

MTR-PCU Series

ezPLC

■ Phase Coupler For PLC

This is the device that enables inter-phase communication by coupling the communication signal among the electronic phases. This is power line communication parts that block voltage of 50~60 Hz, allowing only the passing through of the power line communication signal.

Advantage

- Delivery of the communication signal among different phases
- BNC communication port attachment that can link with the transmission device and analysis device for power line communication
- Able to evaluate the motion characteristics of the device for power line communication
- Broadband coupling frequency characteristics : 90 kHz ~ 40 MHz
- Low insertion loss : -3 ± 2 dB
- Able to apply to diverse power systems : 1 phase 2 wire, 3 phase 3 wire, 3 phase 4 wire



MTR-PCU-WT1



MTR-PCU-WS1B



MTR-PCU-WK1B

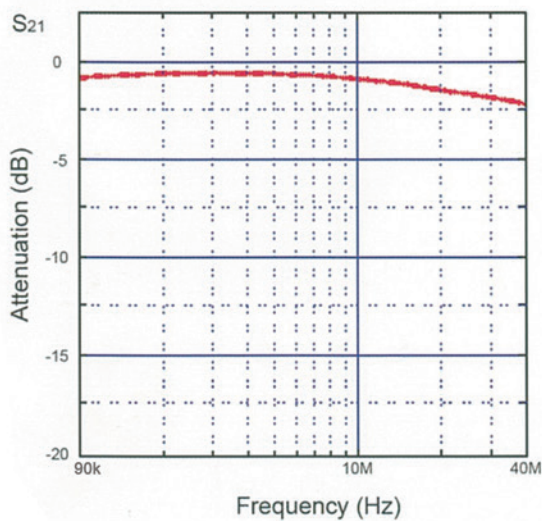
Specification

Model		MTR-PCU-W Series		
		PCU-WS	PCU-WK	PCU-WT
Application		1 Phase 2 Wire	3 Phase 3 Wire	3 Phase 4 Wire
Frequency		90 kHz ~ 40 MHz		
Attenuation (dB)		-3 ± 2		
Dimension (mm) L x W x H		105 x 53 x 32		
Wires Length (m)		1		
Option	Connect Port	BNC or TNC		

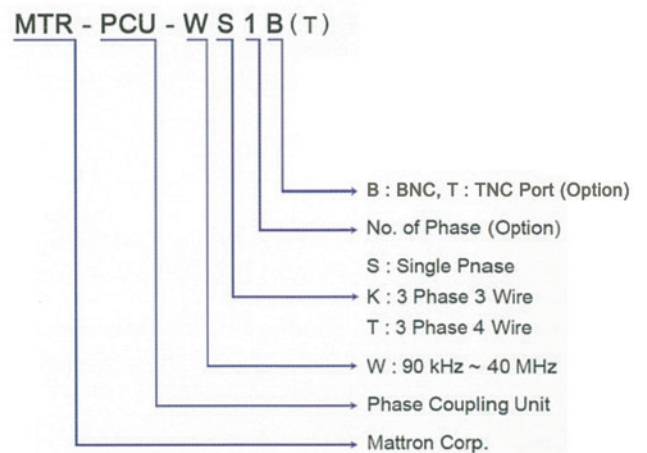
MTR-PCU Series

ezPLC

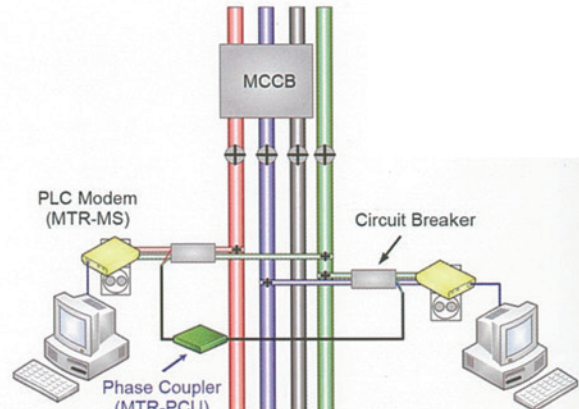
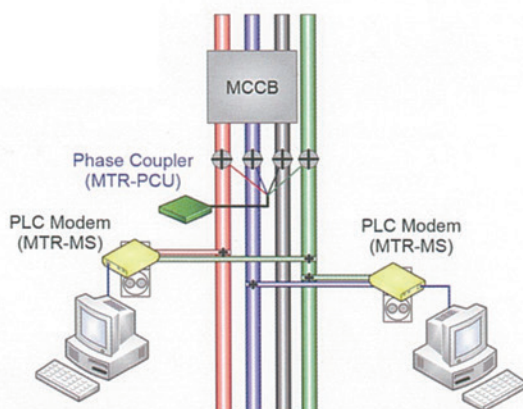
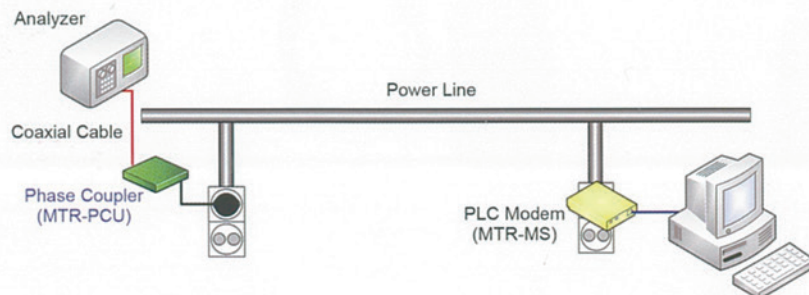
Property



Ordering Code System



Application



MTR-BF Series

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■ Blocking Filter For PLC

Parts for the power line communication that blocks transmission of communication signal to other network via power line in case of the network developed by using power line communication and that block infiltration of other network's communication signal and noise

■ Advantage

MTR-BF-000 L series

- Able to apply to low speed (90 ~ 450 kHz) power line communication
- High attenuation and high impedance of communication frequency bandwidth
- Applicable regardless of PLC modem type
- Compact size

MTR-BF-000 H series

- Applicable to high speed (1.7 ~ 30 MHz) power line communication
- Applicable to diverse power systems : 1phase 2wire, 3phase 3wire, 3phase 4wire
- Applicable regardless of the PLC modem type
- Easy installation



MTR-BF-S30H



MTR-BF-T60H



MTR-BF-S30L



MTR-BF-T100L-A

■ Specification

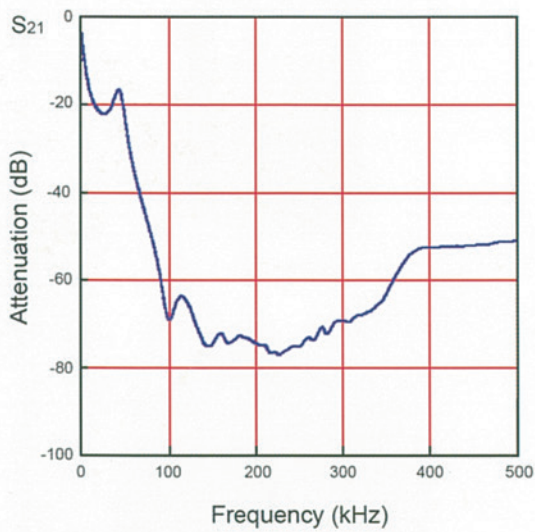
Model	MTR-BF H Series				MTR-BF L Series			
	BF-S30H	BF-S60H	BF-K60H	BF-T60H	BF-S30L	BF-S60L-D	BF-S100L-D	BF-T100L-A
Application	1 Phase 2 Wire		3 Phase 3 Wire	3 Phase 4 Wire	1 Phase 2 Wire			3 Phase 4 Wire
Max. Current (A)	30	60	60	60	30	60	100	100
Frequency	1.7 ~ 30 MHz				90 ~ 450 kHz	110 ~ 140 kHz		
Attenuation (dB)	-50 ± 5		-40 ± 5		-50 ± 5	-45 ± 5	-45 ± 5	-40 ± 5
Rated Voltage (V _{AC})	< 220		< 380		< 220	< 220	< 250	< 380
Dimension (mm) L x W x H	105x60x50		130x80x75		105x60x50	115x70x45	160x70x60	173x118x60
Operating Temp. (°C)	-40 ~ +80							

MTR-BF Series

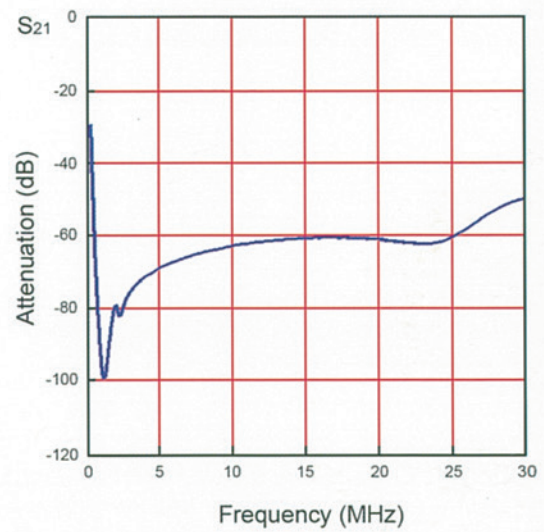
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Property

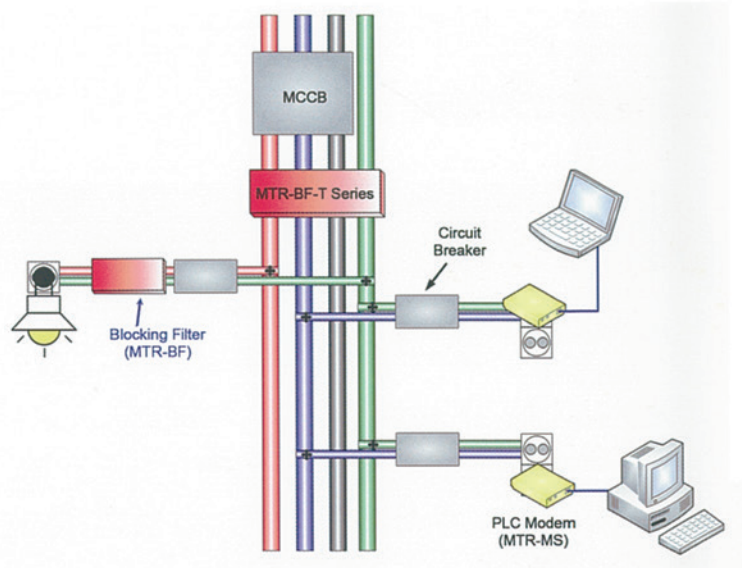
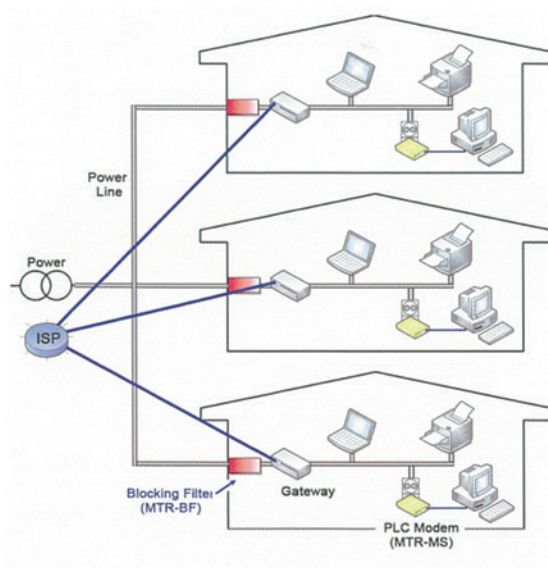
MTR - BF -OOL Series



MTR - BF -OOOH Series



Application



MTR-ICU Series

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■ Inductive Coupler For PLC

Inductive Coupler coupler for power line communication is the part that plays the role of selecting the communication signal from power line to transmit to the modem or for including communication signal in the power line. Parts for power line communication that enables Internet and home network by selecting only the communication signal on the power line without connecting to the power line directly and by getting conjoined with the power line exterior

■ Advantage

- Easy installation and superb safety compared to contact type coupler
- Able to use regardless of the voltage, and can be applied to both low speed / high speed communication
- Applicable to all the power line communication network systems and solutions
: Automatic Meter Reading, power line monitoring and control system, home networking, vessel networking and others



MTR-ICU-H56



MTR-ICU-H34



MTR-ICU-H45



MTR-ICU-L98

■ Specification

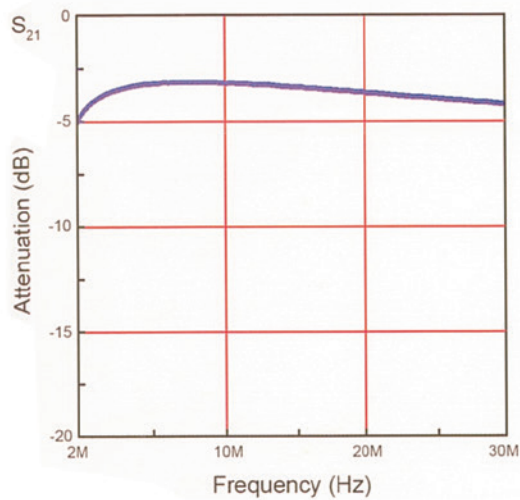
Model	MTR-ICU-H Series					MTR-ICU-L Series	
	ICU-H34	ICU-H45	ICU-H52	ICU-H56	ICU-H98	ICU-L60	ICU-L98
Dimension (mm) I.D x O.D x H	34x73x80	45x95x85	52x98x100	56x111x105	98x146x65	60x115x105	98x146x65
Weight (kg)	0.7	1.3	1.9	1.9	1.9	2.2	1.9
Attenuation (dB)	-4 ± 2					-9 ± 2	
Frequency	1.7 ~ 30 MHz					90 ~ 450 kHz	
Max. Current (A)	100	250	250	300	100	300	100
Connector	BNC or TNC						
Operating Temp.(°C)	-40 ~ + 80						
Caution	Ues only on insulated cable						

MTR-ICU Series

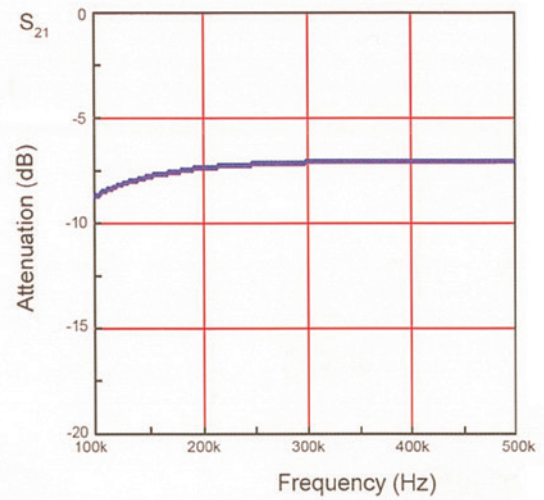
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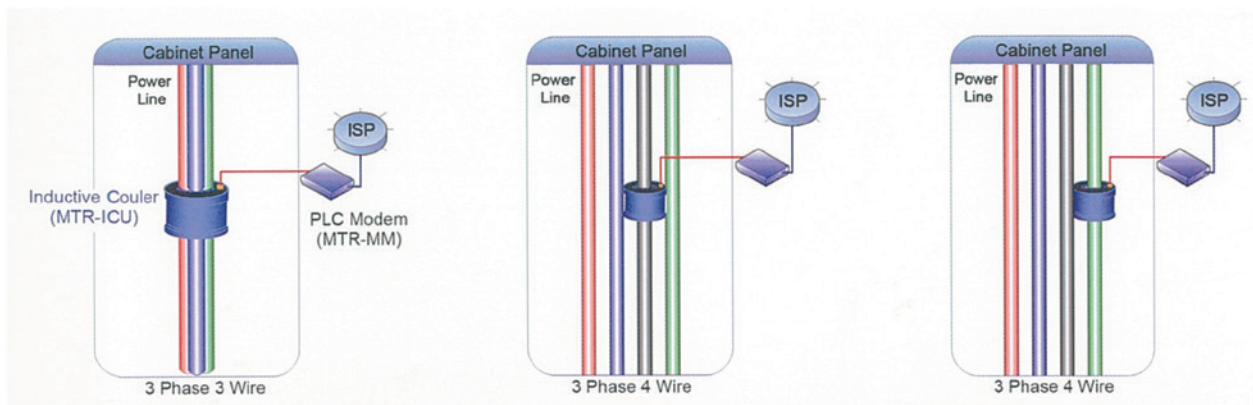
MTR - ICU - H Series



MTR - ICU - L Series



Application



MTR-SPM Series

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Serial Modem For PLC

Serial modem for power line communication is the converter that converts RS232 / 422 / 485 serial communication data into power line communication method.

Able to communicate with the serial equipment by using installed power line without requiring separate communication railing work.

Moreover, able to transmit ethernet data besides serial data by using power line.

Advantage

- Support for converting of diverse methods
 - Serial data ↔ PLC data
 - Ethernet data ↔ PLC data
 - Ethernet data ↔ serial data
- Communication with enabled with existing power line without requiring a separate communication line.
- Easy to install and to use at the industrial sites by attaching onto DIN rail.



MTR-SPM-D200A

Specification

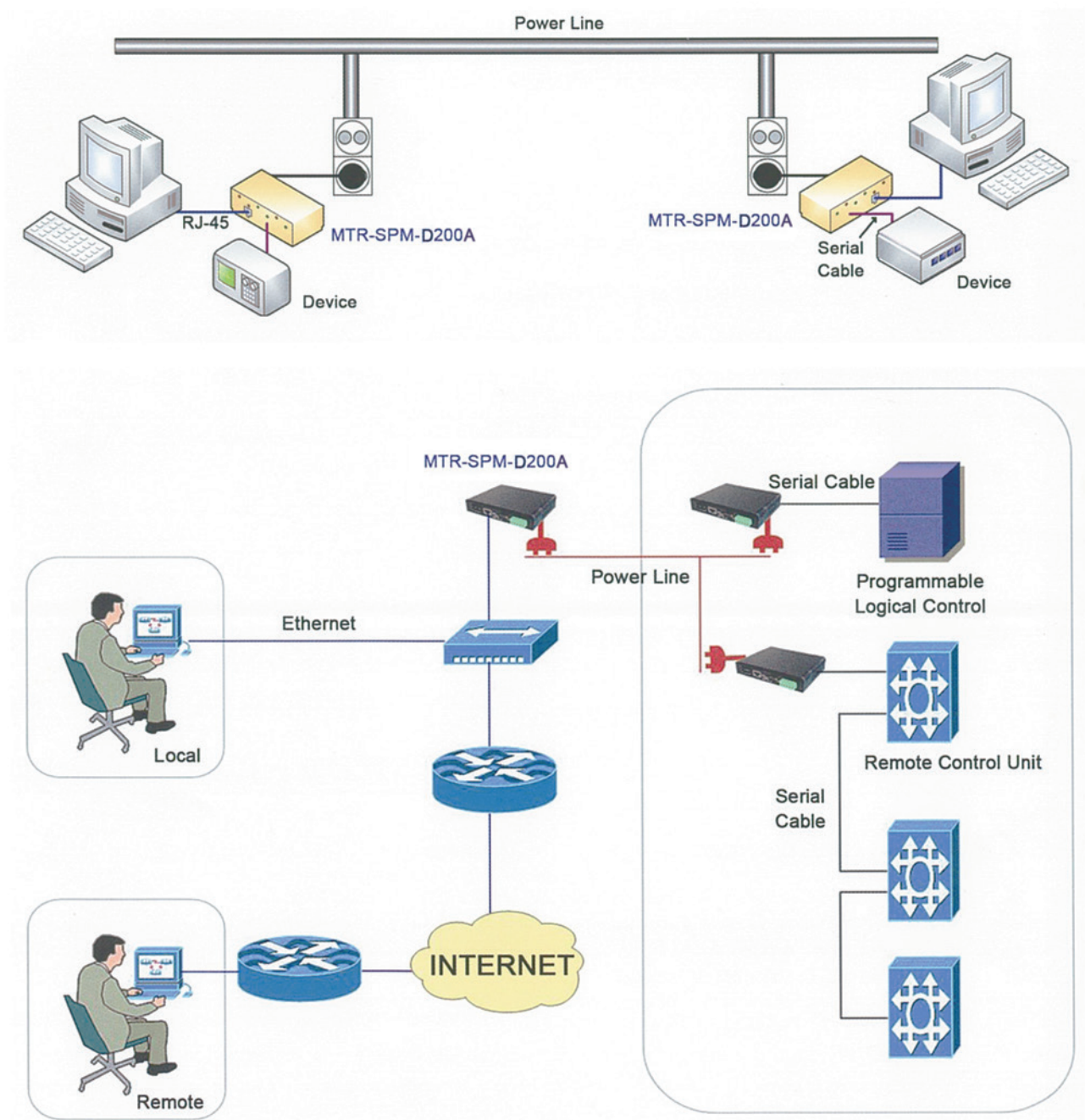
Serial Port			
Interface	RS - 232 / RS - 422 / RS - 485 / Zigbee	Signals	RS - 232 : TxD, RxD, RTS, CTS, GND
Connector	DB9, Terminal Block		RS - 422 : TxD+, TxD-, RxD+, RxD-, GND
Baud Rate	110 bps to 921.6 kbps		RS - 485 : TRxD+, TRxD-, GND
Data Bits	5, 6, 7, 8	Ethernet Port	
Stop Bits	1, 2	Standard	IEEE 802.3u (10/100 Base-T)
Flow control	None, RTS / CTS, Xon / Xoff	Connector	RJ-45 UTP-Cat.5

PLC (Power Line Communication)		Hardware	
Payload Speed	Up to 198 Mbps OFDM@1024QAM	LED	COM, ETH, ALC, PWR
MAC Throughput	Max. 120 Mbps	Management	Web Management, Console
Coverage	Up to 200 m	Dimension	200 X 120 X 40 mm
Frequency	2 ~34 MHz	Power Consumption	Max. 5.5 W
MAC	CSMA / CA	Standard	IEEE802.3u, EIA/TIA RS232 / 422 / 485
Standard	OPERA	Reset	Reset to Factory default

MTR-SPM Series

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Application



MTR-Modem Series

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■ Modem For PLC

Modem for power line communication is the device that enables Internet and home network by using plug at home or office without requiring exclusive line. High speed power line network can be established easily at home or SOHO environment by using power line

Master modem (MTR - MM series)

Attach interface that can link coupling unit and communication device

Slave modem (MTR - MS series)

Plug & Play method



MTR-MM-D200



MTR-MS-D200

I Advantage

- Support for up to 200 Mbps speed
- Easy installation : Installation completed with merely Plug & Play method and Plug- In
- Superb scalability : Up to 16 modems can be used simultaneously



MTR-MM-D200-A

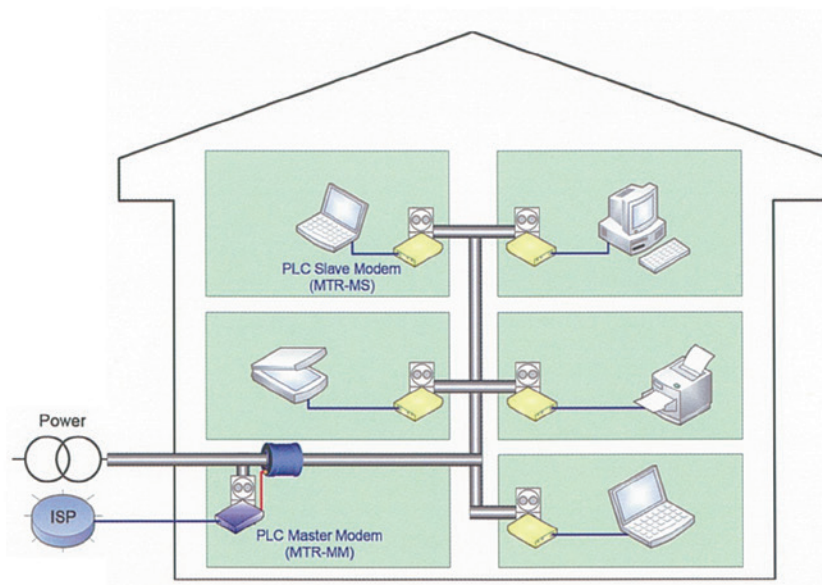
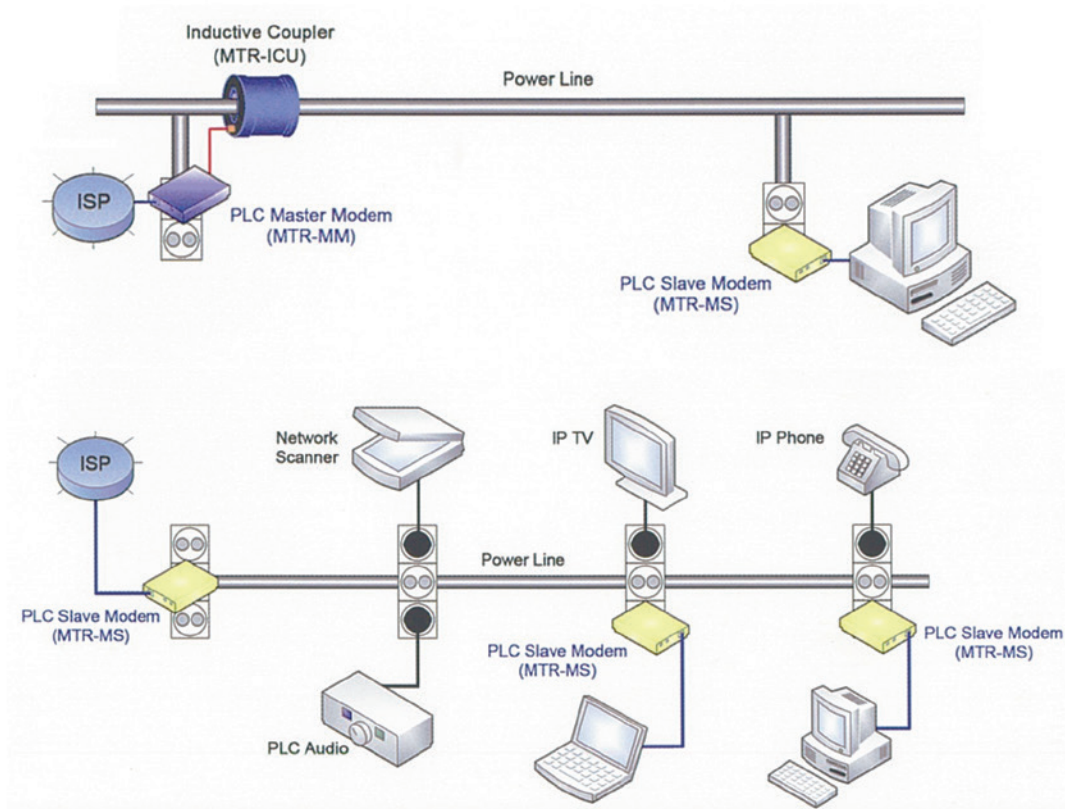
I Specification

Model	MTR-MM Series		MTR-MS Series
	MM - D200-A	MM - D200	MS - D200
PHY Rate (Mbps)	200	200	200
Frequency (MHz)	2 ~ 34	2 ~ 34	2 ~ 34
Power Consumption	7 W	5 W	5 W
Connect Port	BNC Port × 1 ea Ethernet Port : RJ 45 × 2 ea Console Port : 1Port (Connector Type : D-SUB9)	BNC Connector × 1 ea Ethernet Port : RJ 45 × 1 ea	Ethernet Port : RJ 45 × 1 ea
Power Supply	85 ~ 265 V _{AC} , 50/60 Hz		
Operating Temp. (°C)	-20 ~ 70		
Humidity (%)	10 ~ 95		
Dimension (mm) L x W x H	166 x 185 x 40	145 x 110 x 32	145 x 110 x 32

MTR-Modem Series

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Application

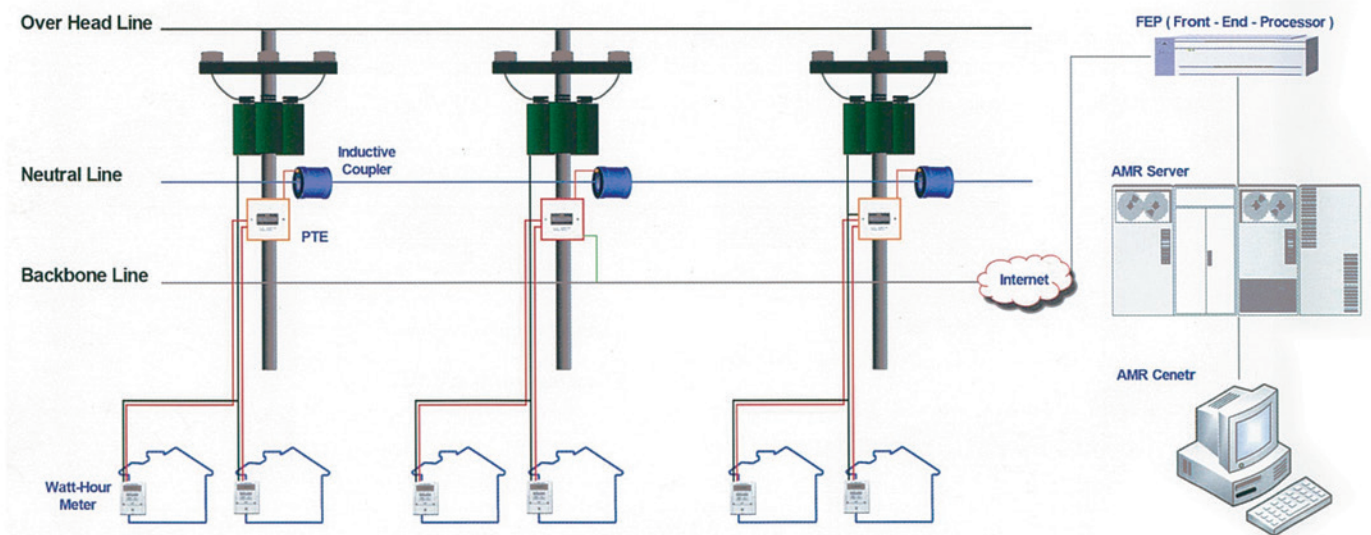


ezPLC Solution

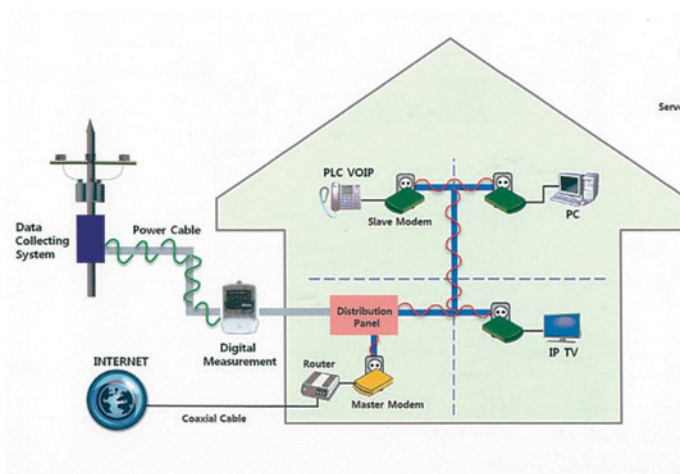
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■ Advanced Metering Infrastructure(AMI)

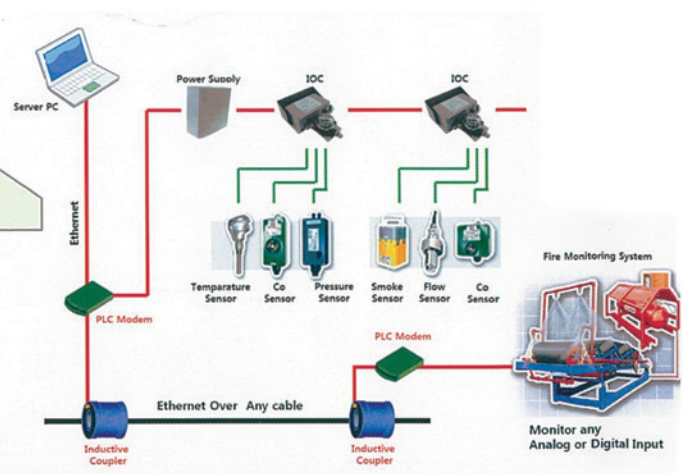
- Meter information can be collected, read and managed remotely without visiting in person
- Applicable to waterworks · gas · hot water system / effective data management, economic cost



■ Internet & VoIP Services



■ Mining's Network

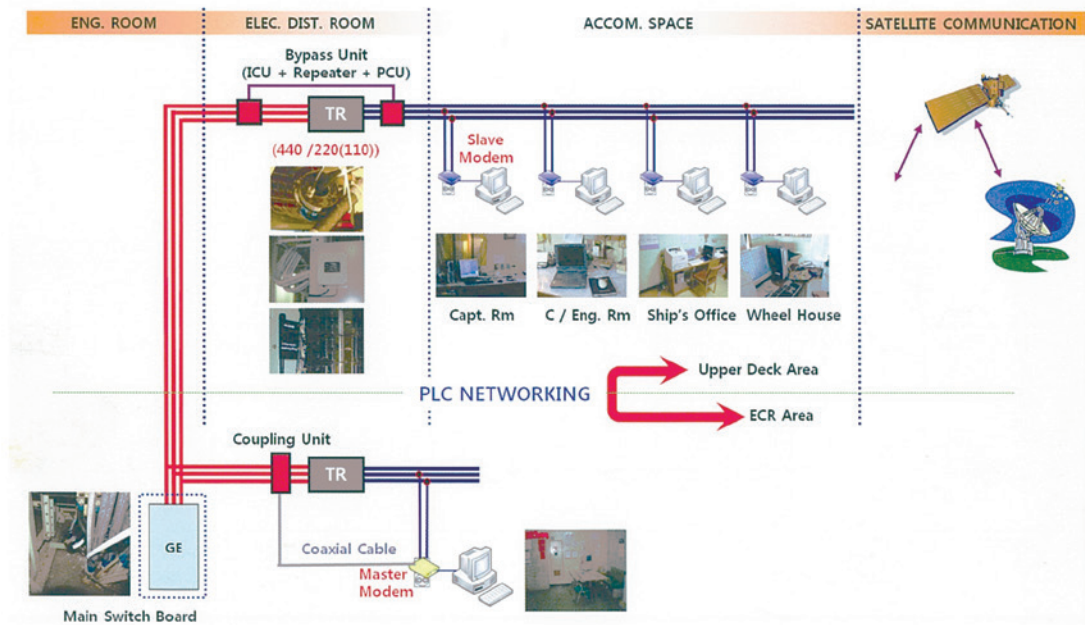


ezPLC Solution

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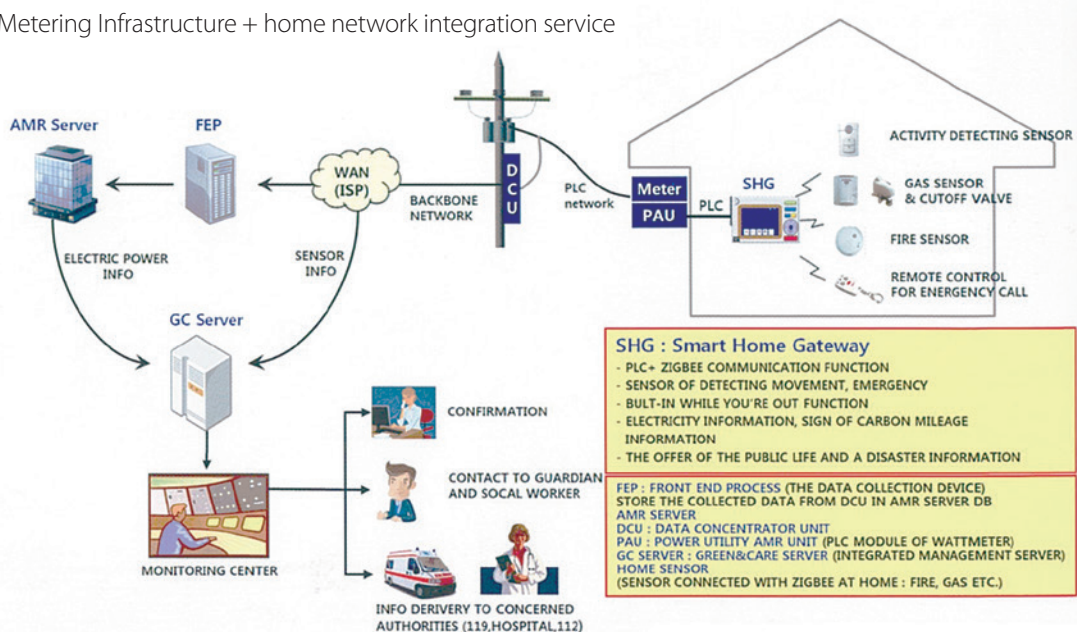
Ship Area Network(SAN)

- Installation enabled without blocking power / short installation time / stable communication



Smart Grid

- Advanced Metering Infrastructure + home network integration service



MTR-AMI-ICU Series

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■ Inductive Coupler for AMI

Inductive Coupling device that ensures effective operation of the Advanced Metering Infrastructure(AMI) system by utilizing power line communication. There are two types of Non-contact type coupler for AMI.

Coupler for lead-in wire

Device that resolves communication defect by reinforcing against signal decrease due to diverse noises and branches at the Automatic Meter Reading field

Coupler for neutral line

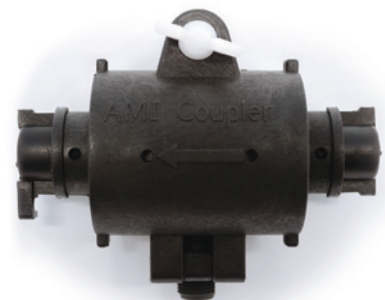
Device that enables communication between Master DCU and Slave DCU by using neutral line



Coupler for lead-in wire (MTR-AMI-H17)

■ Advantage

- Small and superb communication
- Applicable to diverse power line specs
- Easy installation and superb safety
- Optimized for the KEPCO's Automatic Meter Reading system specs
- Coupler for neutral line can be used outdoors



Coupler for neutral line (MTR-AMI-H14)

■ Specification

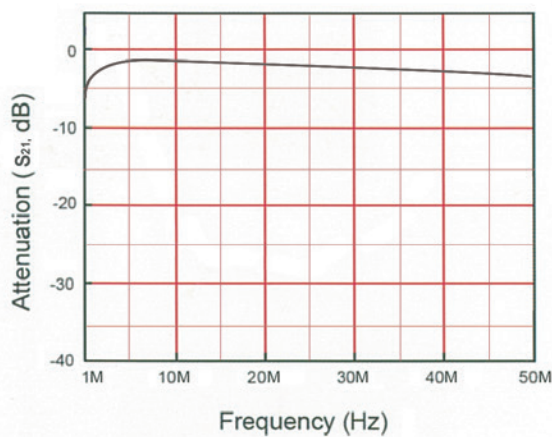
Product Name	Coupler for neutral line	Coupler for lead-in wire
Model	MTR-AMI-H14	MTR-AMI-H17
Dimension (mm)	14×60×90	17×40×50
Weight (g)	240	210
Attenuation (dB)	- 6 ± 2	- 6 ± 2
Frequency (MHz)	2 ~ 30	2 ~ 30
Max. Current (A)	50	50
Operation Temp (°C)	- 40 ~ + 80	- 40 ~ + 80
Note	For outdoor	Use only on insulated cable

MTR-AMI-ICU Series

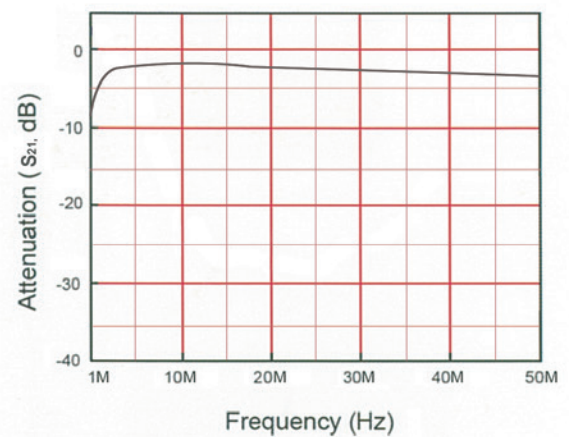
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Property

Coupler for neutral line(MTR-AMI-H14)

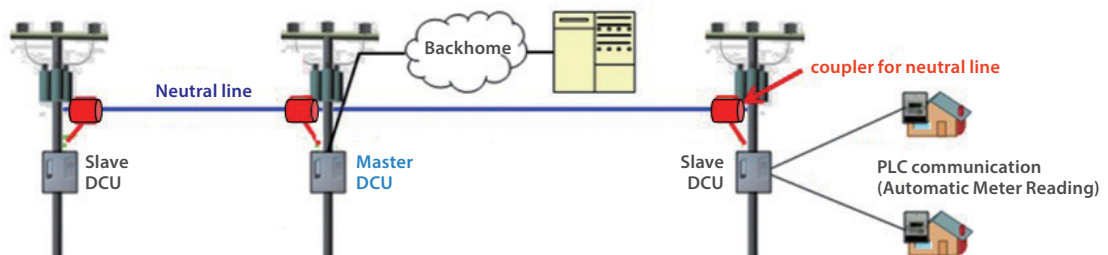


Coupler for lead-in wire(MTR-AMI-H17)

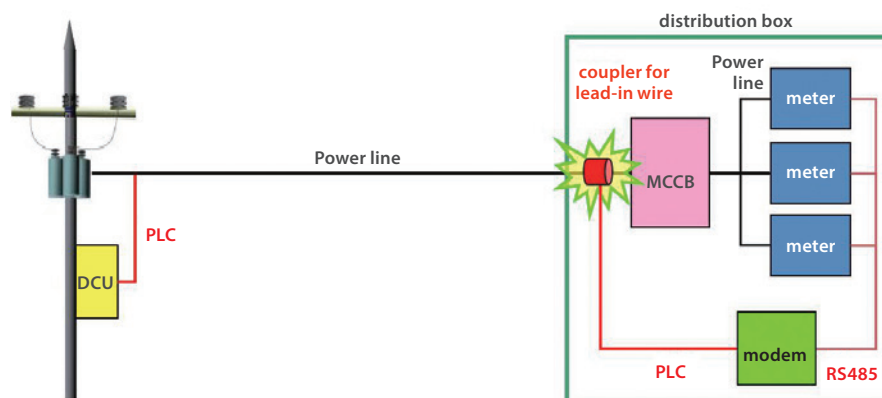


Application

Coupler for neutral line



Coupler for lead-in wire



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Energy Harvesting Device for Transmission Towers

ezPLC

■ Energy Harvesting Device

This device collects energy using non-contact methods from induced current in the ground wire of transmission towers.

■ Power CT (MTR-PowerCT-V300)

- Waterproof and dustproof outdoor structure
- Switchable structure / low-current operation
- High versatility: ideal for smart transmission tower safety monitoring systems and factory power supply backup AMI signal booster device

■ Power Supply (SMPS, MTR-SMPS-PC100)

- Waterproof and dustproof outdoor structure
- High energy efficiency
- Equipped with a lightning protection circuit
- Multi-input/output terminals: 4 inputs, 2 outputs



Power CT
(MTR-PowerCT-V300)



Power Supply
(MTR-SMPS-PC100)

Power CT (MTR-PowerCT-V300)

Dimension (mm)	34 x 115 x 136
Weight (kg)	5.3
Input Current (A)	20 ~ 100
Output Voltage (V _{AC})	30 ~ 50
Connector	2P(IP67)
Cable & Length (mm)	2P(IP67) & 250
Operating Temp. (°C)	-40 ~ +85

SMPS(MTR-SMPS-PC100)

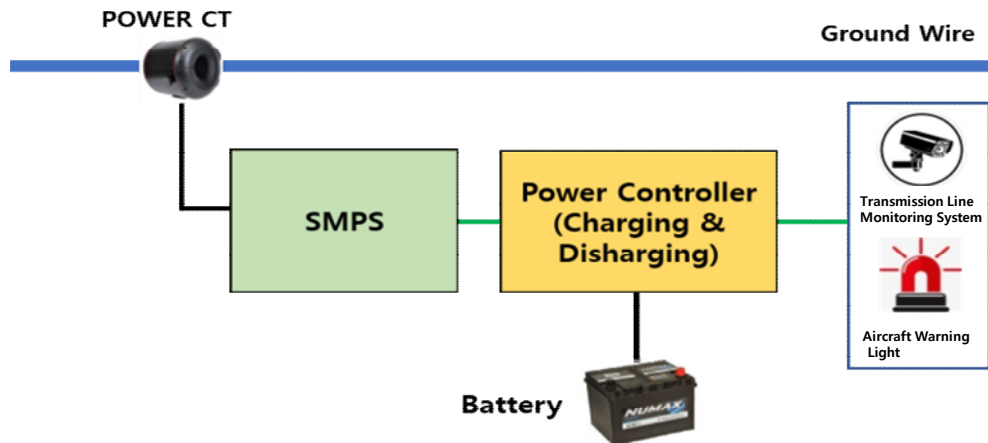
Dimension (mm)			130 x 180 x 60
Input Power	Input Voltage (VAC)		20 ~ 50
	Frequency (Hz)		60
	Max. Current (A)		3
	Number of Connector		4
Output Power	Channel 1	Output Voltage (VDC)	14.5 (±5%)
		Output Current (A)	3.5 (C.C)
		Number of Connector	2
	Channel 2	Output Voltage (VDC)	24 (±5%)
		Output Current (A)	2.1
		Number of Connector	1
Output Power (W)			50
Operating Temp. (°C)			-25 ~ +55

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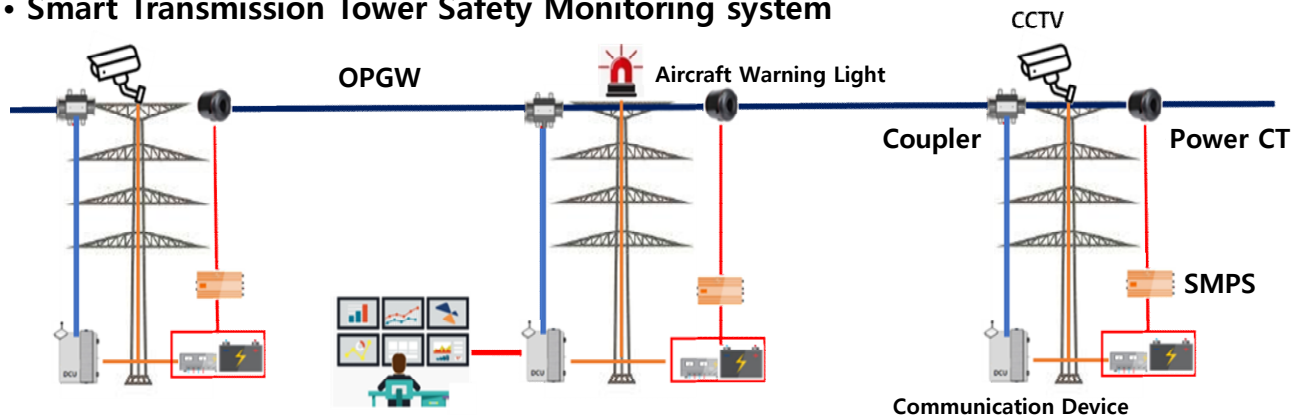
Energy Harvesting Device for Transmission Towers

ezPLC

■ Installation Method and Application



• Smart Transmission Tower Safety Monitoring system



• AMI Signal Booster

