPD Public Relations

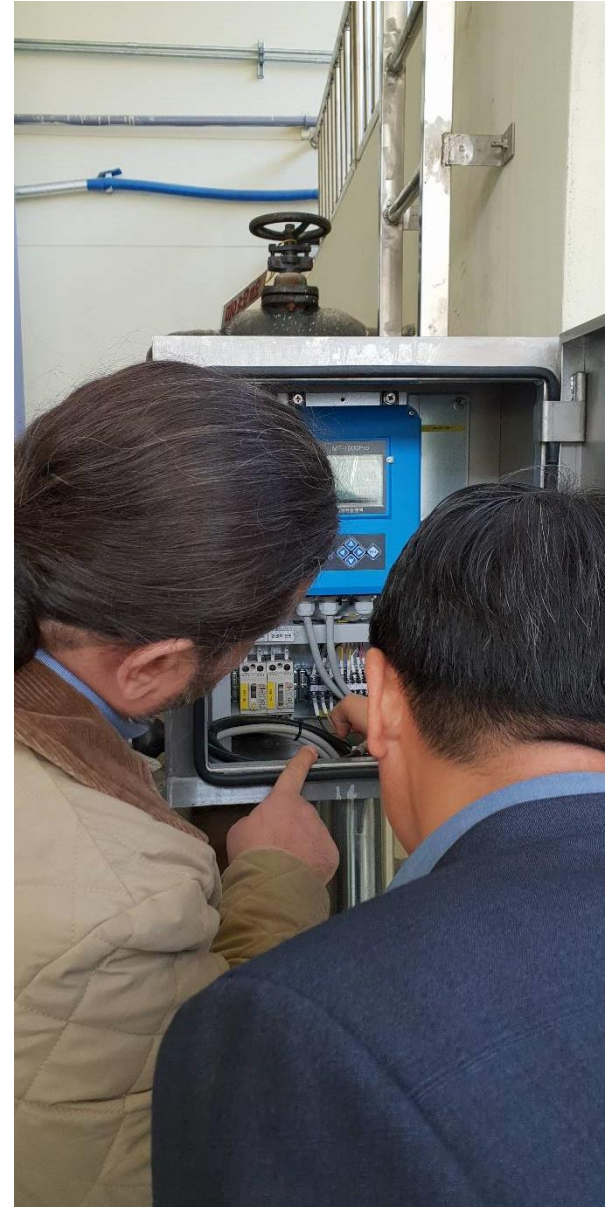
Exhibition



Contract and marketing



Overseas buyer company visit



Meeting and training



Meeting and training



Exhibition and presentation



Company of global distinction



THE UNIVERSITY OF TEXAS AT AUSTIN

Contest for Global Innovation

Koenone Co., Ltd

has been selected as a

Company of Global Distinction

in the IC² Institute Jeonbuk - KAIST

Global Innovation Program

June 25, 2018

A handwritten signature in black ink, appearing to read "Salvador Alanis".

Salvador Alanis, Assistant Director
IC² Institute
The University of Texas at Austin

A handwritten signature in blue ink, appearing to read "James K. Vance".

James K. Vance, Program Manager
IC² Institute
The University of Texas at Austin

 The University of Texas at Austin
IC² Institute
Office of the Vice President for Research

Award

GŁÓWNA NAGRODA

XVII Międzynarodowe Targi Sprzętu Elektrycznego i Systemów Zabezpieczeń

ELEKTROTECHNIKA
www.elektroinstalacje.pl

dla firmy
KOENONE

za

Rodzinę urządzeń odgromowych i przeciwprzebiegowych K-surge,
typ: POWER LINE SPECIAL

Organizator
Agencja SPMA
Marek Orłowski

Przewodniczący Komisji Konkursowej
prof. Wojciech Wybiertalski

Warszawa, 13 marca 2019r.

teletechnika
www.tele-technika.com

IX Wystawa Teletechnika

I NAGRODA

dla firmy
KOENONE

za

Rodzinę zabezpieczeń przepięciowych K-surge,
typ: SIGNAL/TELECOM LINE

Organizator
Agencja SPMA
Marek Orłowski

Przewodniczący Komisji Konkursowej
prof. Wojciech Wybiertalski

Warszawa, 13 marca 2019r.

teletechnika
www.tele-technika.com

IX Wystawa Teletechnika

II NAGRODA

dla firmy
KOENONE

za

Rodzinę zabezpieczeń odgromowych K-surge,
typ: LAN LINE

Organizator
Agencja SPMA
Marek Orłowski

Przewodniczący Komisji Konkursowej
prof. Wojciech Wybiertalski

Warszawa, 13 marca 2019r.

ELEKTROTECHNIKA
www.elektroinstalacje.pl

NAGRODA

Polskiej Izby Inżynierów Budownictwa
w KONKURSIE

XVII Międzynarodowych Targów ELEKTROTECHNIKA 2019
w zakresie elektrotechniki

dla firmy
KOENONE

za

Rodzinę urządzeń odgromowych i przeciwprzebiegowych K-surge,
typ: POWER LINE SPECIAL

Prezes Polskiej Izby Inżynierów Budownictwa
Andrzej Roch Dobrucki

Warszawa, 13 marca 2019r.

ELEKTROTECHNIKA
www.elektroinstalacje.pl

NAGRODA

Polskiej Izby Inżynierów Budownictwa
w KONKURSIE

XVII Międzynarodowych Targów ELEKTROTECHNIKA 2019
w zakresie teletechniki

dla firmy
KOENONE

za

Rodzinę zabezpieczeń odgromowych K-surge, typ: LAN LINE

Prezes Polskiej Izby Inżynierów Budownictwa
Andrzej Roch Dobrucki

Warszawa, 13 marca 2019r.

K water 제 2019-5호

상 장

물 산업 우수기술 코엔원(주)

위 기업은 K-water와 한국상하수도 협회가 공동 주관하고 물산업기술발전 협의회가 주최하는 「2019 대한민국 물산업기술대전」에서 물산업 우수 기술로 선정되었기에 이 상장을 드립니다.

2019년 3월 20일
K-water
사장 이학수

K water 제 2017-02호

상 장

물 관리 우수상 ㈜코엔원 대표이사 이준일

귀하는 환경타일즈와 상하수도산업이 공동주최하고 K-water가 후원한 「2017 물 관리 심포지엄」에서 물 관리 분야에 남다른 열정과 활동으로 물 산업시장 활성화에 이바지한 공이 크므로 이 상장을 드립니다.

2017년 2월 23일
K-water
사장 이학수

제 16753 호
MINISTRY OF TRADE, INDUSTRY & ENERGY

상 장

한국수자원공사
한국수자원공사
대표이사 이준일

방명(표인)의 명칭: 인디케이티 내장형 신호통신 장치모듈
권리번호 : 특허 제10-1736675호

위는 2018 대한민국발명특허대전에서 우수한 성적을 거두었으므로 이에 상장을 수여합니다.

2018년 12월 6일
산업통상자원부 장관
심윤호

K water 제 2017-02호

상 장

물 관리 우수상 ㈜코엔원 대표이사 이준일

귀하는 환경타일즈와 상하수도산업이 공동주최하고 K-water가 후원한 「2017 물 관리 심포지엄」에서 물 관리 분야에 남다른 열정과 활동으로 물 산업시장 활성화에 이바지한 공이 크므로 이 상장을 드립니다.

2017년 2월 23일
K-water
사장 이학수

제 748 호

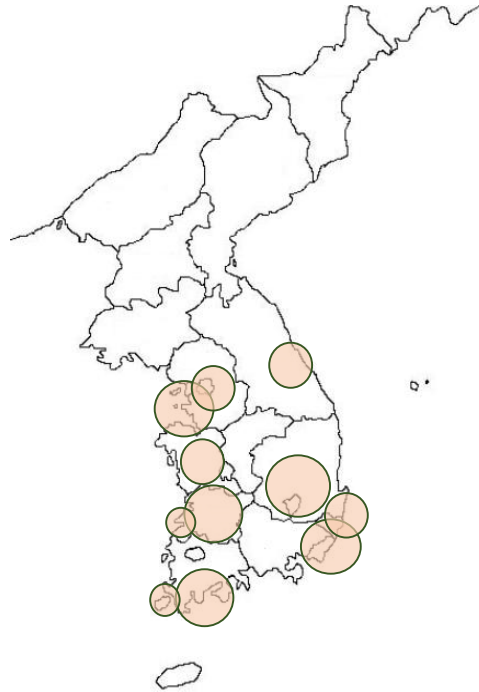
표 창 장

코엔원(주)
대표이사 이준일

귀하는 탁월한 기업가정신으로 벤처기업의 경영 및 생산성 향상을 통하여 국가산업 발전에 기여한 공이 크므로 이에 표창합니다.

2017년 12월 13일
중소벤처기업부장관
홍중환

MARKET



- KOREA MARKET : Korea Rural Community corporation, Korea Water Resources Corporation, Korea national oil corporation, Korea Gas corporation, Korea Hydro &nuclear power co. ltd., Korea electric power corporation, Incheon Airport corporation, Korea electric power knowledge data network, Korea electrotechnology research institute, Seoul metro, Korea railroad corporation, etc../Korea Local Government: Goyang city, Namwon city, Kimje city, Jeongseon city, Taeon city, Changwon city, Sunchang city, Shinan city etc..
- OVERSEA MARKET : VIETNAM, PHILIPPINES, MALAYSIA, TURKEY, POLAND, INDOENSIA

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Thank you



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