

LEYSDEN

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ADVANCED TECHNOLOGY



LDCR低压电容器 使用手册



莱斯顿(上海)电气有限公司

上海市高技路655号3-712

电话: +86-21-57700070

服务电话: 400-7161-961

传真: +86-21-57700170

<http://www.leysden.com>

基于不断改进产品和服务的要求, 设备如有变更, 恕不另行通知
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国际前沿技术
International advanced
technology

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用途USE

LDCR系列圆柱型低压电容器采用最先进的技术制造，以金属化薄膜为主要电介质材料，结合最先进的制造工艺及设备制作而成，每个电容器元件整体密封，采用超低压自动拉断内部安全装置，双重电气保护。电容器损耗低，重量轻，按照国际IEC标准制造，产品满足中国国家标准，内置永久性连接的放电电阻。低压电容器主要用于工频50Hz或60Hz的电力系统中，提高功率因数，减少无功损耗、改善电能质量。

LDCR series of cylindrical low-voltage capacitors using the most advanced technology to metal film as the main dielectric material, combined with the most advanced manufacturing processes and equipment made of each capacitor element as a whole seal, the use of ultra-low voltage automatic pull off the internal safety device, Dual electrical protection. Capacitor low loss, light weight, in accordance with international IEC standards, products meet the Chinese national standard, built-in permanent connection of the discharge resistance. Low-voltage capacitors are mainly used for power frequency 50Hz or 60Hz power system, improve power factor, reduce reactive power loss, improve power quality.

结构特点STRUCTURAL FEATURES

■先进的生产设备，优良的原材料，加上独特的生产工艺，充分保障了产品的高品质质量。

Advanced production equipment, excellent raw materials, coupled with a unique production process, and fully protect the high-quality products.

■独特的设计，保障了产品能够适应较高的环境温度和系统电压波动较大的场所。

Unique design to protect the product to adapt to higher ambient temperature and voltage fluctuations in the larger system.

■内装放电电阻，使电容具有自动放电功能，确保操作安全。内装一个压力开断型保险装置，当电容器发生故障时，内部压力增大，保险装置能使其自动脱离电源，避免事故扩大。

Built-in discharge resistance, the capacitor has an automatic discharge function, to ensure safe operation. Built-in a pressure off-type safety device, when the capacitor fails, the internal pressure increases, the insurance device can automatically from the power to avoid accidents.

■损耗低、发热小、温升低、比特性好。

Low loss, small heat, low temperature, good specificity.

产品型号及含义PRODUCT TYPE AND MEANING



使用环境CIRCUMSTANCE

- 周围温度 $\leq +55^{\circ}\text{C}$, $\geq -40^{\circ}\text{C}$, 24h内平均温度不得高于 $+35^{\circ}\text{C}$ 。超过时, 应采用人工冷却(安装风扇)或将电容器组与电网断开。
Ambient temperature $\leq +55^{\circ}\text{C}$, $\geq -40^{\circ}\text{C}$, 24h the average temperature shall not be higher than $+35^{\circ}\text{C}$. If this is exceeded, use manual cooling (to install the fan) or disconnect the capacitor bank from the grid.
- 户内使用, 使用地点的海拔高度不得超过4000m。
It's used indoor, elevation height of using spot not exceed than 4000m.
- 周围空气相对湿度在最高温度为 $+40^{\circ}\text{C}$ 时不超过50%, 在较低温度时允许有较大的相对湿度, 如 $+20^{\circ}\text{C}$ 时为95%, 应考虑到由于温度的变化可能会偶然产生的凝露的影响。
Relative humidity of surrounding air is not exceed 50% while highest temperature is $+40^{\circ}\text{C}$, larger relative humidity allowed under lower temperature, for example it's 95% while $+20^{\circ}\text{C}$, it should be considered that temperature change can induce frost.
- 安装环境不受阳光的直射、不被雨雪淋湿、无腐蚀性气体、无盐碱、金属粉末及尘埃少、机械震动小, 并且通风良好。
Installation environment from direct sunlight, not rain and snow, no corrosive gases, no salt, metal powder and dust, mechanical vibration is small, and well ventilated.
- 安装电容器前后应测量电压波形和网络特性, 如果存在谐波源, 则应考虑在电容器上串联适当的电抗器。
The voltage waveform and network characteristics should be measured before and after the capacitor is installed. If there is a harmonic source, consider a suitable reactor in series with the capacitor.

性能指标及参数PERFORMANCE PARAMETERS

- 可提供额定电压230V、250V、300V、480V、525V、690V等产品。
Can provide the rated voltage 230V, 250V, 300V, 480V, 525V, 690V and other products.
- 耐受电压: 极间: 工频2.15UN, 2S; 极对壳: 额定电压660V及以下产品, 施加电压3KV, 5S; 额定电压660V以上产品, 施加电压6KV, 5S。
Voltage: 6KV, 5S; rated voltage 660V and above products, applied voltage 6KV, 5S; rated voltage 660V and below products, the applied voltage 3KV, 5S;
- 最高允许过电压: 1.1UN, 每24小时中不超过8小时。最高允许过电流: 2.0IN。
Maximum allowable over-voltage: 1.1UN, not more than 8 hours per 24 hours. Maximum allowable overcurrent: 2.0IN.
- 电容偏差: 电容器实测值与额定值之差不超过-5%~8%, 任意两线路端子间测得的电容器的最大值和最小值之比不超过1.08。
Capacitance deviation: the difference between the measured value and the rated value of the capacitor is not more than -5% to 8%. The ratio between the maximum value and the minimum value measured between any two line terminals shall not exceed 1.08.
- 损耗角正切值: 工频额定电压低于0.0012。
Loss tangent: power frequency rated voltage below 0.0012.

检查验收ACCEPTANCE

- 应对外包装进行检查, 若发现有破损或异样, 应马上进行拍照取证, 并立刻开箱检查, 查看电容器有无损伤, 产品零部件是否损伤和位移, 紧固件是否松动, 绝缘有无破损, 线圈表面有否污秽痕迹等。
The packaging should be checked, if found to be damaged or strange, should immediately take pictures of evidence, and immediately open the box to check whether the damage to the capacitor, the product components are damaged and displacement, fasteners Whether loose, insulation has been damaged, whether the coil surface contamination trace.
- 用户收到电抗器后应及时进行检查。出厂文件、配件齐全, 产品参数与订货合同相符。
Users should be promptly checked after receiving the reactor. Factory documents, accessories complete, the product parameters and order the contract line.

维护与保养MAINTENANCE

■对运行中的电容器必须定期进行检查，如发现内部响声、顶盖膨胀、接头爬电等现象应停止运行，并将故障电容器退出。

The capacitor in operation must be checked regularly. If there is internal noise, the top cover is inflated, the connection creepage phenomenon should be stopped and the fault capacitor should be withdrawn.

■必须定期测量安装电容器部位的空气温度，如发现该温度超过电容器允许运行温度的上限值，则应停止运行或采取必要的降温措施。

The air temperature at the location where the capacitor is installed must be measured periodically. If it is found that the temperature exceeds the upper limit of the permissible operating temperature of the capacitor, stop the operation or take the necessary cooling measures.

■如发现电容器表面积灰尘严重，应停电进行清除，清除应采用干措的方法。

If the capacitor surface area of dust is serious, should be a power failure to clear, remove the method should be used dry wipe.

■电容器的电容量必须进行定期测量（建议每月不少于1次），如发现电容器（或电容组）的总容量降至允许偏差范围以外，或三相不平衡超过107%，则应更换适当的电容器。

If the total capacity of the capacitor (or capacitor group) is found to fall outside the allowable deviation range or the three-phase unbalance exceeds 107%, the capacitor shall be replaced with an appropriate one Of the capacitor.

安装与使用INSTALLATION AND USE

■安装时产品可根据实际需要进行任意方位安装，当电容器水平安装时需要支撑架，电容器之间应留有不小于30mm的距离，底部固定螺栓安装扭力矩12N.m，接线端子安装扭力矩5N.m。电容器顶部确保产品失效防爆变形空间不小于30mm。

The installation of products according to the actual needs of the installation of any orientation, when the level of the capacitor installed support frame, the capacitor should be no less than 30mm between the distance, the bottom of the installation of torque bolts installed torque 12N.m, terminal torque 5N. Lt; & gt; The top of the capacitor to ensure product failure Explosion deformation of space is not less than 30mm.

■电容器端子的接线建议使用软铜线连接，剥头10~12mm，将剥好的线头用0.2mm厚的铜皮包裹一至两层后再连接，保证接触良好。连接线选取：15kvar以下产品用19/0.64规格的6mm²线；15~25kvar产品用49/0.52规格的10mm²线；25~30kvar产品用49/0.64规格的16mm²线；30~40kvar产品用25mm²线；40~50kvar产品用35mm²线。

Wiring of the capacitor terminal is recommended to use soft copper connection, stripping the first 10 ~ 12mm, stripping the thread with 0.2mm thick copper wrapped one to two layers and then connected to ensure good contact. 15kvar products with 19 / 0.64 specifications of the 6mm² line; 15 ~ 25kvar products with 49 / 0.52 specifications of 10mm² line; 25 ~ 30kvar products with 49 / 0.64 specifications of 16mm² lines; 30 ~ 40kvar products with 25mm² lines; 40 ~ 50kvar products with 35mm² line.

■在电容器电路中任何接触不良都会产生电弧而形成高频振荡，使电容器过热和过应力，因此，用户应对电容器补偿装置的所有触电进行定期检查。

Any bad contact in the capacitor circuit will produce an arc and the formation of high-frequency oscillation, the capacitor overheating and overstress, therefore, the user should capacitor compensation device for all electric shocks for regular inspection.

■接线方式Wiring

