

PART / 01

- Low-Voltage
Power Factor Correction
低压功率因数校正

PART / 02

PART / 03

PART / 04



Power Factor Controller

功率因数控制器

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Power Factor Controller

ELK 12 are fully automatic instruments that allow optimum control of reactive power compensation. The instruments features precise voltage and current measurement circuits, and the digital processing of values measured provides high evaluation accuracy of both true root-mean-square values of voltage, current and power factor values.

The built-in temperature sensor measures the temperature inside the distribution board cabinet.

The instrument's installation is fully automatic. The controller automatically detects both the connection configuration and the value of each compensation section connected. Entering these parameters manually is also possible.

功率因数控制器

ELK12系列控制器全自动仪表是无功补偿的适配产品。仪表具有精确的电压和电流测量电路，测量值的数字处理提供了电压、电流和功率因数值的真实均方根值的高评估精度。

内置温度传感器测量配电盘柜内的温度。

仪表是全自动设置。控制器自动检测连接配置和连接的每个补偿段的值。也可以手动输入这些参数。

Power Factor Controller

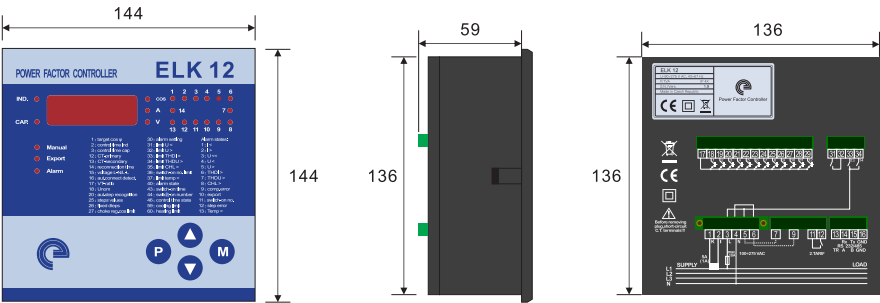
功率因数控制器

Key Features

主要特点

- Up to 14 outputs and 1 alarm relay;
 - Current measurement sensitivity 2mA;
 - Optional RS485 or Ethernet remote communication interface;
 - Optional supply voltage up to 275 V;
 - Separated common pole of relays on additional terminals.
- 多达14个输出和1个报警继电器;
 - 电流测量灵敏度2mA;
 - 可选RS485或以太网远程通信接口;
 - 可选电源电压高达275 V;
 - 附加端子上继电器的分离公共极。

Accessories 配件	Functions and features 功能与特点
/(/无)	Contactor connection mode, up to 14 outputs 接触器连接方式，14路输出
+485	Contactor connection mode, up to 14 outputs, RS485 接触器连接方式，14路输出，RS485通讯接口
+ internet	Contactor connection mode, up to 14 outputs, internet 接触器连接方式，14路输出，RS485通讯接口，以太网通讯接口
+fast	Using thyristor switches, 24VDC, up to 12 outputs, 2 relay sections 可控硅投切方式，24VDC控制电压，12路动态输出，2路可编程触点输出



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Features and Technical Details

技术参数

Range, Accuracy / 范围, 精度	
Power supply 电源电压	90~275VAC
Measuring voltage 检测电压	43~67Hz, 7VA
Voltage measurement accuracy 测量电压精度	±1% ± digit
Measuring voltage loss response time 测量电压损失响应时间	≤20ms
Measuring current (galvanically isolated) 测量电流	0,002 to 7 A
Current input serial impedance 输入连续阻抗电流	< 10 mΩ
Current measurement accuracy 测量电流精度	
range 0.5–7A	±0.02A±1 digit
range 0.02–0.5A	±0.002A±1 digit
range 0.002–0.02A	±0.0005A±1 digit
Max. phase angle error(PF&powers measurement) 最大相位角误差 (PF和功率测量)	±1° at I>3% of range, otherwise±3° >3%量程时为±1°, 否则为±3°
Current harm.& THD measurement accuracy 谐波次数和总的谐波畸变率	±5% ± 1 digit (for U,I > 10% of range)
Temperature measurement range / accuracy 温度测量范围/精度	–30 to 60 °C, ± 5 °C
Number of output relays 继电器输出点数	14
Output relay load rating 输出继电器的负载率	250 V AC / 4 A
Installation overvoltage class / pollution degree 设置过载保护等级	For measuring voltage up to 300 V AC
Communication 通讯功能	NO:RS232 and RS485

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Features and Technical Details

技术参数

Adjustable Parameters / 调节参数	
Power factor desired 功率因数设定值	0.80 ind. through 0.80 cap. 0.8感性~0.8容性
Connection time 接通时间	5 to 1 200 seconds 5~1200s可调
Reconnection delay time 重新连接时间	5 to 1 200 seconds 5~1200s可调
Smallest capacitor current 原边电流与电容容值比	(0.002 ~2 A) x CMT ratio
Connection & section power setting 设置连接模式	Automatic or manual 自动/手动
Operating Conditions / 运行环境	
Working environment 工作环境	Class C1 in compliance with IEC 654-1 满足IEC 654-1中的C1等级
Operating temperature 温度范围	-40°C ~ +60°C
Relative humidity 相对湿度	5 to 100 %
EMC / 电磁兼容性	
Noise suppression level in compliance with 噪音标准	EN 50081-2 EN 55011 , class A EN 55022 , class A
Physical / 安装	
Enclosure 附件	
Front panel 面板防护等级	IP40 (or IP54)
Back panel 背板防护等级	IP20
Dimensions 尺寸	
Front panel 面板	144 x 144 mm
Built-in depth 嵌入尺寸	80 mm
Cutout 开孔尺寸	138 x 138 mm
Mass 重量	Max. 0.7 kg

Wiring Examples

接线图

