



# Industrial Grade HD-PLC

## KS700M4P High-pressure type manual 1.1



Industrial grade high-pressure type

Operating voltage DC12-36V

For high voltage 1200V/AC power line or slip touch cord

Industrial-grade working temperature-40~85°C

Surge ( shock ) anti-interference degree  $\pm 4\text{kv}$



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## Product Introduction

High Definition- Power Line Communication KS700M4P is a powerful and high-performance broadband power carrier communication device , support network port、RS485(modbus agreement) serial port and other digital information on any two-core wire , such as twisted pair, coaxial cable, DC wire, AC wire, parallel line, elevator cable, etc,for high speed long distance transmission.

PLC KS700M4P is self-contained routing algorithm, automatic networking, data transparent transmission , plug and play , the maximum communication speed is 1000Mbps , the maximum point-to-point transmission distance can reach 1000 meters , the relay version supports up to 10 levels of relay , the maximum transmission is 3-5 kilometer.

PLC KS700M4P multiple versions are available, hardware version is available in standard version、high bandwidth version、long-distance edition、broadcast version, software version is include high performance edition、relay version 、slip touch cord dedicated version etc. KS700M4P one-touch setup of host and extension via master-slave dip switches, M-side is the hosts, S-side is the slave.A host can take one slave or multiple slaves.Flexible networking, supports bus, star, tree, and hybrid network topologies structure.

PLC KS700M4P integrated coupled circuit, surge protection, meet 1140V safety certification specification , suitable for power line carrier communication up to AC1200V.The products are mainly used in power carrier communication scenarios, such as mine communication system, oilfield collection platform, substation, photovoltaic new energy and so on.



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## Technical data

Classification	Technical indicators
Power supply	DC 12-36V
PLC Signal port	Voltage 0-1200V any two core cable, power line, slip touch cord, slip ring cable etc
Modulation type	OFDM modulation type
Carrier frequency	2 ~ 28 MHz
Ethernet bandwidth	10M/100Mbps self-adaption
Transmission distance	Maximum transmission distance: Point-to-point 500 meter class 10 relay 3-5 kilometre
RS485	Support Modbus RTU protocol, baud rate adjustable from 1200~115200bps.
Data delay	Within 10ms
Packet loss probability	Less than 0.1‰
Overall power consumption	≤3W
Standard agreement	TCP/IP, UDP, Profinet, Home Plug, Modbus-TCP, IEEE 802.3, IEEE 802.3U, IEEE 802.3ab, IEEE 1905.1, IEEE 1900, IEEE 1901etc
Way of encryption	AES-128bit
Multicast	Support IGMP multicast protocols,the maximum number of nodes is 128
Exterior dimensions	Size: 129*126*50mm (L*W*H) Weight: 610g Install: RAIL TS35/TS35 guide rail
Environmental requirement	Operating temperature: -40°C ~ 85°C Operating humidity: 20%-95% (No condensation) Storage temperature: -40°C ~ 85°C
Working time	Industrial grade, supports 7*24 hours all-weather work



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## Interface Specification



<b>PLC channel interface</b>	L1,L2 parallel connection on power line or slip touch cord under 1200V, AC and DC are available. Leading wire interface	<b>DC power supply interface</b>	Voltage supply DC:12-36V Note : Distinguish between positive and negative.
<b>RS485 Serial port</b>	A: External equipment DATA+ B: External equipment DATA-	<b>LED indicator</b>	Power :The red light is the power indicator, If electrified,light on; No electricity,light off.
<b>RJ45 network interface</b>	Connect network devices, such as computers, switches, network cameras, PLC devices, etc. ; E_link green light: Ethernet connection indicator, connected device normal,the green light blinking ; P_link yellow light: PLC networking indicator,the yellow light is always on for successful networking, otherwise the light is not on.	<b>Master-slave dip switch</b>	Master-Slave setup switch, Dialing to M is the host, Dialing to S is the slave. Set up the master and slave before powering up.
<b>Grounding terminal</b>	M4 screw ground wire connector	<b>Install way</b>	TS35 DIN-rail mounting



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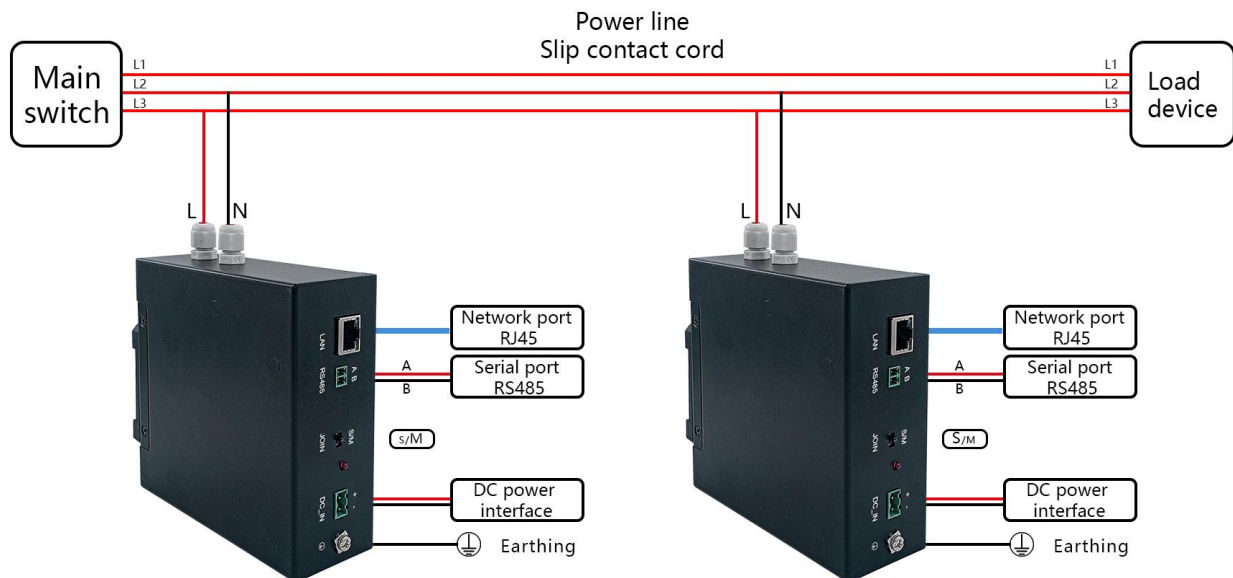
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## Connection schematic diagram

The supply voltage of HD-PLC KS700M4P is DC 12 ~ 36V , support carrier communication on power lines below AC1200V , PLC channel port wiring does not distinguish between phase sequence. The PLC needs to set the host and slave , ensure that the host and slave are set before power-on , the dial switch dials to M as the host , dials to S as the slave. A host can have one slave or multiple slaves. A network must have and can only have one host.

PLC Physical connection schematic:



### Notice:

1. PLC need to set up master and slave machine , be sure to set up the master and slave before powering on the machine. If you set up the master and slave after powering up, you need to power off and restart the PLC for the master and slave to take effect. A network must have and can only have one host.
2. The carrier PLC channel ports N,L are connected in parallel to the power line without distinguishing phase sequence, but the channel ports must be on the same circuit.
3. Please follow the connection diagram to connect the wires correctly, and the wiring should be secure. If the wiring is incorrect or loose, the network will not work.
4. Do not operate with electricity, do not touch the output terminals directly, and do not short the output terminals or connect them to the housing.
5. The product is not designed to be waterproof, please ensure that the product is used in a dry environment.
6. If the product is malfunctioning, do not disassembled and repaired by yourself, please contact the manufacturer or purchase channel in time to deal with it.



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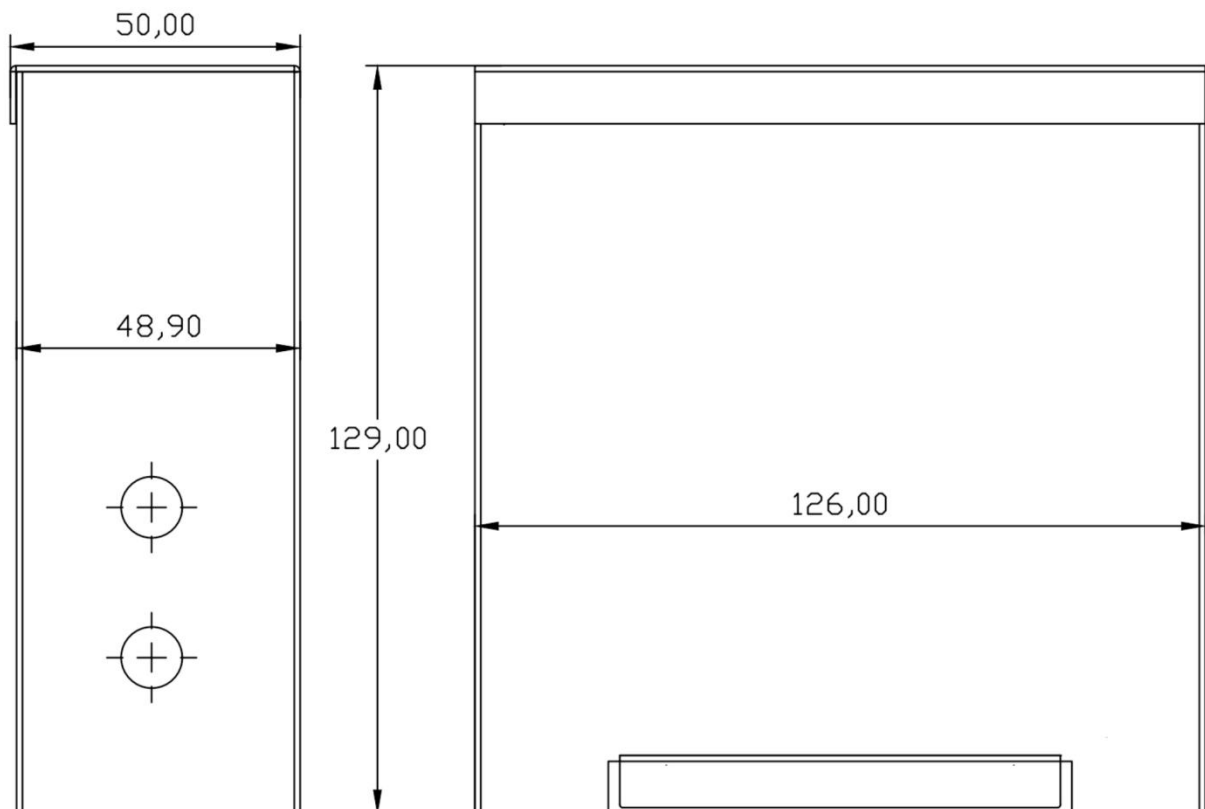
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## Exterior dimensions

The PLC' s length, width and height are: 129\*126\*50mm (No terminals included) , TS35 Installation method of guide rail,

Specific dimensions are shown below:





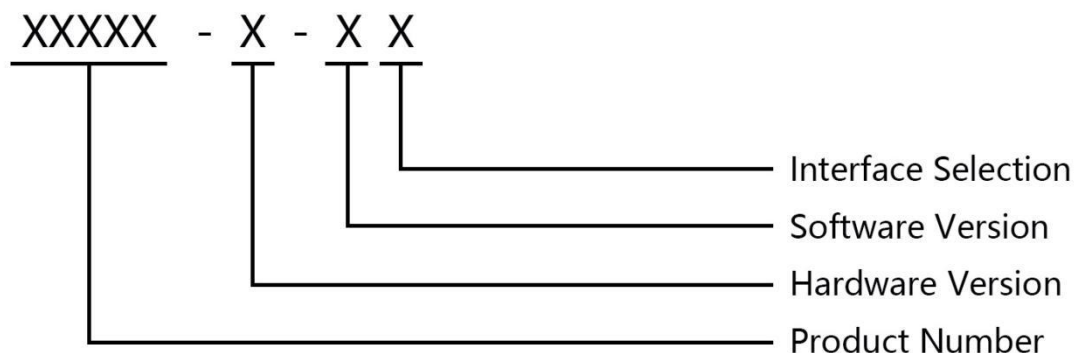
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## Model selection guide

Model specification description:



According to the actual application, you can refer to the following steps to select the model:

Product Type		
High-pressure type: KS700M4P	Power supply voltage DC12~36V	PLC channel interface: Power lines below AC 1200V
Hardware Version		
B: Standard module	Point-to-point 500 meters	Bandwidths: 10/100Mbps
D: Long distance edition	Point-to-point 1000 meters	Bandwidths: 10/50Mbps
Software Version		
E: High performance edition	The number of communication nodes is within 16 pcs	
R: Relay version	The number of nodes ranges is from 16 to 999 pcs	
W: Sliding touch version	Special for sliding touch line	
Interface Selection		
1.Single network port RJ45		2.Network port+RS485

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