



Technical Requirements to MCCB

塑壳断路器供货说明书

Molded case circuit breakers and other low-voltage switching equipment, as well as the requirements and tests for each specific type of low-voltage distribution and control equipment, are defined by two standards:

塑壳断路器和其他低压开关设备，以及每种特定类型的低压配电和控制设备的要求和测试，由两个标准定义：

- 1) "GOST IEC 60947-1"
- 2) "GOST IEC 60947-2".

A list of all parts of the IEC 60947 series, under the general title "Low Voltage Distribution and Control Apparatus", can be found on the IEC website.

IEC 60947 系列所有部件的列表，总标题为“低压配电和控制装置”，可在 IEC 网站上找到。

This standard applies to equipment intended for use in electrical circuits with a nominal voltage of up to 1000V AC or up to 1500 V DC.

本标准适用于额定电压高达 1000V AC 或高达 1500V DC 的电路中使用的设备。

This standard establishes rules and general safety requirements for equipment including:

- definitions;
- characteristics;
- information attached to the equipment;
- normal conditions of operation, installation and transportation;
- design and performance requirements;
- verification of performance and operating capability;
- environmental aspects.

本标准规定了设备的规则和一般安全要求，包括：

- 定义；
- 特征；
- 设备附带的信息；
- 操作、安装和运输的正常条件；
- 设计和性能要求；
- 性能和运行能力验证；

Additional requirements

附加需求

1 Requirements for raw materials and supplies

1.1 The manufacturer shall control the raw materials used for the production of switching devices by the methods used in the company.

1 原材料和用品要求

1.1 制造商应按照公司使用的方法控制用于生产开关器件的原材料，并提供所有产品零部件制造材料牌号和原材料名称

1.2 In case of changes of the raw materials and supplies used, the manufacturer shall coordinate these changes in an additional agreement to this contract.

1.2 如果所用原材料和供应品发生变化，制造商应在本合同的附加协议中对这些变化进行协调。

1.3 The quality of raw materials and supplies must ensure trouble-free operation of the switching devices during the entire service life specified in the passport.

原材料和用品的质量必须确保开关设备在护照规定的整个使用寿命内无故障运行。

1.4 The mechanical life of the circuit breakers shall be not less than:

- Circuit breakers for rated current from 10A to 125A: durability of not less than 15000 cycles.
- Circuit breakers for rated current from 16A to 160A: durability of not less than 15000 cycles.
- Circuit breakers for rated current from 100A to 250A: durability not less than 15000 cycles.
- Circuit breakers for rated current from 250A to 400A: durability not less than 15000 cycles.
- Circuit breakers for rated current from 500A to 630A: durability not less than 10000 cycles.
- Circuit breakers for rated current from 500A to 800A: durability not less than 8000 cycles.
- Circuit breakers for rated current from 630A to 1250A: durability not less than 8000 cycles.
- Circuit breakers with rated current from 1000A to 2000A: durability not less than 8000 cycles.

1.4 断路器的机械寿命应不小于：

- 额定电流为 10A 至 125A 的断路器：耐久性不低于 15000 次循环。
- 额定电流为 16A 至 160A 的断路器：耐久性不低于 15000 次循环。
- 额定电流为 100A 至 250A 的断路器：耐久性不低于 15000 次循环。
- 额定电流为 250A 至 400A 的断路器：耐久性不低于 15000 次循环。
- 额定电流为 500A 至 630A 的断路器：耐久性不低于 10000 次循环。
- 额定电流为 500A 至 800A 的断路器：耐久性不低于 8000 次循环。

If the technology does not meet the requirements, the supplier will be fully responsible for any after-sales issues. The after-sales service is valid for 2 years from the date of purchase, and each product will have a production serial number that can be traced back to the manufacturing time to ensure after-sales service issues.

如果技术不符合需求，将产生售后问题由供应商全权负责，售后有效期为产品购买日 2 年内，每只产品会有 1 个产品生产序列号，可追溯产品制造时间，以确保售后服务问题。

3.Nameplate Design requirements

- The handle shall be labeled with the switch status, the closed and release positions shall be indicated respectively by symbols according to IEC 60417-2.

- The sticker on the device shall contain information on:

1. Model name of the circuit breaker
2. Rated operating voltage (Ue) and frequency
3. Rated insulation voltage (Ui)
4. Rated impulse withstand voltage (Uimp)
5. Rated operating current (In)
6. Rated breaking capacity (Icu) at voltage AC380/400/415V
7. Rated operating breaking capacity (Ics) at AC380/400/415V
8. Rated breaking capacity (Icu) at voltage AC660/690V
9. Rated operating breaking capacity (Ics) at voltage AC660V
10. Category of application
11. Country of manufacture
12. Reference standard
13. Marking ability to disconnection
14. Customer brand marking

3.铭牌设计要求

-手柄应标有开关状态，闭合位置和释放位置应根据 IEC 60417-2 分别用符号表示。

-设备上的标签应包含以下信息：

- 1.断路器型号名称
- 2.额定工作电压（Ue）和频率
- 3.额定绝缘电压（Ui）
- 4.额定冲击耐受电压（Uimp）
- 5.额定工作电流（In）
- 6.电压 AC380/400/415V 下的额定分断能力（Icu）
- 7.电压 AC380/400/415V 下的额定操作分断能力（Ics）
- 8.电压 AC660/690V 时的额定分断能力（Icu）
- 9.AC660V 电压下的额定操作分断能力（Ics）
- 10.应用类别
- 11.制造国

12. 技术参考标准 IEC 60947-1

13. 断开标记能力

14. 客户品牌标识

如图所示：



- The sticker on the individual package shall contain information on:

1. Model:WLM6-250-3300
2. Rated operating current (In)
3. AC380/400/415V (Icu)
4. Series No.:DMY25
5. Country of manufacture: Made in China
6. Techniqic standard:IEC 60947-17.
7. Customer brand marking

-单个包装上的标签应包含以下信息：并用英文/俄语做标识，使用不干胶贴

- 1.断路器型号名称
- 2.额定工作电流 (In)
- 3.电压 AC380/400/415V 时的额定分断能力 (Icu)
- 4.生产日期
- 5.制造国
- 6.参考标准

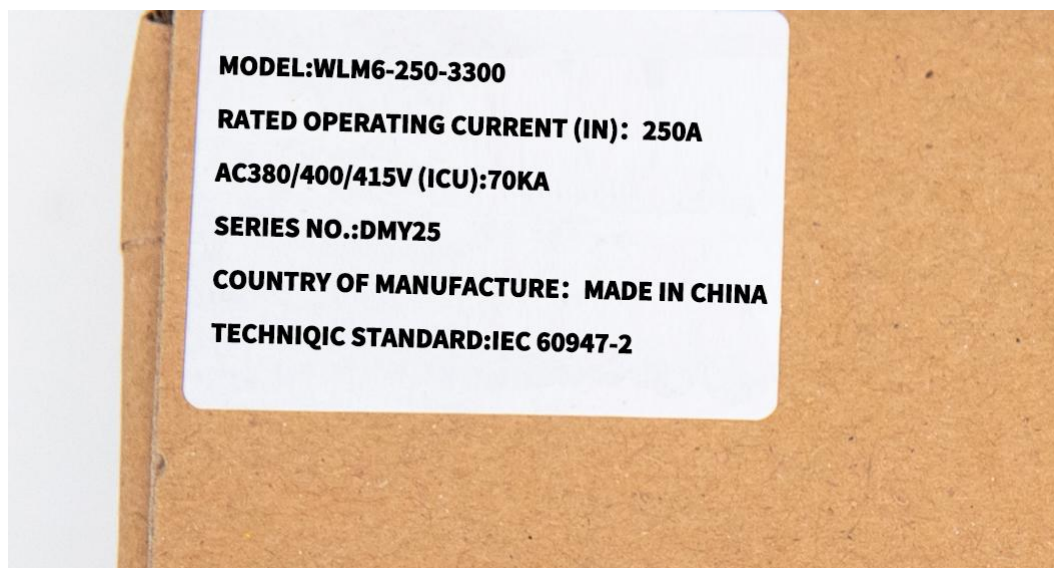
生产序列号规则代码：

Year	Year code	Month	Month code
------	-----------	-------	------------

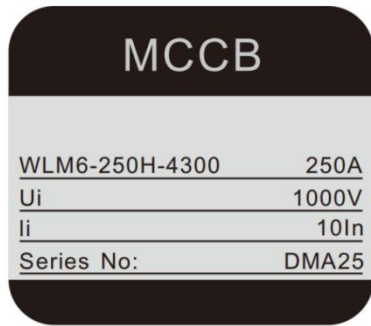
2021	A	1	JA
2022	B	2	FE
2023	C	3	MA
2024	D	4	AP
2025	E	5	MY
2026	F	6	JU
2027	G	7	JL
2028	H	8	AU
2029	I	9	SE
2030	J	10	OC
2031	K	11	NO
2032	L	12	DE

Example: 如：2024 年 5 月 25 日制作的，Produced on May 25, 2024, 为：DMY25

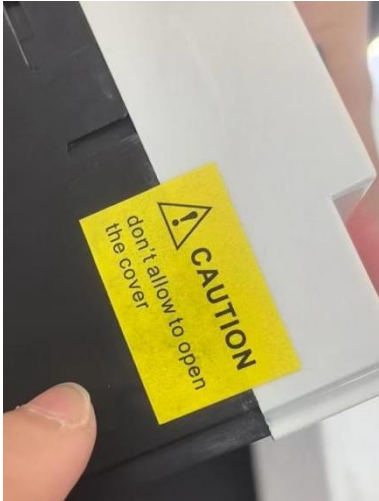
如图所示：



如图所示： check the picture



-每个产品中盖和上盖之间贴一个黄色警告侧帖，



Place a yellow warning sticker between the middle and upper covers of each product,

- The sticker on the total package shall contain information on:

1. Circuit breaker model name
2. Production date serial number
3. Number of circuit breakers in the packaging
4. Country of manufacture: Made in xxx
5. Technical reference standards: IEC 60947-17.

Note: Specific countries need to be negotiated with customers

注意：具体国家需和客户协商

-客户品牌外箱贴标识

总包装上的标签应包含以下信息：

- 1.断路器型号名称

- 2.生产日期序列号
- 3.包装中的断路器数量
- 4.制造国
- 5.技术参考标准

4 Requirements for accompanying documentation

4.1. All assembled molded case circuit breakers are required to be accompanied by an instruction manual, testing report, containing the complete order code, date of manufacture and QC (Quality Control) stamp.

4 随附文件的要求

4.1. 所有组装好的塑壳断路器都需要附有说明书、测试报告，其中包含完整的订单代码、生产日期和 QC（质量控制）印章。如图所示：



4.2. 所有断路器都需要符合 IEC 60947-1、60947-2 的 3D 模型、订单代码、测试报告和国际或当地合格证书。

4.2. 3D models, order codes, test reports and international or local certificates of conformity to IEC 60947-1, 60947-2 are required for all circuit breakers.

5. Packaging and labeling

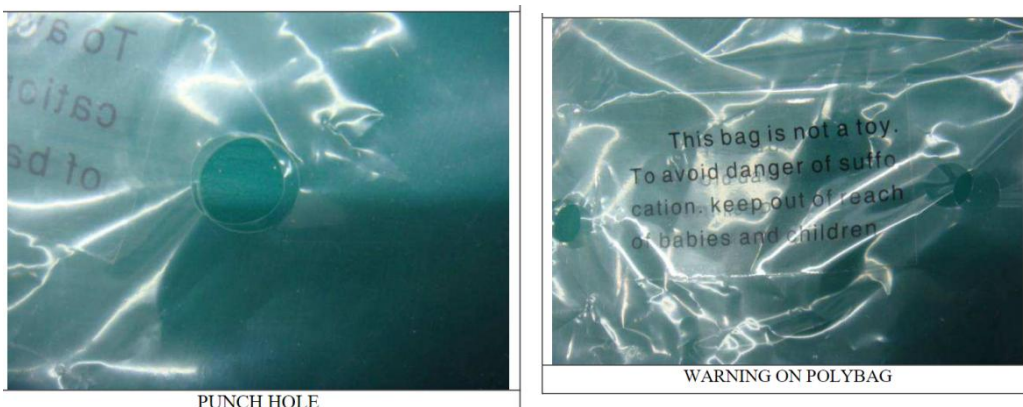
5.1 Each molded case circuit breaker shall be packaged in a polyethylene package with pc

5.2 A sticker or engraving on the device as well as a sticker on the packaging shall be added as specified by the Buyer. The Buyer shall provide the final stickers within some time after the order has been placed with the Supplier. If the Supplier does not have stickers for the device, or if the order for the device is placed for the first time, the Supplier shall notify the Buyer of the need for stickers.

5.包装和标签

5.1 每个塑壳断路器应包装在带有 pc 的聚乙烯包装中。pc 袋子需要打 2 个洞，符合欧盟 rohs 标准，如图所示，

This bag is not a toy, To avoid danger of suffocation. keep out of reach of babies and children



5.4 所有木箱包装的产品，全部使用出口专用免熏蒸木头



5.2 包装应为带有聚乙烯泡沫的纸箱，以防止在运输过程中损坏设备。

5.3 When placing an order for device accessories, the Supplier shall ensure that each accessory is packaged and labeled separately (also according to the Buyer's requirements).

5.4 All products packaged in wooden boxes shall be made of export specific fumigation free wood

5.5 When ordering equipment accessories, the supplier should ensure that each MCCB's internal accessories are labeled with pure English or Russian product labels, packaged separately in PC plastic bags, and labeled with self-adhesive labels for product identification purposes (which should also meet the buyer's requirements). Product identification using customer code, such as shunt release ac230V,

Model: SHT-400L

Working voltage: AC230V

SHT represents division of excitation, please refer to the sample book for other representative codes. L represents left installation, R represents right installation,

5.3 在订购设备附件时，供应商应确保每个 mccb 的内部附件，产品上面需贴纯英文或者俄罗斯语产品贴，单独包装使用 pc 塑料袋，并贴上不干胶标签做产品识别用（也应符合买方的要求）。产品识别使用客户代码，如分励脱扣器 ac230V，

Model: SHT-400L

Working voltage: AC230V

SHT 代表分励，其他代表代码请看样本册，L 代表左装，R 代表右装，