产品选型手册

PRODUCT SELECTION GUIDE

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浙江金来电气有限公司

ZHEJIANG JINLAI ELECTRIC CO., LTD.

BEVAV® EAGLE

浙江金来电气有限公司

ZHEJIANG JINLAI ELECTRIC CO., LTD.

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企业简介
COMPANY OVERVIEW

浙江金来电气有限公司是由一所蓬勃发展的的电器工厂和一家专业的国际贸易公司所组成的综合经济体。企业是集开发，加工，制造，原产品质量结构改进及销售（公司拥有自营进出口权）一条龙服务的新型企业。公司主要产品为数显仪表，多功能电力仪表，导轨数显仪表，表头等低压电气产品。企业获得 ISO9001,CE 等认证。

我公司现已形成规模化国际营销网络现已经与俄罗斯、法国、英国、巴西、美国、沙特、埃及等 50 多个国家和地区建立了长期业务合作关系。公司不断设计和开发新产品，并以优质服务持续增强顾客满意度。公司依靠精良的设备，先进的工艺，科学的管理，不断提高产品的质量和服务水平，完善销售及服务网络，赢得国内外用户的好评，促进了金来品牌影响力大幅度提升。

在企业改革和经营管理中，公司将本着“开拓、创新、敬业、奉献”的企业精神和“准确可靠、满足顾客需求；不断创新、树立金来品牌”的质量方针，力争将“金来”打造成知名品牌而不懈努力！

Zhejiang Jinlai Electric Co., Ltd. is a comprehensive economy consisting of a booming electrical appliance factory and a professional international trading company. The company is a new-type enterprise integrating development, processing, manufacturing, quality structure improvement of original products and sales (company has self-support import and export rights). The company's main products are digital meter, multifunction meters, DIN-rail digital meter and so on. Company has obtained ISO9001, CE and other certifications.

Our company has now formed a large-scale international marketing network. Now it has established long-term business cooperation with more than 50 countries and regions such as Russia, France, Britain, Brazil, the United States, Saudi Arabia and Egypt. Company continues to design and develop new products and continues to enhance customer satisfaction with quality service. The company relies on sophisticated equipment, advanced technology, and scientific management to continuously improve product quality and service level, improve sales and service network, and win praise from domestic and foreign users, which has greatly enhanced the influence of Jinlai brand.

In the enterprise reform and management, the company will adhere to the enterprise spirit of “exploitation, innovation, dedication, dedication” and the quality policy of “accurate and reliable, satisfying customer needs; continuously innovating and establishing a JINLAI brand”, striving to ”JINLAI” "To create a well-known brand and make unremitting efforts!"

发展历程
DEVELOPMENT PATH

BEVAV®

1990 year — Family workshop began to produce pointer meters. Employees: 15 people

1995 year — Moved to a new factory.Employees: 30 people

2001 year — Started to contact foreign trade, have a first foreign trade business.Employees: 150 people

2005 year — Singed agent with our Pakistan customer

2006 year — Established the company: yueqing jinlai electric co., Ltd.

2007 year — Registered trademark "BEVAV" Registered trademark "JJLL"

2008 year — Company has its own factory building of 3,000 square meters. Purchased 5 calibrators. Received CE certification, ISQ9001 certification

2009 year — Singed agent with our Philippines customer

2010 year — Singed agent with our Malaysia customer

2011 year — Transformation of digital display instrument production

2012 year — We have purchased 10 sets of equipment such as aging instrument, high temperature tester and anti-interference tester

2013 year — Company domestic sales reached 6 million yuan, renamed zhejiang jinlai electric co., Ltd.

2014 year — Annual sales reached $2 million, set up its own foreign trade company.

2015 year — Participated in Canton fair , Malaysia exhibition,dubai exhibition.

2016 year — Joined alibaba

2018 year — General summary : Company has an annual sales of $320W, with 30 machines and equipments, 3 technical staff, 70 workers, 5 domestic sales and 3 foreign trade sales.

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XD 系列数显表
XD Series Digital Meter

金来智造，引领未来
Manufactured by Jinlai, Leading the future

XD 系列单相数显表
XD Series Single Phase Digital Meter

BEVAV®

产品标准 /Product Standard

- GB/T 22264.1–2008 安装式数字显示电测量仪表第 1 部分：定义和通用要求
- GB/T 22264.2–2008 安装式数字显示电测量仪表第 2 部分：电流表和电压表的特殊要求
- GB/T 22264.3–2008 安装式数字显示电测量仪表第 3 部分：功率表和无功功率表的特殊要求
- GB/T 22264.4–2008 安装式数字显示电测量仪表第 4 部分：频率表的特殊要求
- GB/T 22264.5–2008 安装式数字显示电测量仪表第 5 部分：相位表和功率因数表的特殊要求
- GB/T 22264.8–2008 安装式数字显示电测量仪表第 8 部分：推荐的实验方法
- Mounted digital display electric measuring meters, part 1: definitions and general requirements common to all parts
- Mounted digital display electric measuring meters, part 2: special requirements for ammeters and voltmeters
- Mounted digital display electric measuring meters, part 3: special requirements for power meters and reactive power meters
- Mounted digital display electric measuring meters, part 4: special requirements for frequency meters
- Mounted digital display electric measuring meters, part 5: special requirements for phase meters and power factor meters
- Mounted digital display electric measuring meters, part 8: recommended test methods

性能特点 /Performance Characteristics

- 高精度测量单相电流或电压
- 提供数码管显示，本地数据查询
- 电流变比可编程设置
- 支持 RS–485 通讯，Modbus–RTU 协议
- 支持开关量输入、开关量输出、模拟变量输出
- 辅助电源：AC/DC 80V~270V、AC220V、AC380V、AC100V、DC48V、DC24V
- 多种外形选择，满足不同柜体电气回路的要求

- High accuracy measurement of single phase current or voltage
- Nixie tube display, local data inquiry
- The current change ratio can be set by programming
- Support RS–485 communication and Modbus–RTU protocol
- Support switching value input, switching value output and analog variable output
- Auxiliary power supply: AC/DC 80V~270V, AC220V, AC380V, AC100V, DC48V, DC24V
- Multiple kinds of outline selection to meet the requirements of different electric circuits of cabinet

型号命名 /Model Naming

XD □ □ □ – □ □ □ □

（省略）– 无模拟变送输出功能，nD– 模拟变送输出 (n=1 路、2 路、3 路……)
(Omission)–no analog transmitting output function, nD–analog transmitting output (n=line 1, line 2, line 3.....)

（省略）– 无 RS485 通讯，nT–RS485 通讯 (n=1 路、2 路)
(Omission)–no RS485 communication, nT–RS48 communication (n=line 1, line 2)

（省略）– 无报警（开关量）输出，nO– 报警（开关量）输出 (n=1 路、2 路、3 路……)
(Omission)–no alarm (switching value) output, nO–alarm (switching value) output (n=line 1, line 2, line 3.....)

（省略）– 无开关量输入，nI– 开关量输入 (n=1 路、2 路、3 路……)
(Omission)– no input of switching value, nI–input of switching value (n=line 1, line 2, line 3.....)

功能代号
Function code：
A– 交流电流，DA– 直流电流，V– 交流电压，DV– 直流电压，Hz– 频率，PF– 功率因数，P– 有功功率，Q– 无功功率，E– 有功电能，RE– 无功电能
A–AC current, DA–DC current, V–AC voltage, DV–DC voltage, Hz–frequency, PF– power factor, P–active power, Q–reactive power, E–active power supply, RE–reactive power supply

显示方式
Display method：
（省略）– 单排显示，2– 两排显示，3– 三排显示，4– 四排显示，5– 五排显示，6 六排显示，Y–LCD 液晶显示
(Omission)– single row display, 2– two row display, 3–three row display, 4–four row display, 5–five row display, 6–six row display, Y–LCD liquid crystal display

外型代号 /Outline Code：

外型代号 Outline Code	对应指针表型号 Corresponding Pointer Meter Model	面框尺寸 Frame Size (mm)	开孔尺寸 Opening Size (mm)
42	45 方形 square	120*120	111*111
96	96 方形 square	96*96	91*91
96B	96B 方形 square	96*48	92*45
80	80 方形 square	80*80	76*76
72	72 方形 square	72*72	67*67
48	48 方形 square	48*48	45*45

产品代号 /Product code

技术指标 /Technical Index

◆ 测量精度 /Measurement accuracy

◇电流：0.5 级
◇电压：0.5 级
◇ frequency：±0.02Hz

◇ Current：Class 0.5
◇ Voltage：Class 0.5
◇ Frequency：±0.02Hz

◆ 电流信号输入 /Current signal input

◇ 接线方式：单相
◇ 额定电流：AC1A、AC5A、DC20mA、DC1A、DC5A、DC75mV
◇ 过负载：1.2 倍（持续），10 倍 /5 秒（瞬时）
◇ 功耗：＜ 0.4VA/ 相
◇ 阻抗：＜ 20mΩ
◇ 频率：45~65Hz 或者直流

◇ Wiring method：Single phase
◇ Rated current： AC1A, AC5A, DC20mA, DC1A, DC5A, DC75mV
◇ Overload： 1.2 times (continuous), ten times/second (instantaneous)
◇ Power consumption：＜ 0.4VA/phase
◇ Impedance：＜ 20mΩ
◇ Frequency：45~65Hz or DC

◆ 电压信号输入 /Voltage signal input

◇ 接线方式：单相
◇ 额定电压：AC 57.7V、AC 100V、AC 220V、AC 380V、DC 2V、DC 20V、DC 200V、DC 600V
◇ 过负载：1.2 倍（持续），2 倍 /1 秒（瞬时）
◇ 功耗：＜ 1VA/ 相
◇ 阻抗：＜ 300KΩ
◇ 频率：45~65Hz 或者直流

◇ Wiring method： Single phase
◇ Rated voltage： AC57.7V, AC100V, AC220V, AC380V, DC2V, DC20C, DC200V, DC600V
◇ Overload： 1.2 times (continuous), twice/one second (instantaneous)
◇ Power consumption：＜ 1VA/phase
◇ Impedance：＜ 300KΩ
◇ Frequency：45~65Hz or DC

◆ 辅助电源 /Auxiliary power supply

◇ 工作范围：AC/DC 80V~270V、AC 220V、AC 380V、AC 100V、DC 48V、DC 24V
◇ 功耗：＜ 4VA

◇ Operation range：AC/DC 80V~270V, AC220V, AC380V, AC100V, DC48V, DC24V
◇ Power consumption：＜ 4VA

◆ 功能模块 /Function module

◇ 通讯接口：1 路 RS–485 通讯，Modbus–RTU 协议
◇ 波特率：1200~9600bps 默认 2400bps
◇ 开关了输入：支持 2 路干结点输入
◇ 开关量输出：支持 2 路模拟量输出，容量：AC250V/5A，DC30V5A
◇ 变量输出：支持 1 路模拟量输出，0/4~20mA 或 0~5/10V

◇ Communication interface： one line RS–485 communication, Modbus–RTU protocol
◇ Baud rate：1200~9600bps Default 2400bps
◇ Input of switching value： support two line dry node input
◇ Output of switching value：support two line analog output, capacity：AC250V/5A, DC30V5A
◇ Variable output： support one line analog output, 0/4~20mA or 0~5/10V

◆ 环境 /Environment

◇ 工作温度：–10℃ ~+55℃
◇ 储存温度：–25℃ ~+70℃
◇ 相对温度：≤ 93%，无腐蚀性气体场所
◇ 海拔：≤ 2500m

◇ Working temperature：–10℃ ~+55℃
◇ Storage temperature：–25℃ ~+70℃
◇ Relative humidity：≤ 93%, site without corrosive gas
◇ Altitude：≤ 2500m

◆ 安全 /Safety

◇ 绝缘电阻：＞ 100MΩ
◇ 交流电压：AC 2KV

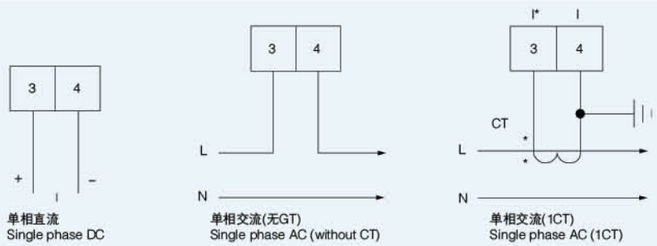
◇ Insulation resistor：＞ 100MΩ
◇ ACvoltage ：AC 2KV

◆ 电磁兼容性能 /Electromagnetic compatibility performance

◇ 静电放电：4 级
◇ 电快速瞬变脉冲群：4 级
◇ 浪涌（冲击）：4 级

◇ Electrostatic discharge：Class 4
◇ Electric rapid transient pulse group：Class 4
◇ Surge (impact)：Class 4

单相电流表典型信号接线图 /Typical Signal Wiring Diagram For Single Phase Ammeter



单相电流表端子排列图 /Single Phase Ammeter Terminal Arrangement

71	72	70	15	16	17	18
DI1	DI2	COM	DO1		DO2	
开关量输入 Input of switching value			开关量输出 Output of switching value			

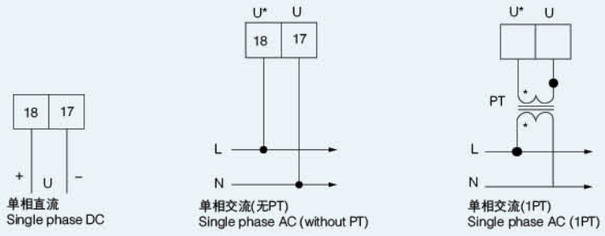
辅助电源 Auxiliary power supply	
L	N
11	12

模拟量输出 Analog output		RS485	
AO−	AO+	A	B
30	31	14	13

电流信号输入 Input of current signal	
I*(+)	I(−)
20	19

注：如与仪表壳体 接线图不一致，请以仪表壳体上面为准
Note：when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

单相电压表典型信号接线图 /Typical Signal Wiring Diagram For Single Phase Voltmeter



单相电压表端子排列图 /Single Phase Voltmeter Terminal Arrangement

71	72	70	15	16	17	18
DI1	DI2	COM	DO1		DO2	
开关量输入 Input of switching value			开关量输出 Output of switching value			

辅助电源 Auxiliary power supply	
L	N
11	12

模拟量输出 Analog output		RS485		电压信号输入 Input of voltage signal	
AO−	AO+	A	B	U*	U
30	31	58	59	18	17

注：如与仪表壳体 接线图不一致，请以仪表壳体上面为准
Note：when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

产品标准 /Product Standard

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- GB/T 22264.5–2008 安装式数字显示电测量仪表第 5 部分：相位表和功率因数表的特殊要求
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- Mounted digital display electric measuring meters, part 8： recommended test methods

性能特点 /Performance Characteristics

- 高精度测量三相电流或电压
- 提供数码管显示，本地数据查询
- 电流变比可编程设置
- 支持 RS–485 通讯，Modbus–RTU 协议
- 支持开关量输入、开关量输出、模拟变量输出
- 辅助电源：AC/DC 80V~270V、AC220V、AC380V、AC100V
- 多种外形选择，满足不同柜体电气回路的要求

- High accuracy measurement of three phase current or voltage
- Nixie tube display, local data inquiry
- The current change ratio can be set by programming
- Support RS–485 communication and Modbus–RTU protocol
- Support switching value input, switching value output and analog variable output
- Auxiliary power supply： AC/DC 80V~270V, AC220V, AC380V, AC100V
- Multiple kinds of outline selection to meet the requirements of different electric circuits of cabinet

型号命名 /Model Naming

XD □ □ □ – □ □ □ □

(省略)– 无模拟变送输出功能，nD– 模拟变送输出 (n=1 路、2 路、3 路……)
(Omission)–no analog transmitting output function, nD–analog transmitting output (n=line 1, line 2, line 3.....)
(省略)– 无 RS485 通讯，nT–RS485 通讯 (n=1 路、2 路)
(Omission)–no RS485 communication, nT–RS48 communication (n=line 1, line 2)
(省略)– 无报警 (开关量) 输出，nO– 报警 (开关量) 输出 (n=1 路、2 路、3 路……)
(Omission)–no alarm (switching value) output, nO–alarm (switching value) output (n=line 1, line 2, line 3.....)
(省略)– 无开关量输入，nI– 开关量输入 (n=1 路、2 路、3 路……)
(Omission)– no input of switching value, nI–input of switching value (n=line 1, line 2, line 3.....)
功能代号 /Function code：
A– 交流电流，V– 交流电压
A–AC current, V–AC voltage
显示方式 /Display method：
3– 三排显示，5– 五排显示
3–three row display, 5–five row display

外型代号 Outline Code	对应指针表型号 Corresponding Pointer Meter Model	面框尺寸 Frame Size (mm)	开孔尺寸 Opening Size (mm)
42	45 方形 square	120*120	111*111
96	96 方形 square	96*96	91*91
80	80 方形 square	80*80	76*76
72	72 方形 square	72*72	67*67
48	48 方形 square	48*48	45*45

产品代号 /Product code

技术指标 /Technical Index

◆ 测量精度 /Measurement accuracy

◇ 电流 (电压)：0.5 级
◇ Current (voltage)：Class 0.5

◆ 三相电流信号输入 /Three phase current signal input

◇ 接线方式：三相四线、三相三线
◇ 额定电流：AC1A、AC5A
◇ 过负载：1.2 倍 (持续)，10 倍 / 秒 (瞬时)
◇ 功耗：＜ 0.4VA/ 相
◇ 阻抗：＜ 20mΩ
◇ 频率：45–65Hz 或者直流
◇ Wiring method： three phase four wire, three phase three wire
◇ Rated current：AC1A, AC5A
◇ Overload： 1.2 times (continuous), ten times/second (instantaneous)
◇ Power consumption：＜ 0.4VA/phase
◇ Impedance：＜ 20mΩ
◇ Frequency：45–65Hz or DC

◆ 辅助电源 /Auxiliary power supply

◇ 工作范围：AC/DC 80V~270V、AC220V、AC380V、AC100V
◇ 功耗：＜ 4VA
◇ Operation range： AC/DC 80V~270V, AC220V, AC380V, AC100V
◇ Power consumption：＜ 4VA

技术指标 /Technical Index

◆ 电压号输入 /Voltage signal input

◇ 接线方式：三相四线、三相三线
◇ 额定电压：AC57.7V、AC100V、AC220V、AC380V
◇ 过负载：1.2 倍 (持续)，2 倍 /1 秒 (瞬时)
◇ 功耗：＜ 1VA/ 相
◇ 阻抗：＜ 300KΩ
◇ 频率：45–65Hz 或者直流
◇ Wiring method： three phase four wire, three phase three wire
◇ Rated voltage： AC57.7V, AC100V, AC220V, AC380V
◇ Overload： 1.2 times (continuous), twice/one second (instantaneous)
◇ Power consumption：＜ 1VA/phase
◇ Impedance：＜ 300KΩ
◇ Frequency：45–65Hz or DC

◆ 功能模块 /Function module

◇ 通讯接口：1 路 RS–485 通讯，Modbus–RTU 协议
◇ 波特率：1200~9600bps 默认 2400bps
◇ 开关了输入：支持 2 路干结点输入
◇ 开关量输出：支持 2 路模拟量输出，容量：AC250V/5A，DC30V5A
◇ 变量输出：支持 1 路模拟量输出，0/4~20mA 或 0~5/10V
◇ Communication interface： one line RS–485 communication, Modbus–RTU protocol
◇ Baud rate：1200~9600bps Default 2400bps
◇ Input of switching value： support two line dry node input
◇ Output of switching value： support two line analog output, capacity: AC250V/5A, DC30V5A
◇ Variable output： support one line analog output, 0/4~20mA or 0~5/10V

◆ 环境 /Environment

◇ 工作温度：–10℃ ~+55℃
◇ 储存温度：–25℃ ~+70℃
◇ 相对温度：≤ 93%，无腐蚀性气体场所
◇ 海拔：≤ 2500m
◇ Working temperature：–10℃ ~+55℃
◇ Storage temperature：–25℃ ~+70℃
◇ Relative humidity：≤ 93%, site without corrosive gas
◇ Altitude：≤ 2500m

◆ 安全 /Safety

◇ 绝缘电阻：＞ 100MΩ
◇ 交流电压：AC 2KV
◇ Insulation resistor：＞ 100MΩ
◇ AC voltage：AC 2KV

◆ 电磁兼容性能 /Electromagnetic compatibility performance

◇ 静电放电：4 级
◇ 电快速瞬变脉冲群：4 级
◇ 浪涌 (冲击)：4 级
◇ Electrostatic discharge：Class 4
◇ Electric rapid transient pulse group：Class 4
◇ Surge (impact)：Class 4

三相电流表端子排列图 /Three Phase Ammeter Terminal Arrangement

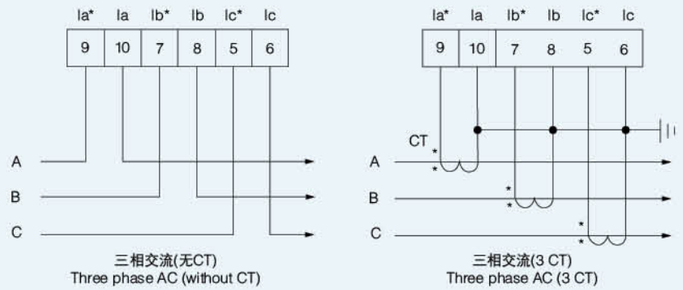
9	10	7	8	5	6
Ia*	Ia	Ib*	Ib	Ic*	Ic
电流信号输入 Current signal					

30	31	32	33
COM	AO1+	AO2+	AO3+
模拟量输出 Analog outpu			

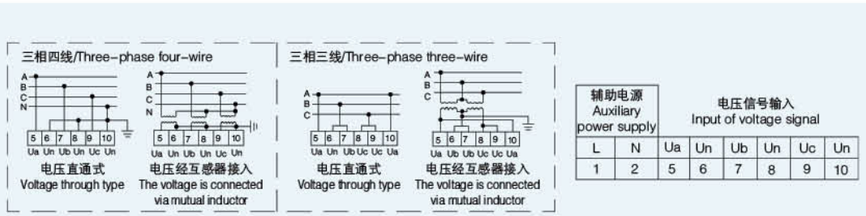
注：电流带“*”号为输入端
Note: the “*” of current is the input end

辅助电源 Auxiliary power supply		开关量输出 Output of switching value		开关量输入 Input of switching value			RS485	
L	N	DO1		DI1	DI2	COM	A	B
1	2	15	16	71	72	70	11	12

三相电流表典型信号接线图 /Three Phase Ammeter Typical Signal Wiring Diagram



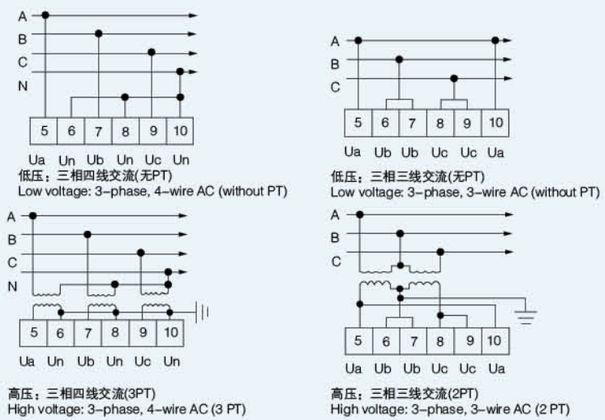
三相电压表端子排列图 /Three Phase Voltmeter Terminal Arrangement



辅助电源 Auxiliary power supply		电压信号输入 Input of voltage signal					
L	N	Ua	Un	Ub	Un	Uc	Un
1	2	5	6	7	8	9	10

注：如与仪表壳体 接线图不一致，请以仪表壳体上面为准
Note： when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

三相电压表典型信号接线图 /Three Phase Voltmeter Typical Signal Wiring Diagram



产品标准 /Product Standard

- GB/T 22264.1-2008 安装式数字显示电测量仪表第 1 部分：定义和通用要求
- GB/T 22264.2-2008 安装式数字显示电测量仪表第 2 部分：电流表和电压表的特殊要求
- GB/T 22264.3-2008 安装式数字显示电测量仪表第 3 部分：功率表和无功功率表的特殊要求
- GB/T 22264.4-2008 安装式数字显示电测量仪表第 4 部分：频率表的特殊要求
- GB/T 22264.5-2008 安装式数字显示电测量仪表第 5 部分：相位表和功率因数表的特殊要求
- GB/T 22264.8-2008 安装式数字显示电测量仪表第 8 部分：推荐的实验方法
- Mounted digital display electric measuring meters, part 1： definitions and general requirements common to all parts
- Mounted digital display electric measuring meters, part 2： special requirements for ammeters and voltmeters
- Mounted digital display electric measuring meters, part 3： special requirements for power meters and reactive power meters
- Mounted digital display electric measuring meters, part 4： special requirements for frequency meters
- Mounted digital display electric measuring meters, part 5： special requirements for phase meters and power factor meters
- Mounted digital display electric measuring meters, part 8： recommended test methods

性能特点 /Performance Characteristics

- 高精度测量单相电压、电流、频率或三相电流、电压
- 提供数码管或液晶显示，本地数据查询
- 电流、电压变比可编程设置
- 支持 RS-485 通讯，Nodbus-RTU 协议
- 支持开关量输入、开关量输出、模拟量变送输出
- 辅助电源：AC/DC 80V~270V、AC220V、AC380V、AC100V
- 多种外形选择，满足不同柜体电气回路的需求

- High accuracy measurement of single phase voltage, current, frequency or three-phase current and voltage
- Nixie tube or liquid crystal display, local data inquiry
- The voltage and current change ratio can be set by programming
- Support RS-485 communication and Modbus-RTU protocol
- Support switching value input, switching value output and analog transmitting output
- Auxiliary power supply： AC/DC 80V~270V, AC220V, AC380V, AC100V
- Multiple kinds of outline selection to meet the requirements of different electric circuits of cabinet

型号命名 /Model Naming

XD □ □ □ – □ □ □ □

(省略)– 无模拟变送输出功能，nD– 模拟变送输出 (n=1 路、2 路、3 路……)
(Omission)–no analog transmitting output function, nD–analog transmitting output (n=line 1, line 2, line 3.....)
(省略)– 无 RS485 通讯，nT–RS485 通讯 (n=1 路、2 路)
(Omission)–no RS485 communication, nT–RS48 communication (n=line 1, line 2)
(省略)– 无报警 (开关量) 输出，nO– 报警 (开关量) 输出 (n=1 路、2 路、3 路……)
(Omission)–no alarm (switching value) output, nO–alarm (switching value) output (n=line 1, line 2, line 3.....)
(省略)– 无开关量输入，nI– 开关量输入 (n=1 路、2 路、3 路……)
(Omission)– no input of switching value, nI–input of switching value (n=line 1, line 2, line 3.....)
功能代号 /Function code：
AV– 电流电压组合，U/I/F– 电流电压频率组合。
AV–AC voltage combination, U/I/F–AC voltage frequency combination
显示方式 /Display method：
3– 三排显示，5– 五排显示
3–three row display, 5–five row display

外型代号 Outline Code	对应指针表型号 Corresponding Pointer Meter Model	面框尺寸 Frame Size (mm)	开孔尺寸 Opening Size (mm)
42	45 方形 square	120*120	111*111
96	96 方形 square	96*96	91*91
80	80 方形 square	80*80	76*76
72	72 方形 square	72*72	67*67
48	48 方形 square	48*48	45*45

产品代号 /Product code

技术指标 /Technical Index

◆ 测量精度 /Measurement accuracy

◇ 电压：0.5 级
◇ 电流：0.5 级
◇ 频率：±0.02Hz

◇ Voltage：class 0.5
◇ Current：class 0.5
◇ Frequency：±0.02Hz

◆ 信号输入 /Signal input

◇ 接线方式：三相四线、三相三线
◇ 额定电压：AC 57.7V、AC 100V、AC 220V、AC 380V
◇ 额定电流：AC 1A、AC 5A
◇ 过负载：电压：1.2 倍 (持续)，2 倍 /1 秒 (瞬时)
电流：1.2 倍 (持续)10 倍 /5 秒 (瞬时)
◇ 功耗：电压：< 1VA/ 相，电流：< 0.4VA/ 相
◇ 阻抗：电压：> 300kΩ，电流：< 20mΩ
◇ 频率：45~65Hz

◇ Wiring method：3–phase and 4–wire, 3–phase and 3–wire
◇ Rated voltage：AC 57.7V, AC 100V, AC 220V, AC 380V
◇ Rated current：AC 1A, AC 5A
◇ Overload：Voltage：1.2 times (continuous), twice/one second (instantaneous)
Current：1.2 times (continuous), ten times/five seconds (instantaneous)
◇ Power consumption：voltage < 1VA/phase, current：< 0.4VA/phase
◇ Impedance：voltage：> 300kΩ Current：< 20mΩ
◇ Frequency：45~65Hz

技术指标 /Technical Index

◆ 辅助电源 /Auxiliary power supply

◇ 工作范围：AC/DC 80V~270V、AC220V、AC380V、AC100V
◇ 功耗：< 4VA

◇ Operation range：AC/DC 80V~270V, AC220V, AC380V, AC100V
◇ Power consumption：< 4VA

◆ 功能模块 /Function Module

◇ 通讯接口：1 路 RS–485 通讯，Modbus–PTU 协议
◇ 波特率：1200~9600pds，默认 2400bps
◇ 开关量输入：支持 4 路干结点输入
◇ 开关量输出：支持 3 路继电器输出，容量：AC 250V/5A，DC 30V5A
◇ 变送输出：支持 1 路模拟量输出：0/4~20mA 或 0~5/10V

◇ Communication interface：one line RS–485 communication, Modbus–RTU protocol
◇ Baud rate：1200~9600bps, default 2400bps
◇ Input of switching value：support four line dry node input
◇ Output of switching value：support three line relay output, capacity： AC 250V/5A,DC 30V5A
◇ Transmitting output：support one line analog output, 0/4~20mA or 0~5/10V

◆ 环境 /Environment

◇ 工作温度：–10℃ ~+55℃
◇ 储存温度：–25℃ ~+70℃
◇ 相对温度：≤ 93% 无腐蚀气体场所
◇ 海拔：≤ 2500m

◇ Working temperature：–10℃ ~+55℃
◇ Storage temperature：–25℃ ~+70℃
◇ Relative humidity：≤ 93%, site without corrosive gas
◇ Altitude：≤ 2500m

◆ 安全 /Safety

◇ 绝缘电阻：> 100MΩ
◇ 交流耐压：AC 2KV

◇ Insulation resistor：> 100MΩ
◇ AC withstand voltage：AC 2KV

◆ 电磁兼容性能 /Electromagnetic compatibility performance

◇ 静电放电：4 级
◇ 电快速瞬变脉冲群：4 级
◇ 浪涌 (冲击)：4 级

◇ Electrostatic discharge：Class 4
◇ Electric rapid transient pulse group：Class 4
◇ Surge (impact)：Class 4

单相组合表端子排列图 /Single Phase Combination Meter Terminal Arrangement

71	72	70	15	16	17	18
DI1	DI2	COM	DO1		DO2	
开关量输入 Input of switching value			开关量输出 Output of switching value			

辅助电源 Auxiliary power supply		模拟量输出 Analog output		RS485		电压信号输入 Input of current signal		电流信号输入 Input of current signal	
L	N	AO–	AO–	A	B	U*	U	I*	I
1	2	30	31	58	59	18	17	20	19

注：如与仪表壳体上接线图不一致，请以仪表壳体上为准
Note： when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.
(1) 单相组合 (电流、电压、频率、功率因数、功率随意组合)
(1)single phase combination (any combination among current, voltage, frequency, power factor and power).

单相组合表典型信号接线图 /Single Phase Combination Meter Typical Signal Wiring Diagram

注：如与仪表壳体上接线图不一致，请以仪表壳体上为准
Note： when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

三相组合表端子排列图 /Three Phase Combination Meter Terminal Arrangement

三相电流电压频率组合
Three-phase current, voltage and frequency combination

9	10	7	8	5	6
Ia*	Ia	Ib*	Ib	Ic*	Ic
电流信号输入 Input of voltage signal					

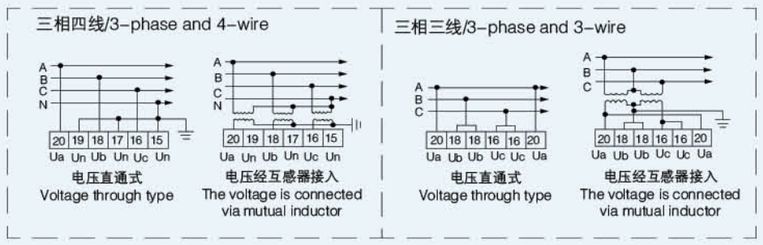
30	31	32	33
COM	AO1+	AO2+	AO3+
模拟量输出 Analog output			

注：电流带“*”号为输入端
Note: the “*” of current is the input end

辅助电源 Auxiliary power supply		开关量输出 Output of switching value		开关量输入 Input of switching value			RS485		电压信号输入 Input of voltage signal					
L	N	DO1		DI1	DI2	COM	A	B	20	18	18	16	16	20
1	2	15	16	71	72	70	11	12	20	19	18	17	16	15

注：如与仪表壳体上接线图不一致，请以仪表壳体上为准
Note： when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

三相组合表典型信号接线图 /Three Phase Combination Meter Typical Signal Wiring Diagram



产品标准 /Product Standards

- GB/T 2264.1–2008 安装式数字显示电测量仪表 第 1 部分：定义和通用
- GB/T 22264.7–2008 安装式数字显示电测量仪表 第 7 部分：多功能仪表的特殊要求
- GB/T 22264.8–2008 安装式数字显示电测量仪表 第 8 部分：推荐的井验方法
- GB/T 17215.323–2008 交流电测量设备 – 特殊要求 – 第 22 部分：静止式有功电能表 (0.2S 级和 0.5S 级)
- GB/T 17215.323–2008 交流电测量设备 – 特殊要求 – 第 22 部分：静止式有功电能表 (2S 级和 3S 级)
- DL/T 614–2007 多功能电能表
- GB14287–2005 电气火灾监控系统
- GB50045–95 高层民用建筑设计防火规范
- GB50054–95 低压配电设计规范
- GB50096 住宅设计规范
- GB13955–2005 剩余电流动作保护装置的安装和运行
- GB50016–2006 建筑设计防火规范
- Mounted digital display electric measuring meters, part 1： definitions and general requirements common to all parts
- Mounted digital display electric measuring meters, part 7： special requirements for multifunction meters
- Mounted digital display electric measuring meters, part 8： recommended test methods
- Electricity metering equipment(a, C.)–particular requirements–Part 22： Static meters for active energy(class 0.2S and 0.5S)
- Electricity metering equipment(a, C.)–particular requirements–Part 22： Static meters for active energy(class 3S and 3S)
- Multifunction electricity metering equipment
- Alarm and control system for electric fire prevention
- Code for fire protection design of tall buildings
- Code for low voltage electrical installations
- Design code for residential buildings
- Installation and operation of residual current operated protective devices
- Code of design on building fire protection and prevention

概述 /Overview

多功能电力仪表是高性能的监控仪表，具有高精度电力参数实时测量、正反向有功 / 无功电能计算、分时电能定时抄表、电力品质分析、实时波形显示、事件记录、需量等功能，并配置有丰富放入输入输出接口可用于现场设备状态的检测与控制，还集成了 RS-485 通讯接口，可与各种智能配电系统和能量管理系统统筹，共享丰富的检测数据和电能质量数据。

多功能电力仪表有着极高的性价比，可以直接取代常规电力变送器、测量仪表、电能计量表以及相关的辅助单元，应用领域非常广泛。如能源管理系统、电力监控系统、工矿企业、公共设施、只能建筑和开关柜等配电网络系统。

Multifunction electric meters are the monitoring meters with high performance and functions like high accuracy real time measuring of electric parameters, harmonic measuring, metering of forward and backward active/reactive electric energy, metering of time sharing electric energy, timed meter reading of time sharing electric energy, analysis of power quality, real time wave shape display, event recording and demand. Besides, rich input and output interfaces are provided to monitor and control the status of on-site equipment. RS-485 communication interface is integrated so that various kinds of intelligent power distribution systems and energy management systems can be integrated and rich monitoring data and electric energy quality data can be shared.

Multifunction electric meters have high cost performance and they can replace directly the conventional power transmitters,measuring meters, electric energy meters and relevant auxiliary units. Such meters are widely applied in fields like energy management system, power monitoring system, industrial and mining enterprises, public facilities, intelligent buildings and power distribution network system like switchgears.

型号命名 /Model Naming

XD194 □ □ – □ □ □

显示方式 /Display method：

4–LED 显示 /Display　Y–LCD 显示 /Display

产品系列代号 /Product series code：

D– 全电能量多功能电力仪表 /D–full electric quantity multifunction electric meter

FD– 全电量测量 + 多费率分时计量 /FD–full electric quantity measuring+multi–rate time–sharing metering

HD– 全电量测量 + 谐波测量 /HD–full electric quantity measuring+harmonic measuring

FHD– 全电量测量 + 多费率分时计量 + 谐波测量

FHD–full electric quantity measuring+multi–rate time–sharing metering +harmonic measuring

仪表外形 /Meter outline ：

外型代号 Outline Code	面框尺寸 Frame size(mm)	开孔尺寸 Opening size (mm)
2	120*120	111*111
9	96*96	91*91
8	80*80	76*76
7	72*72	67*67

E– 多功能电力仪表 /E–multifunction electric meter

Z– 网络电力仪表 /Z–network electric meter

1– 单相 /(省略)– 三相

1–single phase /(omission)–Three phase

产品代号 /Product code

技术指标 /Technical Index

◆ 测量精度 /Measurement accuracy

◇ 电压：0.5 级或 0.2
◇ 电流：0.5 级或 0.2
◇ 有功功率：0.5 级
◇ 无功功率：0.5 级
◇ 功率因数：0.5 级
◇ 频率：±0.02Hz
◇ 有功电能：0.5S 级或 0.2S 级
◇ 无功电能：1 级或 2 级

◇ Voltage：Class 0.5 or 0.2
◇ Current：Class 0.5 or 0.2
◇ Active power：Class 0.5
◇ Reactive power：Class 0.5
◇ Power factor：Class 0.5
◇ Frequency：±0.02Hz
◇ Active electric energy：Class 0.5S or 0.2S
◇ Reactive electric energy：Class 1 or 2

◆ 信号输入 /Signal input

◇ 接线方式：三相四线、三相三线
◇ 额定电压：AC 57.7V、AC 100V、AC 220V、AC 380V
◇ 额定电流：AC 1A、AC 5A
◇ 过负载：电压：1.2 倍 (持续)，2 倍 /1 秒 (瞬时)
　　电流：1.2 倍 (持续)，10 倍 /5 秒 (瞬时)
◇ 功耗：电压：< 1VA/ 相，电流：< 0.4VA/ 相
◇ 阻抗：电压：> 300kΩ，电流：< 20mΩ
◇ 频率：45~65Hz

◇ Wiring method：3–phase and 4–wire, 3–phase and 3–wire
◇ Rated voltage：AC 57.7V, AC 100V, AC 220V, AC 380V
◇ Rated current：AC 1A, AC 5A
◇ Overload：voltage：1.2 times (continuous), twice/one second (instantaneous)
　Current：1.2 times (continuous), ten times/five seconds (instantaneous)
◇ Power consumption：voltage < 1VA/phase, current：< 0.4VA/phase
◇ Impedance：voltage：> 300kΩ, Current：< 20mΩ
◇ Frequency：45~65Hz

◆ 辅助电源 /Auxiliary power supply

◇ 工作范围：AC/DC 80V~270V、AC220V、AC380V、AC100V
◇ 功耗：< 4VA

◇ Operation range：AC/DC 80V~270V, AC220V, AC380V, AC100V
◇ Power consumption：< 4VA

◆ 功能模块 /Function module

◇ 通讯接口：1 路 RS–485 通讯，Modbus–PTU 协议
◇ 波特率：1200~9600pds，默认 2400bps
◇ 开关量输入：支持 4 路干结点输入
◇ 开关量输出：支持 3 路继电器输出，容量：AC 250V/5A，DC 30V5A
◇ 变送输出：支持 1 路模拟量输出：0/4~20mA 或 0~5/10V
◇ 电能脉冲输出：支持 2 路电能脉冲输出，常数：8000imp/KWh(KvaXD)

◇ Communication interface：one line RS–485 communication, Modbus–RTU protocol
◇ Baud rate：1200~9600bps Default 2400bps
◇ Input of switching value：support four line dry node input
◇ Output of switching value：Support three line relay output, capacity：AC250V/5A, DC30V5A
◇ Transmitting output：Support one line analog output：0/4~20mA or 0~5/10V
◇ Electric energy pulse output：support two line energy pulse output, constant：8000imp/KWh(KvaXD)

◆ 环境 /Environment

◇ 工作温度：–10℃ ~+55℃
◇ 储存温度：–25℃ ~+70℃
◇ 相对温度：≤ 93% 无腐蚀气体场所
◇ 海拔：≤ 2500m

◇ Working temperature：–10℃ ~+55℃
◇ Storage temperature：–25℃ ~+70℃
◇ Relative humidity：≤ 93%, site without corrosive gas
◇ Altitude：≤ 2500m

◆ 安全 /Safety

◇ 绝缘电阻：> 100MΩ
◇ 交流耐压：AC 2KV

◇ Insulation resistor：> 100MΩ
◇ AC withstand voltage：AC 2KV

◆ 电磁兼容性能 /Electromagnetic compatibility performance

◇ 静电放电：4 级
◇ 电快速瞬变脉冲群：4 级
◇ 浪涌 (冲击)：4 级

◇ Electrostatic discharge：Class 4
◇ Electric rapid transient pulse group：Class 4
◇ Surge (impact)：Class 4

性能特点 /Performance Characteristics

- ◆ 高精度测量三相电压、三相电流、有功功率、无功功率、视在功率、功率因数、频率等电参量
- ◆ 正反向有功 / 无功电能计量
- ◆ 分时电能计量、分时电能定时抄表
- ◆ 测量三相电压、三相电流的总谐波畸变率 (THD)，2–31 次奇次谐波分量
- ◆ 提供数码管或液晶显示，本地数据查询
- ◆ 菜单直观、按键操作简单
- ◆ 电流、电压变比可编程
- ◆ 提供多回路的漏电流监控
- ◆ 提供多回路控制节点，可用于报警、跳闸等控制
- ◆ 支持消防联动，远程切断故障回路
- ◆ 支持 RS–485 通讯，Modbus–RTU 协议
- ◆ 支持开关量输入、开关量输出、模拟量变送输出、电能脉冲输出
- ◆ 安装方便，接线简单，工程量小
- ◆ 辅助电源：AC/DC 80V–270V、AC220V、AC380V、AC100V
- ◆ 可完成 SCADA、PLC 中多种通讯软件的组网

- ◆ High accuracy measurement of electric parameters like 3–phase voltage, 3–phase current, active power, reactive power, apparent power, power factor and frequency.
- ◆ Metering of forward/backward active/reactive energy
- ◆ Time–sharing energy metering, time–sharing energy timed metering reading
- ◆ Measurement of total harmonic distortion (THD) and 2nd –31st odd harmonics of 3–phase voltage and 3–phase current.
- ◆ Nixie tube or liquid crystal display, local data inquiry
- ◆ Vivid menu and easy keying operation
- ◆ The current and voltage change ratio can be set by programming
- ◆ Multi–circuit leakage current monitoring
- ◆ Multi–circuit control nodes for control like alarm and trip
- ◆ Support fire fighting linkage and cut off remotely the fault circuit
- ◆ Support RS–485 communication and Modbus–RTU protocol
- ◆ Support input of switching value, output of switching value, analog transmitting output, electric energy pulse output
- ◆ Easy installation and wiring, small engineering amount
- ◆ Auxiliary power supply： AC/DC 80V–270V, AC220V, AC380V, AC100V
- ◆ Able to finish the networking of multiple kinds of communication software in SCADA and PLC.

多功能仪表端子排列图 /Multifunction Meter Terminal Arrangement

基本电量测量+开关量输入+模拟量变送输出
Basic electric quantity measuring+input of switching value+analog transmitting output

4	5	6	7	8	9	11	12	13	14
Ia*	Ia	Ib*	Ib	Ic*	Ic	Ua	Ub	Uc	Un
电流信号输入 Input of current signal						电压信号输入 Input of voltage signal			

75	76	77	78	79	80	81	30	31	30	32	30	33	30	34
DI5	DI6	DI7	DI8	DI9	DI10	DI11	A0+	A01	A0+	A02	A0+	A03	A0+	A04
开关量输入 Input of switching value							模拟量输出 Analog output							

辅助电源 Auxiliary power supply		开关量输入 Input of switching value					无功脉冲 Reactive pulse		有功脉冲 Active pulse		RS485–1		RS485–2	
L	N	DI1	DI2	DI3	DI4	COM	Eq+	Eq–	Ep+	Ep–	A	B	A	B
1	2	71	72	73	74	70	49	50	47	48	58	59	55	56

注：如与仪表壳体上接线图不一致，请以仪表壳体上为准
Note: when it is not the same as the wiring diagram on the instrument shell, the latter shall prevail.

多功能仪表端子排列图 /Multifunction Meter Terminal Arrangement

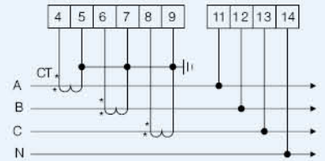
基本电量测量+开关量输入+开关量输出
Basic electric quantity measuring+input of switching value+ output of switching value

4	5	6	7	8	9	11	12	13	14
Ia*	Ia	Ib*	Ib	Ic*	Ic	Ua	Ub	Uc	Un
电流信号输入 Input of current signal						电压信号输入 Input of voltage signal			

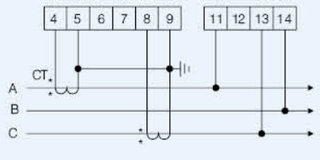
75	76	77	78	79	80	81	15	16	17	18	19	20	21	22
DI5	DI6	DI7	DI8	DI9	DI10	DI11	D01		D02		D03		D04	
开关量输入 Input of switching value							开关量输出 Output of switching value							

辅助电源 Auxiliary power supply		开关量输入 Input of switching value					无功脉冲 Reactive pulse		有功脉冲 Active pulse		RS485–1		RS485–2	
L	N	DI1	DI2	DI3	DI4	COM	Eq+	Eq–	Ep+	Ep–	A	B	A	B
1	2	71	72	73	74	70	49	50	47	48	58	59	55	56

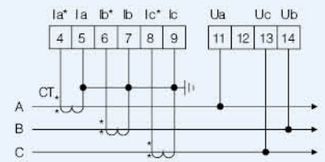
多功能仪表典型信号接线图 /Multifunction Meter Typical Signal Wiring



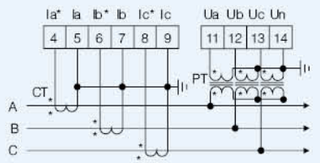
低压：三相四线(3CT 无PT)
Low voltage: 3–phase and 4–wire(3CT 无PT)



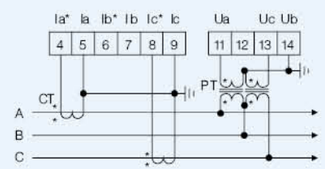
低压：三相三线(2CT 无PT)
Low voltage: 3–phase and 3–wire(2CT 无PT)



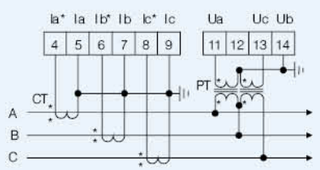
低压：三相三线(3CT 无PT)
Low voltage: 3–phase and 3–wire(3CT 无PT)



高压：三相四线(3CT 3PT)
High voltage: 3–phase and 4–wire(3CT 3PT)



高压：三相三线(2CT 2PT)
High voltage: 3–phase and 3–wire(3CT 3PT)



高压：三相三线(3CT 2PT)
High voltage: 3–phase and 3–wire(3CT 2PT)

DP3 系列数显表

DP3 Series Digital Meter

金来智造，引领未来

Manufactured by Jinlai, Leading the future

DP3 系列单相数显表

DP3 Series Single Phase Digital Meter

BEVAV®

产品标准 /Product Standard

- GB/T 22264.1–2008 安装式数字显示电测量仪表第 1 部分：定义和通用要求
- GB/T 22264.2–2008 安装式数字显示电测量仪表第 2 部分：电流表和电压表的特殊要求
- GB/T 22264.3–2008 安装式数字显示电测量仪表第 3 部分：功率表和无功功率表的特殊要求
- GB/T 22264.4–2008 安装式数字显示电测量仪表第 4 部分：频率表的特殊要求
- GB/T 22264.5–2008 安装式数字显示电测量仪表第 5 部分：相位表和功率因数表的特殊要求
- GB/T 22264.8–2008 安装式数字显示电测量仪表第 8 部分：推荐的实验方法
- Mounted digital display electric measuring meters, part 1: definitions and general requirements common to all parts
- Mounted digital display electric measuring meters, part 2: special requirements for ammeters and voltmeters
- Mounted digital display electric measuring meters, part 3: special requirements for power meters and reactive power meters
- Mounted digital display electric measuring meters, part 4: special requirements for frequency meters
- Mounted digital display electric measuring meters, part 5: special requirements for phase meters and power factor meters
- Mounted digital display electric measuring meters, part 8: recommended test methods

性能特点 /Performance Characteristics

- 高精度测量单相电流或电压
- 提供数码管显示，本地数据查询
- 电流变比可编程设置
- 多种外形选择，满足不同柜体电气回路的要求
- High accuracy measurement of single phase current or voltage
- Nixie tube display, local data inquiry
- The current change ratio can be set by programming
- Multiple kinds of outline selection to meet the requirements of different electric circuits of cabinet

型号命名 /Model Naming

DP3 □ □ □

功能代号 /Function code：
A– 交流电流，DA– 直流电流，V– 交流电压，DV– 直流电压，Hz– 频率，PF– 功率因数
A–AC current, DA–DC current, V–AC voltage, DV–DC voltage, Hz–frequency, PF– power factor

显示方式 /Display method：
（省略）– 单排显示，2– 两排显示
(Omission)– single row display, 2– two row display

外型代号 Outline Code	对应指针表型号 Corresponding Pointer Meter Model	面框尺寸 Frame Size (mm)	开孔尺寸 Opening Size (mm)
96	96 方形 square	96*96	91*91
72	72 方形 square	72*72	67*67

产品代号 /Product code

技术指标 /Technical Index

◆ 测量精度 /Measurement accuracy

◇电流（电压）：0.5 级
◇ Current (voltage)：Class 0.5

◇频率：±0.02Hz
◇ Frequency：±0.02Hz

◆ 电流信号输入 /Current signal input

◇ 接线方式：单相
◇ Wiring method：Single phase

◇ 额定电流：AC1A、AC5A、DC20mA、DC1A、DC5A、DC75mV
◇ Rated current：AC1A, AC5A, DC20mA, DC1A, DC5A, DC75mV

◇ 过负载：1.2 倍（持续），10 倍 /5 秒（瞬时）
◇ Overload：1.2 times (continuous), ten times/second (instantaneous)

◇ 功耗：< 0.4VA/ 相
◇ Power consumption：< 0.4VA/phase

◇ 阻抗：< 20mΩ
◇ Impedance：< 20mΩ

◇ 频率：45~65Hz 或者直流
◇ Frequency：45~65Hz or DC

◆ 电压信号输入 /Voltage signal input

◇ 接线方式：单相
◇ Wiring method：Single phase

◇ 额定电压：AC 57.7V、AC 100V、AC 220V、AC 380V、DC 2V、DC 20V、DC 200V、DC 600V
◇ Rated voltage：AC57.7V, AC100V, AC220V, AC380V, DC2V, DC20C, DC200V, DC600V

◇ 过负载：1.2 倍（持续），2 倍 /1 秒（瞬时）
◇ Overload：1.2 times (continuous), twice/one second (instantaneous)

◇ 功耗：< 1VA/ 相
◇ Power consumption：< 1VA/phase

◇ 阻抗：< 300KΩ
◇ Impedance：< 300KΩ

◇ 频率：45~65Hz 或者直流
◇ Frequency：45~65Hz or DC

◆ 辅助电源 /Auxiliary power supply

◇ 工作范围：AC/DC 80V~270V、AC 220V、AC 380V、AC 100V、DC 48V、DC 24V
◇ Operation range：AC/DC 80V~270V, AC220V, AC380V, AC100V, DC48V, DC24V

◇ 功耗：< 4VA
◇ Power consumption：< 4VA

DP3 系列单相数显表
DP3 Series Single Phase Digital Meter

技术指标 /Technical Index

◆ 环境 /Environment

◇ 工作温度：–10℃ ~+55℃
◇ Working temperature：–10℃ ~+55℃

◇ 储存温度：–25℃ ~+70℃
◇ Storage temperature：–25℃ ~+70℃

◇ 相对温度：≤ 93%，无腐蚀性气体场所
◇ Relative humidity：≤ 93%, site without corrosive gas

◇ 海拔：≤ 2500m
◇ Altitude：≤ 2500m

◆ 安全 /Safety

◇ 绝缘电阻：> 100MΩ
◇ Insulation resistor：> 100MΩ

◇ 交流电压：AC 2KV
◇ ACvoltage：AC 2KV

◆ 电磁兼容性能 /Electromagnetic compatibility performance

◇ 静电放电：4 级
◇ Electrostatic discharge：Class 4

◇ 电快速瞬变脉冲群：4 级
◇ Electric rapid transient pulse group：Class 4

◇ 浪涌（冲击）：4 级
◇ Surge (impact)：Class 4

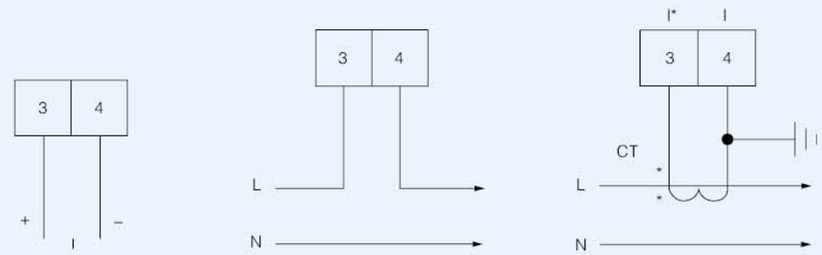
单相电流表端子排列图 /Single Phase Ammeter Terminal Arrangement

辅助电源 Auxiliary power supply	
L	N
1	2

电流信号输入 Input of current signal	
I*(+)	I(–)
3	4

注：如与仪表壳体 接线图不一致，请以仪表壳体上面为准
Note：when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

单相电流表典型信号接线图 /Typical Signal Wiring Diagram For Single Phase Ammeter

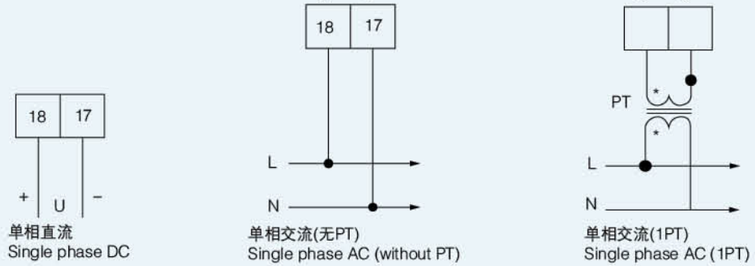


单相电压表端子排列图 /Single Phase Voltmeter Terminal Arrangement

辅助电源 Auxiliary power supply		电压信号输入 Input of voltage signal	
L	N	U*	Un
1	2	3	4

注：如与仪表壳体 接线图不一致，请以仪表壳体上面为准
Note： when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

单相电压表典型信号接线图 /Typical Signal Wiring Diagram For Single Phase Voltmeter



单相直流
Single phase DC

单相交流(无PT)
Single phase AC (without PT)

单相交流(1PT)
Single phase AC (1PT)

产品标准 /Product Standard

- ◆ GB/T 22264.1–2008 安装式数字显示电测量仪表第 1 部分：定义和通用要求
- ◆ GB/T 22264.2–2008 安装式数字显示电测量仪表第 2 部分：电流表和电压表的特殊要求
- ◆ GB/T 22264.3–2008 安装式数字显示电测量仪表第 3 部分：功率表和无功功率表的特殊要求
- ◆ GB/T 22264.4–2008 安装式数字显示电测量仪表第 4 部分：频率表的特殊要求
- ◆ GB/T 22264.5–2008 安装式数字显示电测量仪表第 5 部分：相位表和功率因数表的特殊要求
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- ◆ Mounted digital display electric measuring meters, part 5： special requirements for phase meters and power factor meters
- ◆ Mounted digital display electric measuring meters, part 8： recommended test methods

性能特点 /Performance Characteristics

- ◆ 高精度测量三相电流或电压
- ◆ 提供数码管显示，本地数据查询
- ◆ 电流变比可编程设置
- ◆ 多种外形选择，满足不同柜体电气回路的要求
- ◆ High accuracy measurement of three phase current or voltage
- ◆ Nixie tube display, local data inquiry
- ◆ The current change ratio can be set by programming
- ◆ Multiple kinds of outline selection to meet the requirements of different electric circuits of cabinet

型号命名 /Model Naming

DP3 □ □ □

功能代号 /Function code：
A– 交流电流，V– 交流电压 ,AV– 电流电压组合，U/I/F– 电流电压频率组合
A–AC current, V–AC voltage, AV–AC voltage combination, U/I/F–AC voltage frequency combination
显示方式 /Display method：
3– 三排显示，5– 五排显示，6 六排显示 (3–three row display, 5–five row display, 6–six row display)

外型代号 Outline Code	对应指针表型号 Corresponding Pointer Meter Model	面框尺寸 Frame Size (mm)	开孔尺寸 Opening Size (mm)
96	96 方形 square	96*96	91*91
72	72 方形 square	72*72	67*67

产品代号 /Product code

技术指标 /Technical Index

◆ 测量精度 /Measurement accuracy

◇电流 (电压)：0.5 级	◇ Current (voltage)：Class 0.5
◇频率：±0.02Hz	◇ Freqency：±0.02Hz

◆ 三相电流信号输入 /Three phase current signal input

◇ 接线方式：三相四线、三相三线	◇ Wiring method：three phase four wire, three phase three wire
◇ 额定电流：AC1A、AC5A	◇ Rated current：AC1A, AC5A
◇ 过负载：1.2 倍 (持续)，10 倍 / 秒 (瞬时)	◇ Overload：1.2 times (continuous), ten times/second (instantaneous)
◇ 功耗：< 0.4VA/ 相	◇ Power consumption：< 0.4VA/phase
◇ 阻抗：< 20mΩ	◇ Impedance：< 20mΩ
◇ 频率：45–65Hz 或者直流	◇ Frequency：45–65Hz or DC

◆ 电压号输入 /Voltage signal input

◇ 接线方式：三相四线、三相三线	◇ Wiring method： three phase four wire, three phase three wire
◇ 额定电压：AC57.7V、AC100V、AC220V、AC380V	◇ Rated voltage： AC57.7V, AC100V, AC220V, AC380V
◇ 过负载：1.2 倍 (持续)，2 倍 /1 秒 (瞬时)	◇ Overload： 1.2 times (continuous), twice/one second (instantaneous)
◇ 功耗：< 1VA/ 相	◇ Power consumption：< 1VA/phase
◇ 阻抗：< 300KΩ	◇ Impedance：< 300KΩ
◇ 频率：45–65Hz 或者直流	◇ Frequency：45–65Hz or DC

◆ 辅助电源 /Auxiliary power supply

◇ 工作范围：AC/DC 80V~270V、AC220V、AC380V、AC100V	◇ Operation range： AC/DC 80V~270V, AC220V, AC380V, AC100V
◇ 功耗：< 4VA	◇ Power consumption：< 4VA

◆ 环境 /Environment

◇ 工作温度：–10℃ ~+55℃	◇ Working temperature：–10℃ ~+55℃
◇ 储存温度：–25℃ ~+70℃	◇ Storage temperature：–25℃ ~+70℃
◇ 相对温度：≤ 93%，无腐蚀性气体场所	◇ Relative humidity：≤ 93%, site without corrosive gas
◇ 海拔：≤ 2500m	◇ Altitude：≤ 2500m

◆ 安全 /Safety

◇ 绝缘电阻：> 100MΩ	◇ Insulation resistor：> 100MΩ
◇ 交流电压：AC 2KV	◇ AC voltage：AC 2KV

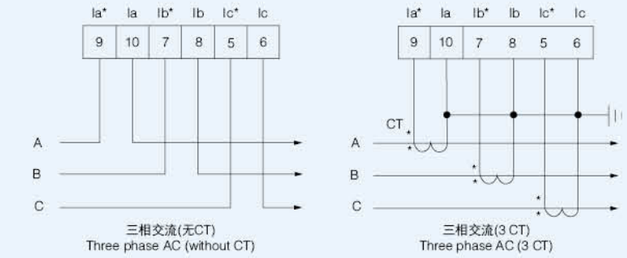
◆ 电磁兼容性能 /Electromagnetic compatibility performance

◇ 静电放电：4 级	◇ Electrostatic discharge：Class 4
◇ 电快速瞬变脉冲群：4 级	◇ Electric rapid transient pulse group：Class 4
◇ 浪涌 (冲击)：4 级	◇ Surge (impact)：Class 4

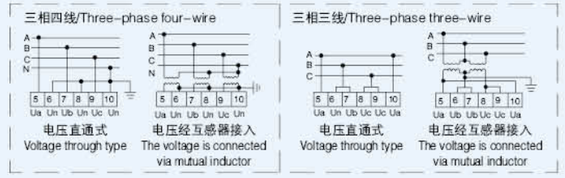
三相电流表端子排列图 /Three Phase Ammeter Terminal Arrangement

POWER		I input					
		Ic*	Ic*	Ib*	Ib	Ia*	Ia
1	2	5	6	7	8	9	10

三相电流表典型信号接线图 /Typical Signal Wiring Diagram For Three Phase Ammeter



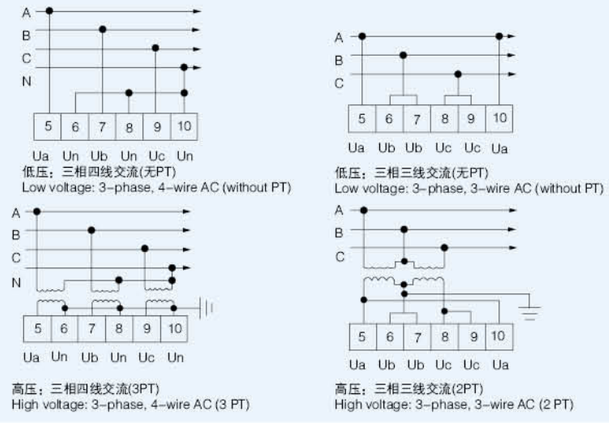
三相电压表端子排列图 /Three Phase Voltmeter Terminal Arrangement



辅助电源 Auxiliary power supply		电压信号输入 Input of voltage signal					
L	N	Ua	Un	Ub	Un	Uc	Un
1	2	5	6	7	8	9	10

注：如与仪表壳体接线图不一致，请以仪表壳体上面为准
Note： when it is not the same as the wiring diagram on the meter shell, the latter shall prevail.

三相电压表典型信号接线图 /Typical Signal Wiring Diagram For Three Phase Voltmeter



Din-Rail

Series Digital Meter

金来智造，引领未来

Manufactured by Jinlai, Leading the future

ERV–XX

Timer

BEVAV®

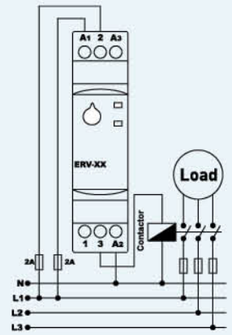
Product Overview

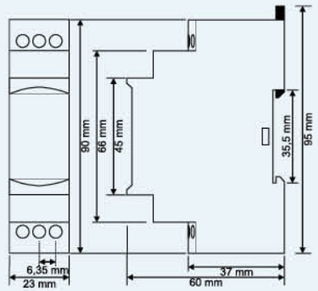
ERV–XX timer relays are used in all fields (industry，house，plant etc.)need controlls related to the time.

Technical Parameters

- Operating Voltage(Un)：150V – 260V AC
- Operating Frequency：50/60 Hz.
- Operating Power：<4VA
- Operating Temperature：–20℃ ~+55℃
- Time(t)：0.1sec. – 60min.
- Display：On led and Out(RLY) led
- Connection Type：Terminal connection
- Weight：Max.90ge.
- Contact：5A/250V AC (Resistive Load)
- Mounting：Vertical assembled in the panel or assembled on the din rail
- Operating Altitude：<2000meter
- Cable Diameter：2,5mm^2

Connection Diagram And Dimensions





SM 500
Phase And Voltage Controllor

BEVAV®

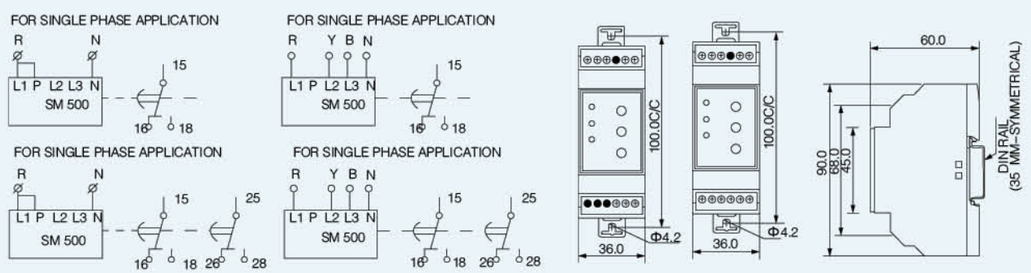
Product Overview

SM 500 Phase and voltage controllor is mainly used for photovoltaic grid–connected, household and similar low–voltage distribution lines. It can automatically disconnect when there is over–voltage, under–voltage or voltage loss in the line, and can automatic detection of wire voltage. It is a protector that can automatically closed when the line of electricity back to normal A low–power microprocessor is used as the core control of the meal, and high–load capacity magnetic retaining relay is used as the main control circuit. And it should meet the requirements of relevant installation regulations such as GB16895. 1 during installation.

Technical Parameters

- Supply Voltage：240V
- Phase or 3–Phase 4 Wire
- Frequency：47 to 63 Hz
- Power Consumption：4VA(Max.)
- Operating Temperature：–15℃ to +55℃
- Storage Temperature：–25℃ to +70℃
- Humidity(Non–Condensing)：95%(Rh)
- Max.Operating Altitude：2000m
- Degree of Protection：IP–20 for Terminals；IP–30 for Housing
- Mounting：Base/Din–Rail(35 mm Symmetrical)
- Dimensions in mm(W*H*D)：36*60*90
- Weight(Unpacked)：120g Approx.

Connection Diagram And Dimensions



EM–06DIN/60DIN/250DIN
Series Meter

BEVAV®

Product Overview

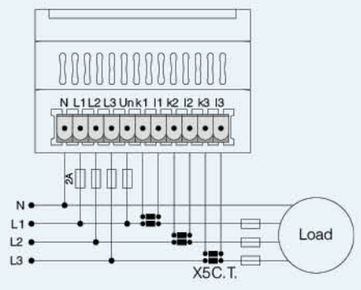
EM–06 series meter can display three–phase AC voltage，current and frequency at the same time.it is displayde by the digital tube.EM series meter has the advantages of intuitive display、Easy setup、high procision、stable performance，strong isolation and vibration resistance.

Technical Parameters

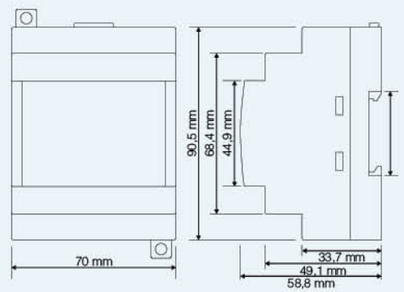
- Operating Voltage(Un)：140V–270V AC { N – Un }
- Operating Frequency：50/60 Hz.
- Operating Power：<6VA
- Operating Temperature：–20℃ ~+55℃
- Voltage Measuring Range：1V – 500V AC
- Current Measuring Range：5/5A – 9995/5A (100mA–5A)；EM–60XXX(1A–100A) and EM–250XXX(2A – 250A)
- Display：(3 digit) 6x Displays + 9 Leds
- Connection Type：Plug–in terminal
- Cable Diameter：1,5mm²
- Weight：Max. 325gr.
- Panel Hole Sizes：91 x 91mm(EM–XXX)
- Mounting：Panel front mounted(EM–XXX)；Assembled on the din rail.(EM–XXXDIN)
- Operating Altitude：<2000meter

Connection Diagram And Dimensions

Connection diagram for EM–XXXDIN



Dimensions for EM–06DIN/60DIN/250DIN



Product Overview

Intelligent digital display adjustable timer, used for pumps, farm irrigation, factory construction, home appliances, etc. where timing is required.The timer adopts LCD display, four button settings, precise timing time, completely compensates for the traditional timer, timing inaccuracy, etc. The user can set the timing time according to the button arbitrarily. The product has the memory function, the power–down time parameter is not lost, etc.

Technical Parameters

- Electronic type: The internal use of high–power relay 40A or 63A, the electronic type does not have complete isolation power–off, overload, short–circuit protection.
- Mechanical type: Standard equipped with mechanical 63A circuit breaker, with complete isolation, power failure, overload, short circuit protection and other functions.
- Time setting: MAX=99 hours 59 minutes MIX: 1 minute
- Operating Voltage (Un): 150V–260V AC
- Operating Frequency: 50/60Hz
- Operating Power: < 4VA

Use Conditions

Mechanical Life Expectancy: 3×10^6 Operations

Electrical Life Expectancy: 1×10^5 Operations

Operating Temperature: –15℃ to +55℃

Storage Temperature: –25℃ to +70℃

Humidity (Non–Condensing): 95%(Rh)

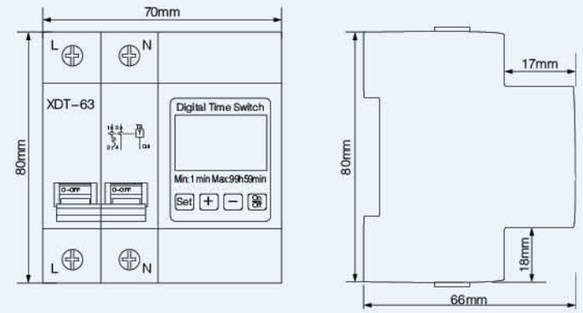
Max. Operating Altitude: 2000m

Degree of Protection: IP–20 for Terminals ; IP–30 for Housing

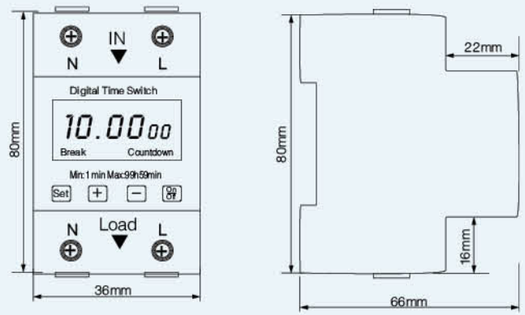
XDT–63/XDTE–63
Intelligent Digital Display Adjustable Timer
BEVAV®

Dimensions

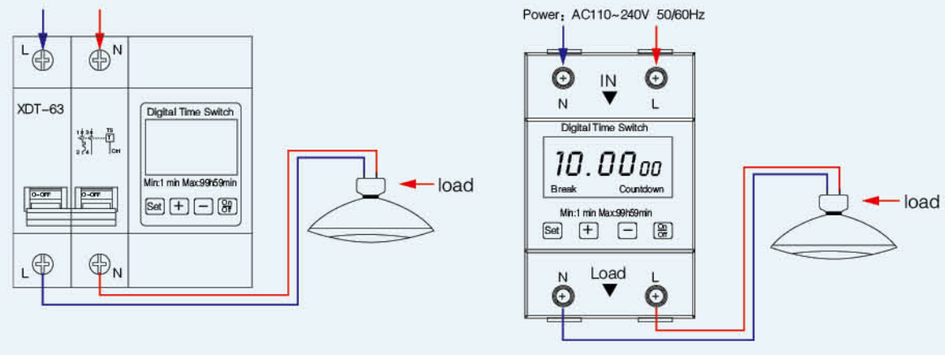
XDT–63 Dimensions



XDTE–63 Dimensions



Typical Applications



BEVAV®

Product Overview

D52–2042 Din–rail AC voltage and current meter can display AC voltage and current at the same time.If the measuring current is lower than 99.9A , you can get the AC current only making the wire across the hole which in the right side of the meter. If the measuring current is higher than 99.9A, you should connect meter with a current transformer.

Technical Parameter

- ◆ Accuracy : 1%
- ◆ Display Mode: 0.5 inch LED digital tube
- ◆ Range: AC voltage: 80 – 300V or 200 – 450V
  AC current: 0.1 – 99.9A
- ◆ Speed: 2 per second
- ◆ Size: 54*80*64 mm
- ◆ Installation: Din–rail

Use Conditions

Mechanical Life Expectancy: 3 x 10^6 Operations

Electrical Life Expectancy: 1 x 10^5 Operations

Operating Temperature: –15℃ to +55℃

Storage Temperature: –25℃ to +70℃

Humidity (Non–Condensing): 95%(Rh)

Max. Operating Altitude: 2000m

Degree of Protection: IP–20 for Terminals ; IP–30 for Housing

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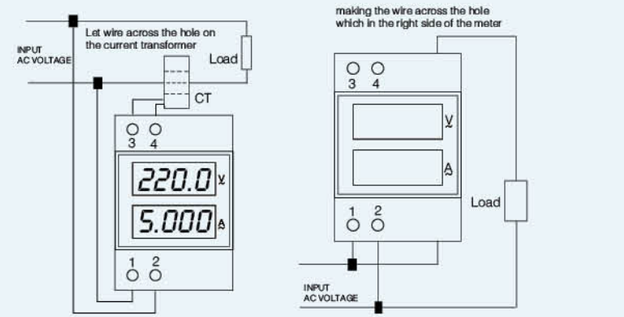
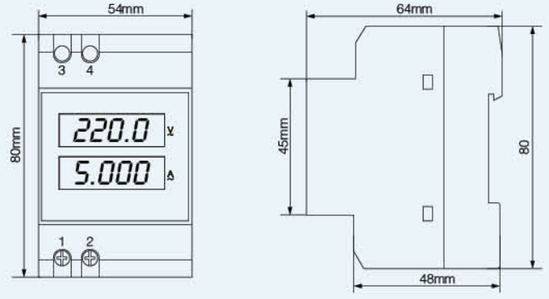
Wiring Diagram



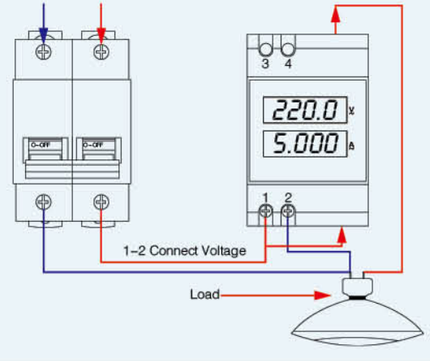
Graph1: install current transformer

Graph2: Connect graph when AC current lower than 100A

Dimensions



Typical Applications



D37–2042
Din–Rail AC Voltage And Current Meter

BEVAV®

Product Overview

D37–2042 Din–rail digital meter can measure and display AC voltage, AC current at the same time. We will provide a precision small current transformer for the meter.

Technical Indicators

- AC current: AC 0–100A (CT) (measured current is less than 10A, display 0–9.99,The resolution is 0.01A. Display 10.0–60.0A when larger than 10AResolution is 0.1A, decimal point is automatically converted
- Accuracy: 1% ± 2 words
- AC current: AC 0–60.0A
- Speed: 2 times per second;
- Size: 37 × 80 × 66mm
- Installation: Din–Rail (din–rail for air switch, there will not provide rail)
- Display Mode: 0.32–inch Led (AC voltage with red led and AC current with green led)
- Range: AC voltage: AC160–275V (You should select one of the meter in your order).
- Bulge Size: 36(width) * 44 (height) * 23 (thickness) mm
- Installation Width: 2P (sum of width of two DZ47/C45)

Use Conditions

Mechanical Life Expectancy: 3×10^6 Operations

Electrical Life Expectancy: 1×10^5 Operations

Operating Temperature: –15℃ to +55℃

Storage Temperature: –25℃ to +70℃

Humidity (Non–Condensing): 95%(Rh)

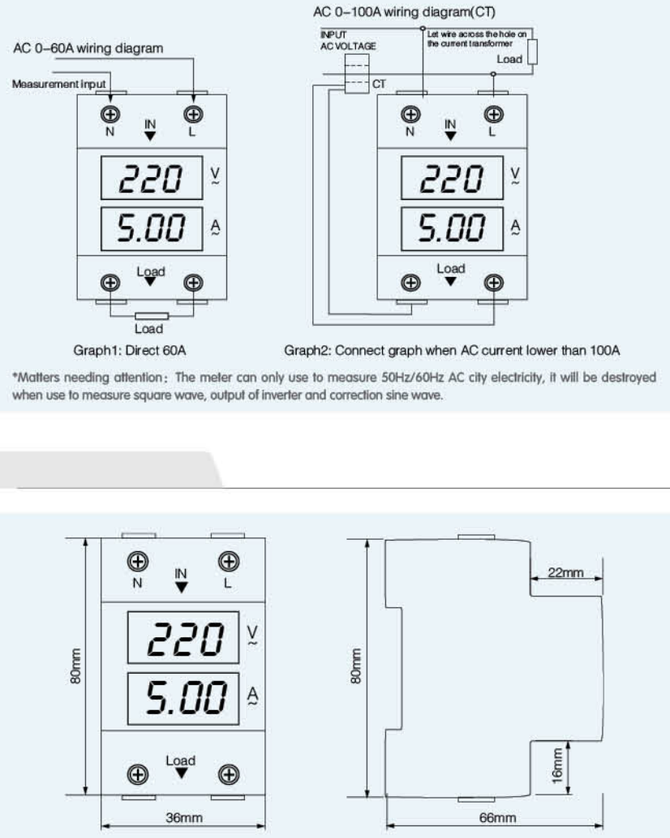
Max. Operating Altitude: 2000m

Degree of Protection: IP–20 for Terminals ; IP–30 for Housing

D37–2042
Din–Rail AC Voltage And Current Meter

BEVAV®

Wiring Diagram



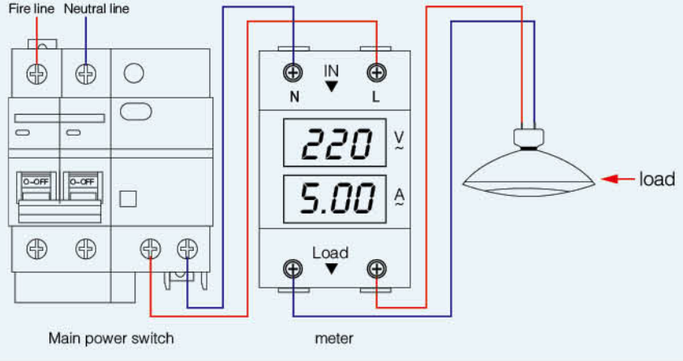
Graph1: Direct 60A

Graph2: Connect graph when AC current lower than 100A

*Matters needing attention: The meter can only use to measure 50Hz/60Hz AC city electricity, it will be destroyed when use to measure square wave, output of inverter and correction sine wave.

Dimensions

Typical Applications



BEVAV®

Product Overview

DIN–C thermometer can display temperature,suitable for industrial or household use,it is displayed by the big digital tube.DIN–C thermometer has the advantages of intuitive display、high procision、stable performance，strong isolation and vibration resistance.

Technical Parameters

- ◆ Power supply： AC110~240V 50/60Hz
- ◆ Display：0.56 LED digital display
- ◆ Temperature range： –9~+99℃
- ◆ Installation method ： Din
- ◆ Weight：120g
- ◆ Operating temperature：–10~40℃
- ◆ Operating humidity：35%~85% RH
- ◆ Accuracy：0.5%FS ± 1
- ◆ Power consumption： < 8VA

Use Conditions

Mechanical Life Expectancy：3 x 10^6 Operations

Electrical Life Expectancy：1 x 10^5 Operations

Operating Temperature：–15℃ to +55℃

Storage Temperature：–25℃ to +70℃

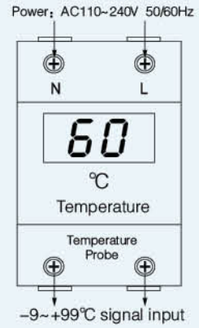
Humidity (Non–Condensing)：95%(Rh)

Max. Operating Altitude：2000m

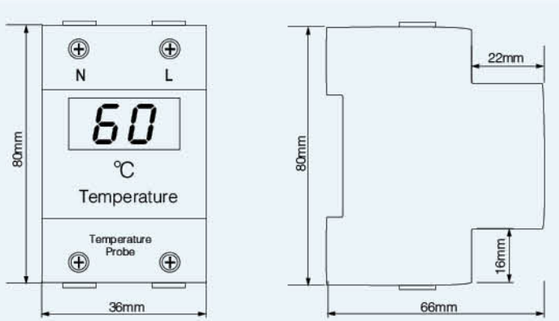
Degree of Protection：IP–20 for Terminals ； IP–30 for Housing

BEVAV®

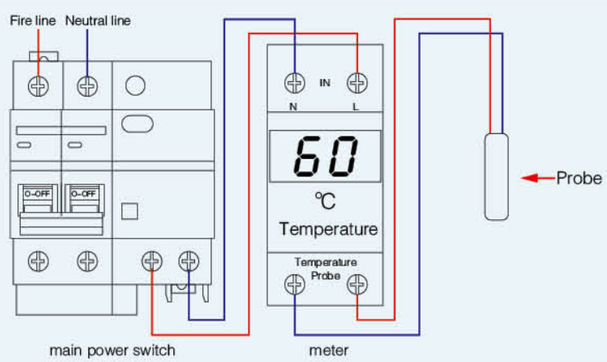
Wiring Diagram



Dimensions



Typical Applications



BEVAV®

Product Overview

The current limiting protector is an intelligent protector for current monitoring and auxiliary protection. When there is an over–current fault in the circuit,

the protector will cut off the power supply at the set time to prevent excessive load.When the current value is restored within the set value, the circuit will be energized again.

Technical Parameters

- ◆ Accuracy：1% ± 2words
- ◆ Display Mode：0.3Inch LED digital tube
- ◆ Current range：1–63A or 1–40A or 0.1–16A
- ◆ Recovery time：0–30S， Factory Settings：2S
- ◆ Work power：AC220V
- ◆ Delay time：0–30S，Factory Settings：2S
- ◆ Speed：2times per second
- ◆ Size：37 × 80 × 66mm
- ◆ Bulge Size：36 × 40 × 23mm
- ◆ Installation：Din–rail

Use Conditions

Mechanical Life Expectancy：3×10^6 Operations

Electrical Life Expectancy：1×10^5 Operations

Operating Temperature：–15℃ to +55℃

Storage Temperature：–25℃ to +70℃

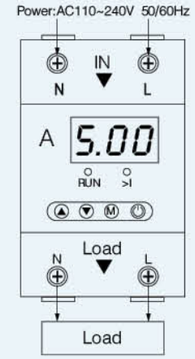
Humidity (Non–Condensing)：95%(Rh)

Max. Operating Altitude：2000m

Degree of Protection：IP–20 for Terminals ； IP–30 for Housing

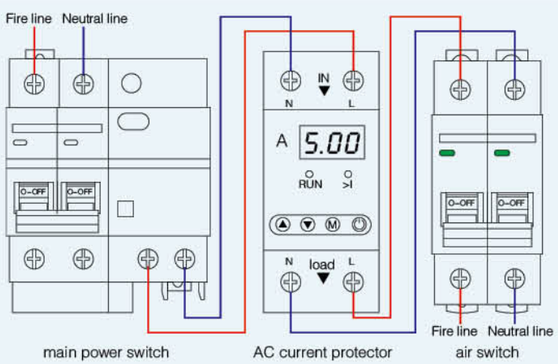
BEVAV®

Wiring Diagram



Dimensions

Typical Applications



BEVAV®

Product Overview

DIN–V Protector is mainly used for photovoltaic grid–connected, household and similar low–voltage distribution lines. It can automatically disconnect when there is over–voltage, under–voltage or voltage loss in the line, and can automatic detection of wire voltage. It is a protector that can automatically closed when the line of electricity back to normal A low–power microprocessor is used as the core control of the meal, and high–load capacity magnetic retaining relay is used as the main control circuit. With online real–time voltage display function, indicator status indication function, voltage protection threshold adjustable function, the product can quickly and safely cut off the circuit under continuous high voltage impact, and timely protect the safe use of the loaded electrical appliances. The neutral line of the product is opened continuously during the protective action, and it should meet the requirements of relevant installation regulations such as GB16895. 1 during installation.

Technical Parameters

◆ Electrical parameters

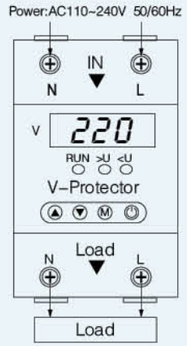
◇ Rated working voltage： AC230V/50Hz
◇ Rated working current： 40A or 63A
◇ Maximum short–circuit withstand current： 3000W below 40A，4500W above 50A (action time 10ms)
◇ Overvoltage protection value： AC230V–AC275V，factory default 275V
◇ Undervoltage protection value： AC160V–AC210V, factory default 175V
◇ Power–off time：0–180s， factory default：2s
◇ Power delay time：0–180s， factory default：2s
◇ Own power consumption：⩽ 1.5W
◇ Motor mechanical life：⩾ 100,000 times
◇ Dimensions：80 × 37 × 66mm(L × W × H)

◆ Ambient temperature

◇ Working environment temperature range：–25℃ ~55℃
◇ Relative humidity： 45–90% RH,40℃
◇ Altitude：⩽ 2000m
◇ Pollution level： 2 Class

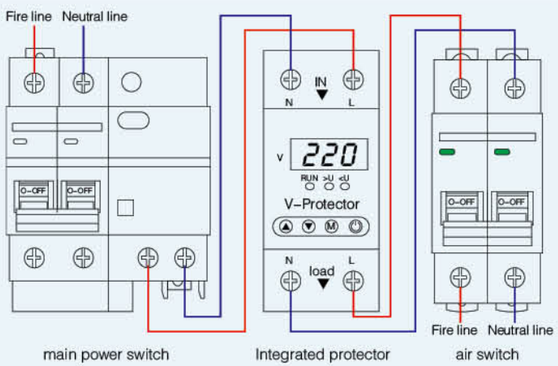
BEVAV®

Wiring Diagram



Dimensions

Typical Applications



BEVAV®

Product Overview

DIN–VA Protector is mainly used for photovoltaic grid–connected, household and similar low–voltage distribution lines. It can automatically disconnect when there is over–voltage、under–voltage、voltage loss or over–current in the line, and can automatic detection of wire voltage and current. It is a protector that can automatically closed when the line of electricity back to normal A low–power microprocessor is used as the core control of the meal, and high–load capacity magnetic retaining relay is used as the main control circuit. With online real–time voltage and current display function, indicator status indication function, voltage and current protection threshold adjustable function, the product can quickly and safely cut off the circuit under continuous high voltage and high current impact, and timely protect the safe use of the loaded electrical appliances. The neutral line of the product is opened continuously during the protective action, and it should meet the requirements of relevant installation regulations such as GB16895.21 during installation.

Technical Parameters

◆ Electrical parameters

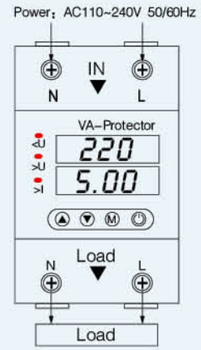
◇ Rated working voltage： AC230V/50Hz
◇ Rated working current： 40A or 63A
◇ Maximum short–circuit withstand current： 3000A below 40A, 4500A above 50A (action time 10ms)
◇ Overvoltage protection value： AC230V–AC275V, factory default 275V
◇ Undervoltage protection value： AC160V–AC220V, factory default 175V
◇ Automatic closing delay： 0–180S, factory default：2S
◇ Overcurrent protection value： 1–40A, factory default 40A Or 1–63A, factory default 63A
◇ Action time： 0–30S, factory default：2S
◇ Own power consumption： ⩽ 1.5W
◇ Motor mechanical life： ⩾ 100,000 times
◇ Dimensions： 80 × 37 × 66mm (L × W × H)

◆ Ambient temperature

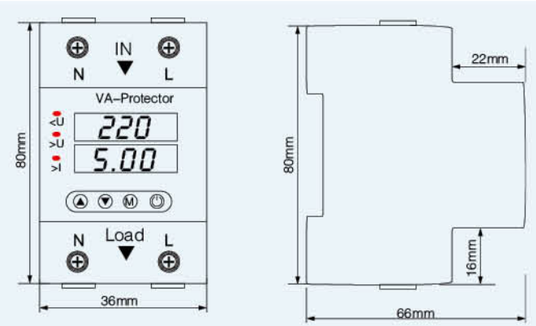
◇ Working environment temperature range： –25℃ ~55℃
◇ Relative humidity： 45–90% RH, 40℃
◇ Altitude： ⩽ 2000m
◇ Pollution level： 2 Class

BEVAV®

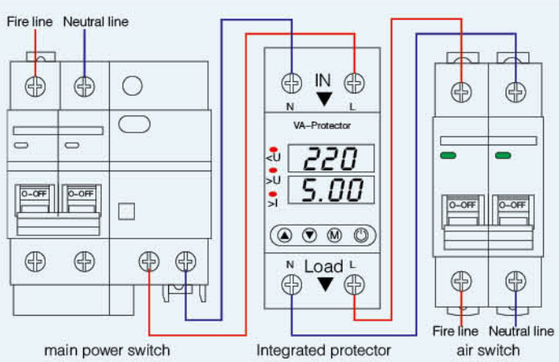
Wiring Diagram



Dimensions



Typical Applications



BEVAV®

Product Overview

DAV–100 Din–rail digital meter can measure and display AC voltage, AC current at the same time.We will provide a precision small current transformer for the meter.

Technical Parameters

- Accuracy： 1%+2 words
- Display Mode： 0. 32–inch Led (AC voltage with red led and AC current with green led)
- Range： AC voltage：AC160–275V (You shouldselect the one type of meter in your order).
- AC current： AC 0–100A (CT) (measured current is less than 10A,display 0–9.99,The resolution is 0.01A. Display 10.0–60.0A when larger than 10AResolution is 0.1A, decimal point is automatically converted
- Speed： 2 times per second;
- Size： 90 × 59 × 35mm
- Installation Width： 2P (sum of width of two D247/C45)
- Installation： Din–Rail (din–rail for air switch, there will not–provide rail)

Use Conditions

Mechanical Life Expectancy：3×10^6 Operations

Electrical Life Expectancy：1×10^5 Operations

Operating Temperature：–15℃ to +55℃

Storage Temperature：–25℃ to +70℃

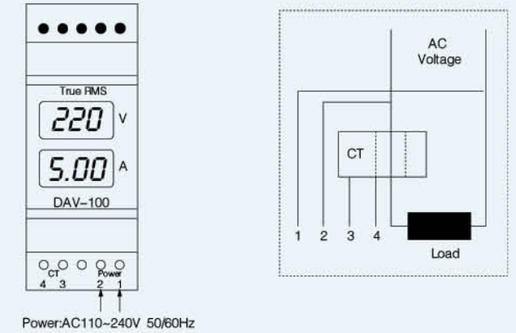
Humidity (Non–Condensing)：95%(Rh)

Max. Operating Altitude：2000m

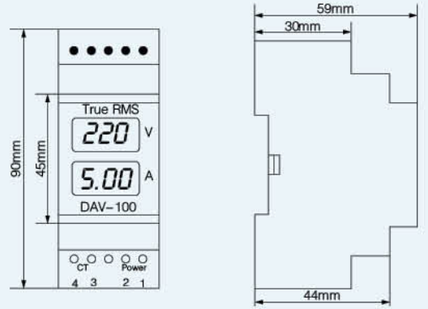
Degree of Protection：IP–20 for Terminals ； IP–30 for Housing

BEVAV®

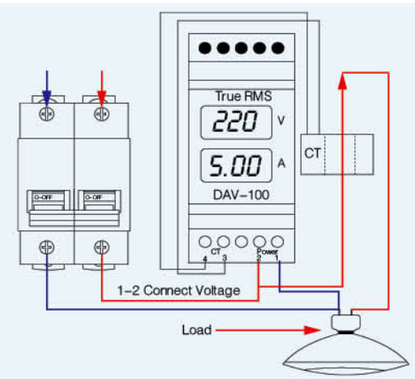
Wiring Diagram



Dimensions



Typical Applications



BEVAV®

Product Overview

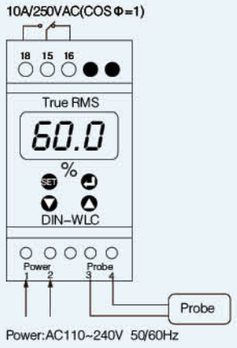
The temperature controller is a control integrated intelligent temperature control meter. It adopts a fully digital integrated design、with temperature alarm programmable、alarm switch output、real–time data query、digital temperature meter and relay combined into one, temperature measurement The meter is directly connected to the switch trigger signal to drive various loads.

Technical Parameters

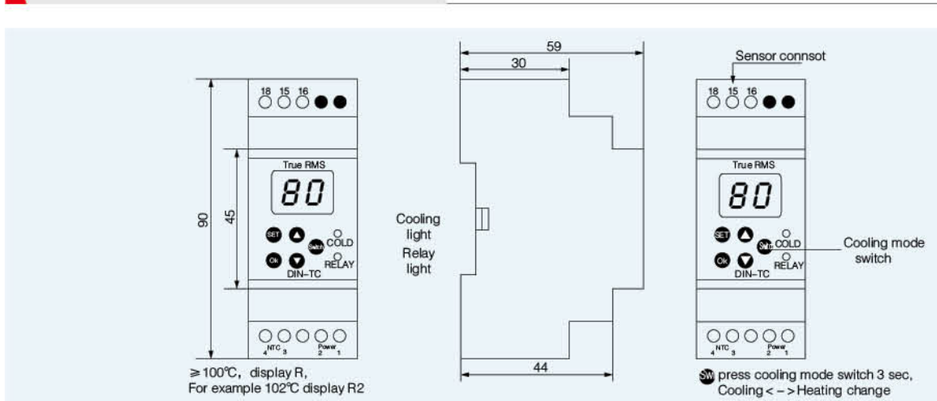
- ◆ Supply voltage：AC 220V
- ◆ Sensor：NTC 100K(3950)
- ◆ Measuring range：–19~109℃ (109℃ display R9)
- ◆ Resolution ：1℃
- ◆ Control mode：ON–OFF
- ◆ Working mode：Cooling or Heating
- ◆ ON/OFF control hysteresis：1 ~ 10℃
- ◆ Setting temperature：–19~109℃
- ◆ Correction of Sensor：–5~5℃
- ◆ Display：0.56 inch Red LED
- ◆ Control output：1CAC250V 16A Max (Resistive)
- ◆ Electrical life：$\geqslant 1\times10^5$
- ◆ Power consumption：Approx 2VA
- ◆ Mounting：DIN Rail
- ◆ Weight：Approx：150g
- ◆ Operating temperature：–20~+65℃
- ◆ Humidity：35~85%RH
- ◆ Storage Temperature：–25~+50℃

BEVAV®

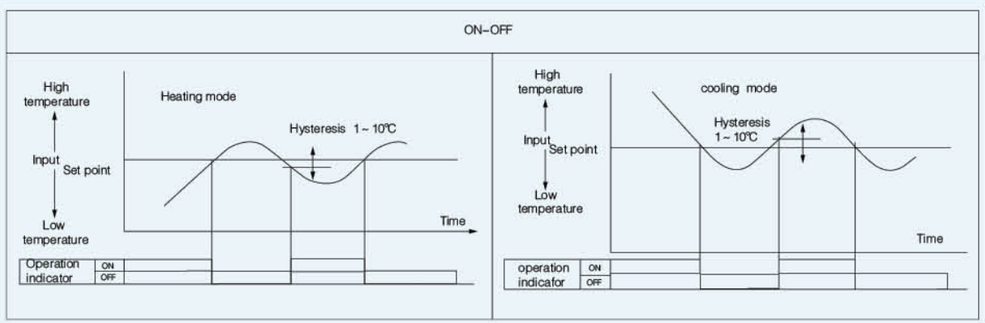
Wiring Diagram



Dimensions



Control Modes



BEVAV®

Product Overview

Water level percentage meter is the water level induction line be lengthened according to the required length and then suspended vertically in the water.

By induction, the water level is detected,the water level signal is transmitted to the digital water level automatic control alarm device through the two–wire water level sensor,the tube will display the water level.The water level automatically controls the relay and the water level control value. The water level alarm line can be set by the user through the panel button.

Technical Parameters

- ◆ Power Supply： AC220V
- ◆ Relay Contact Capacity：AC 250V/5V (PURE RESISTIVE)
- ◆ Control Mode： ON–OFF
- ◆ Mounting： DIN RAIL
- ◆ Working Mode：COME OR OUT
- ◆ Sensor Distance：≤ 500M
- ◆ Dimensions： 90 × 59 × 35mm
- ◆ Number Of Sensors： 10PCS
- ◆ Liquid Level Gear： 10GEARS

Use Conditions

Mechanical Life Expectancy：3 x 10^6 Operations

Electrical Life Expectancy：1 x 10^5 Operations

Operating Temperature：–15℃ to +55℃

Storage Temperature：–25℃ to +70℃

Humidity (Non–Condensing)：95%(Rh)

Max. Operating Altitude：2000m

Degree of Protection：IP–20 for Terminals ； IP–30 for Housing

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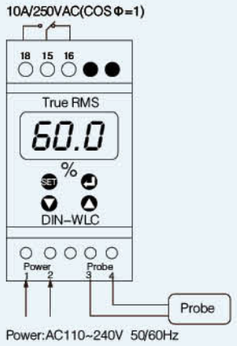
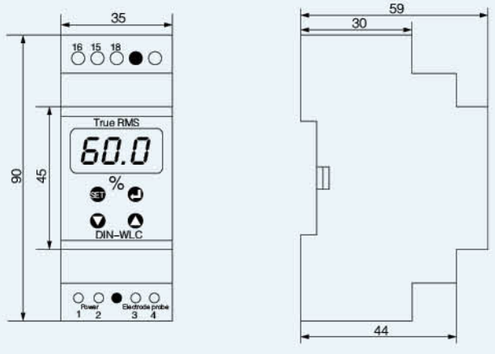
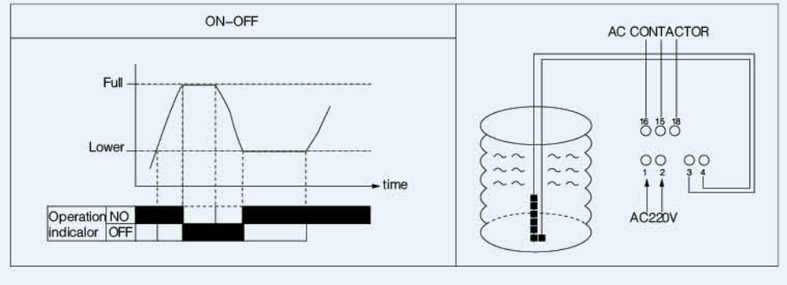
Wiring Diagram



Dimensions



Control Modes



KE–FKR4 (D)

Intelligent Voltage Phase Sequence Protector

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Product Overview

This is phase sequence protector in three phase systems, it measures RMS values of AC voltages and system frequency sensitively. Using up direction button (Select) phase–neutral voltages and phase–phase voltages monitor sequentially KE–FKR4(D) has many features: Phase Failure、Phase Sequence、Over Voltage Protection、Under Voltage Protection、Voltage Unbalance (asymmetry). Protection: Over Frequency Protection、Under Frequency Protection. When device is turn on if its adjusted voltages and frequency in its interval and if phase sequence is correct relay switch on. If any of error occurred (except phase failure and phase sequence) at the end of adjusted time relay switch off its contact. When system return normal values, at the end of time out relay switch on.

IMPORTANT

L1–N is device supply inputs. Thus,the applied L1–N voltage must be rated voltage of system .

The measured frequency also must the frequency of the system.

Technical Parameters

- ◆ Rated Voltage (Un) : 220Vac (L1–N)
- ◆ Operating Range : (0,8–1,1) x Un
- ◆ Frequency : 50 / 60 Hz
- ◆ Supply Power Consumption : < 4VA
- ◆ Voltage Measurement (Phase–Phase) : 10–500 VAC (For L1–N 176V–242V)
- ◆ Voltage Measurement Power Consumption : <1VA (for one phase)
- ◆ Measurement Sensitivity : %1 ± 1 digit
- ◆ Display : 3 Digit LED
- ◆ Contact Current : Max. 5A / 240Vac
- ◆ Device Protection Class : IP 20
- ◆ Connector Protection Class : IP 00
- ◆ Temperature : – 5℃ ~+ 50℃
- ◆ Connection Type : To connection rail in electrical panel

Product Function

Phase Failure: (u–U)

Locking Function: (Latch)

L–t: Locking Time (001–060 min.)

L–C : Locking Counter (oto , 001–010 piece)

Over and/or Under Frequency Protection : (40–70 Hz)

KE–FKR4 (D)

Intelligent Voltage Phase Sequence Protector

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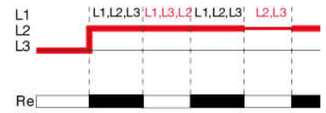
Product Function

Phase Sequetion: (Seq)

In case of wrong phase order , Normal LED turned off and relay contact is not switch on. In this case if Reset button pushes seq warn displayed. If phase order is corrected , Normal LED turned on and out relay switch on.

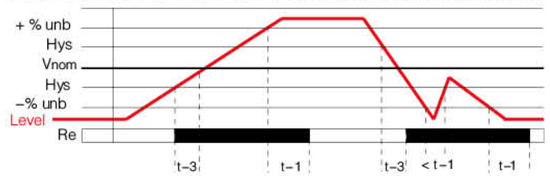


Voltage Unbalanced: (unb)

The phase–phase voltage unbalance limit can be adjusted between(5%–20%) .
When it exceeds the adjusted limit , the device switched off its out contact at the end of t–1 delay. In this case when pushing Reset button unb warn appear on the screen. For the returning normal state, asymmetry values should under 20% (hysteresis value). In this case at the end of t3 time Normal
LED turned on and output contact switch on. If the phase–phase voltage unbalance, return adjusted value shorter than t–1 time, output relay does not release its contact. Hysteresis is 20%.
Example: Let's say that asymmetry value is set to 15% for a 3 x 380VAC.
In this case, relay contact switch off at (380–(380 x 0.15))=323 V.
Switch on the contact is performed at 323+(380 x 15% x 20%)= 334V.
(20% is the hysteresis).

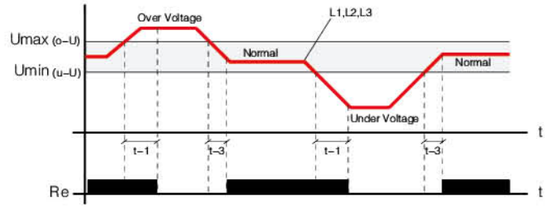
$$\%\,unb = \frac{(V_{max} - V_{min})}{380} \times 100$$

$$Hys = 380 \times (\%\ Asm) \times (20\%)$$

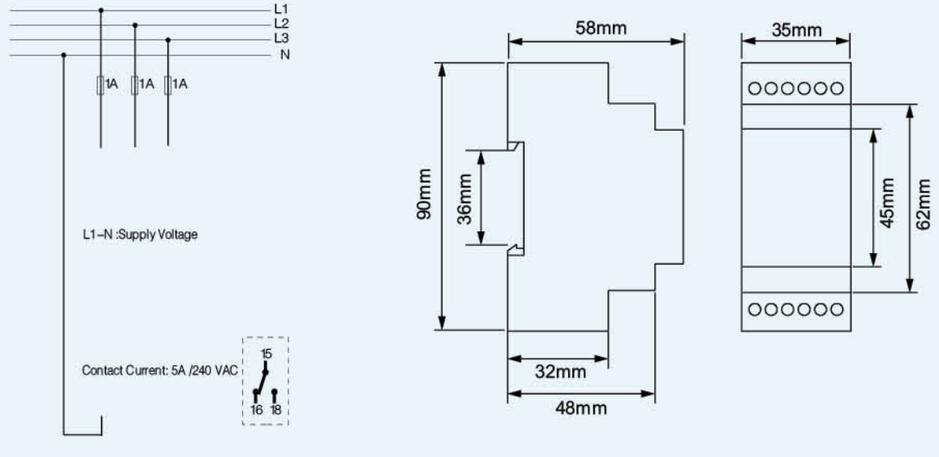


Over and Under Voltage : (o–U),(u–U)

Under voltage (u–U) it can adjusted between Umin= (300– 370 V).
Over voltage (o–U) it can adjusted between Umax=(390–460 V).
If the voltage drops below the adjusted under voltage limit, when u–U shows on the screen and device switch off its output contact end of the t–1 time
Normal LED turned on .In this case when pushing Reset button u–U warn appear on its screen.
If the voltage exceed the adjusted over voltage limit, Normal LED turned off and output relay switch off. In this case when pushing Reset button o–U warn appers on its screen.



Connection Diagram And Dimensions



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Picture			
Model	XD–72 A	XD–72 V	XD–72 Hz
Power	AC220V	AC220V	AC220V
Display Range	AC0~9999A	AC0~500V	AC0~100Hz

Picture			
Model	XD–60 A	XD–60 V	XD–80 A
Power	AC220V	AC220V	AC220V
Display Range	AC0~60A	AC80~500V	AC0~60A

Picture			
Model	XD–80 V	JL–VPDB2000	JL–VPDB2001
Power	AC220V	AC220V	AC220V
Display Range	AC80~500V	AC80~300V	AC80~300V

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Picture			
Model	XD85–2042A	XD85–2042B	XD85–2042C
Power	AC220V	AC220V	AC220V
Display Range	Voltage:AC80~300V;AC200~450V Current:AC0~100A;AC0~200A	Voltage:AC80~300V Current:AC0~100A	Voltage:AC80~300V Current:AC0~100A

Picture			
Model	XD85–V	XD85–V(LCD)	XD85–2V
Power	AC220V	AC220V	AC220V
Display Range	Voltage:AC80~500V	Voltage:AC80~500V	Voltage:AC80~300V

Picture			
Model	XDEM–061	DL69–2047	DM55–3
Power	AC220V	AC220V	AC220V
Display Range	Voltage: AC80–260V Current: AC0–100A Active power: 0–99999W Electric power: 0–99999kwh	Voltage: AC 80–300V Current: AC 0–100A Active power: 0–30000W Scope of the Power Factor: 1,000–0,000 Electric power: 0–99999kwh	Voltage:AC80~300V