

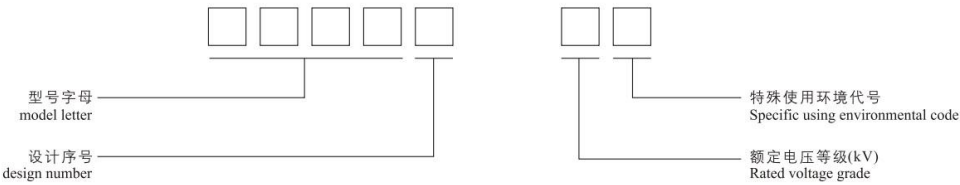
互感器是电力系统中重要的电器设备之一，它和电力变压器相似，也是用来转换线路的电压或电流。但是，电力变压器转换电压和电流的目的，在于传递电能，互感器转换电压或电流的目的，在于测量和监视线路的电压或电流。一般说来，电力变压器的容量大，电压或电流的变化误差也大，互感器的容量小，电压或电流的变化误差则较小。在测量线路中，用来转换电流，向电流仪表和继电器供电的互感器叫做电流互感器，用来转换电压，向电压仪表和继电器供电的互感器叫做电压互感器。

The transformer is one of important electrical appliances in electric system. It's similar to power transformer and also used to transform voltage or current in the circuit. However, transforming voltage and current by power transformer aims at transferring electric energy while transforming voltage and current by transformer aims at measuring and monitoring voltage or current in the circuit. Generally, power transformer owns large capacity as well as large change difference of voltage or current. While transformer owns small capacity as well as smaller change difference of voltage or current. In measuring circuit, the transformer that transforms current and supplies electricity for current meter and relay is called current transformer. The transformer that transforms voltage and supplies electricity for voltage meter and relay is called voltage transformer.

型号含义 Model definition

电流互感器和电压互感器的型号组成为两部分，前一部分为产品型号字母和设计序号，后一部分为额定电压等级(KV)和特殊使用环境代号。(型号字母含义附后)

The model composition of current transformer and voltage transformer is divided into two parts. The first part is product model letter and design number and the latter part is rated voltage grade (KV) and specific using environment code. (the definition of model letter is shown as below)



互感器特殊使用环境代号 Specific using environment code of transformer

- 1.高原地区用代表符合：“GY”

2.污秽地区用代表符号见表1

3.腐蚀地区用代表符号：“F”

4.干热带地区用代表符合：“TA”

5.湿热带地区用代表符合：“TH”

6.干、湿热带地区用代表符合：“T”

7.温升限值比标准规定限值降低5K以上时，用“WS”表示。
1. Code of using in highland area:"GY"

2. See the below table for code of using in polluted area

3. Code of using in currosive area:"F"

4. Code of using in dry tropic region:"TA"

5. Code of using in wet tropic region:"TH"

6. Code of using in dry-wet tropic region:"T"

7. "WS" denotes the occasion that temperature rise limit value is 5K lower than standard stipulated value

表1

污秽地区使用代表符号 Using representative symbol of polluted area	GB5582-85中规定 Stipulated in GB5582-85	
	污秽等级 Polluted area class	最小公称爬电比距(mm/kV) Min nominal creepage distance
—	0	14.8
—	I	16
W1	II	20
W2	III	25
W3	IV	31

互感器的分类 Transformer assortment

- 1.按原理分类：电压互感器可分为电容式电压互感器和电磁式电压互感器；电流互感器均为电磁式电流互感器。
- 2.按绕组外绝缘介质分类，有干式、浇注式、油浸式和充气式(SF6)。
- 3.按用途分类：可分为电压互感器、电流互感器两大类，又可分为测量用、保护用、特殊用途及精密型四类。
- 4.按安装地点分类：可分为户内式和户外式两种。
- 5.电压互感器按相数分类：可分为单相、三相两种。
- 6.电压互感器按绕组数分类：有双绕组、三绕组两种。
- 7.电流互感器按安装方式分类：有穿墙式、支持式和装入式三种。
- 8.电流互感器按电流比分类：有单变比、多变比两种。
- 1. According to principle, the voltage transformer can be sorted into capacitor type voltage transformer and electromagnetic type voltage transformer. Current transformer is the one of electromagnetic type.
- 2. According to winding external insulation medium, transformer can be sorted into dry type, pouring type, oil-immersed type and inflating type.
- 3. According to function, transformer can be sorted into voltage transformer and current transformer. It also can be sorted into four types: for measurement, for protection, special purpose and precision type.
- 4. According to installation site, transformer can be sorted into indoor type and outdoor type.
- 5. According to the number of phase, voltage transformer can be sorted into single-phase and three-phase types.
- 6. According to the number of winding, voltage transformer can be sorted into double-winding and three-winding types.
- 7. According to the mode of installation, current transformer can be sorted into through-wall type, support type and built-in type.
- 8. According to current ratio, current transformer can be sorted into single transformation ratio and multiple transformation ratio type.

适用工作条件 Applicable working conditions

- 1.海拔高度不超过1000米。（高原地区使用时，请提供海拔高度）
- 2.周围气温最大变化不超过-30℃到40℃（特殊要求时，请在订货时注明）
- 3.普通型产品用在相对湿度不大于85%的地区。
- 4.安装场所无严重影响互感器绝缘的气体、蒸汽、化学性沉积、灰尘污垢及其他爆炸性和侵蚀性介质，并无严重的震动和颠簸。
- 1. The altitude is not above 1000m. (Please indicate altitude if it is used in highland area)
- 2. Max. change of environmental temperature doesn't exceed -30℃ to 40℃. (If there is any requirement, please indicate in the order.)
- 3. Ordinary products can be used in the area with relative humidity not above 85%.
- 4. There is no gas, steam, chemical sedimentation, dust or dirt or other explosive and corrosive medium that seriously affect transformer at installation site. There is no serious vibration or bump, either.

引用标准 Cited standard

- GB1207-2006 《电压互感器》
- GB1208-2006 《电流互感器》
- ZBY096-1982 《精密电压互感器技术条件》
- ZBY097-1982 《精密电流互感器技术条件》
- GB311.1-1997 《高压输变电设备的绝缘配合》
- GB17201-1997 《组合互感器》
- GB1207-2006 Voltage Transformer
- GB1208-2006 Current Transformer
- ZBY096-1982 Technical Conditions of Precise Voltage Transformer
- ZBY097-1982 Technical Conditions of Precise Current Transformer
- GB311.1-1997 Insulation Coordination of High Voltage Transforming Equipment
- GB17201-1997 Combined Transformer

注意事项 Precautions

- 1.电流互感器一次有电流通过时，二次绕组不得开路，否则有高压产生，对产品性能亦有影响；
- 2.电压互感器二次绕组不得短路，否则互感器将被烧毁；
- 3.一次绕组的重复工频耐压，试验应在规定试验电压值的 80%下进行。

- 1.While the primary current goes through current transformer, the open circuit of secondary winding is not allowed, otherwise high voltage will produce and affect the performance of product.
- 2.The short circuit of secondary winding of voltage transformer is not allowed, otherwise the transformer will be burned.
- 3.The repeated power frequency withstand voltage test of primary winding shall be conducted under 80% of stipulated test voltage value.

附:互感器型号字母含义 Type and implication of transformer

序号 Code	字母含义 Letter implication	代表字母 Letter	序号 Code	字母含义 Letter implication	代表字母 Letter
1	电流互感器 Current transformer	L	1	电压互感器 Voltage transformer	J
2	母线式 Bus-type	M	2	单相 Single-phase	D
	贯穿复匝式 Compound turn through type	F		三相 Three-phase	S
	贯穿单匝式 Single turn through type	D		串级结构 Cascading structure	E
	线圈式 Coil type	Q		浇注式 Cast-resin type	Z
	穿墙式 Penetrating wall type	A	3	油浸式 Oil-immersed type	J
	支持式 Support type	B		浇注绝缘 Cast-resin insulated	Z
	支座式 Seat type	Z		干式绝缘 Dry-type insulated	G
	装入式 Built-in type	R		六氟化硫绝缘 SF6 insulated	F
	手车式 Handcart type	C		气体绝缘 Air insulated	Q
	接地保护 Earthing protection	J		户外 Outdoor	W
3	低压 Low voltage	Y	4	接地保护 Earthing protection	J
	浇注绝缘 Cast-resin insulated	Z		保护用 Used for protection	B
	瓷绝缘 Porcelain insulated	C		带剩余(零序)绕组 With residual winding (zero sequence)	X
	塑料外壳 Plastic enclosure	K		五柱 Five-leg	W
	户外式 Outdoor type	W		测量和保护分开的二次绕组 Measuring winding that is separated from protective winding	F
	母线式 Bus-type	M		V形接线 V-shaped wiring	V
	干式 Dry-type	G		"串"级式带剩余(零序)绕组 With residual(zero-sequence)winding of series connection type	C
	加强式 Extension type	Q	5	五柱三线圈 Five-leg three-coil	W
	小体积柜用 For small volume cupboard using	X		测量和保护分开的二次绕组 Measuring winding that is separated from protective winding	F
	手车柜用 For handcart switch cupboard using	S		不带金属膨胀器 Without metal expander	N
	差动作用 Differential protection	D			
4	加强型 Reinforced type	Q	5	防污型爬电比距>20mm/kv Dirt proof type creepage distance	
	铝线式 Aluminium wire type	L		防污型爬电比距>25mm/kv Dirt proof type creepage distance	
	加大容量 Extension output	J		高原型适用于高海拔地区 Highland type applicable for high altitude region	
	差动保护用 Differential protection used for	D		干热型适用于干热地区 Dry heat type applicable for drying heat region	
	保护用 Used for protection	N		湿热型适用于湿热地区 Wet heat type applicable for wet heat region	
	双变比以上 Double transformation ratio over	S		干、湿热带地区 Dirt and wet tropic region	
	差动保护 Differential protection	C			