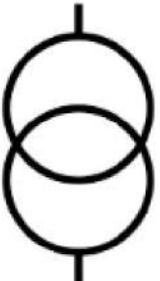


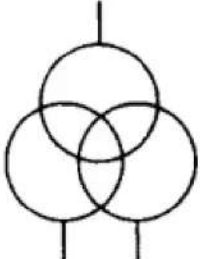

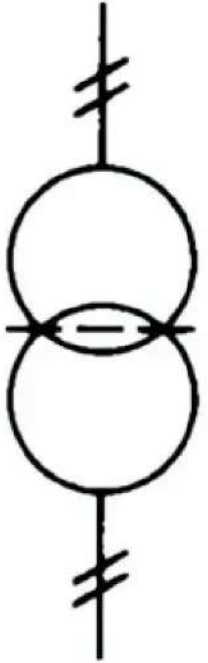
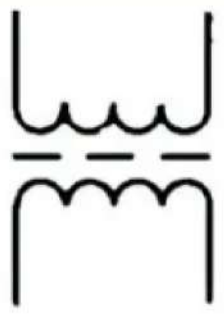
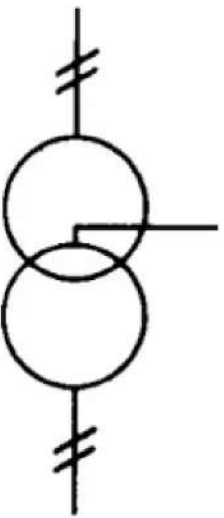
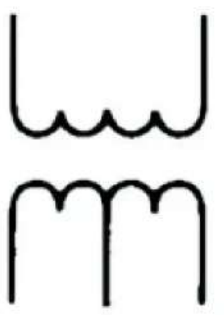
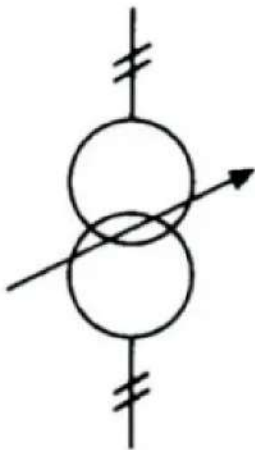
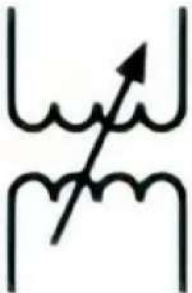


Transformer Symbols (based on IEC and IEEE standarts)


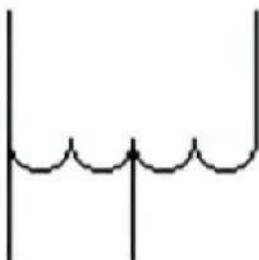
General symbols


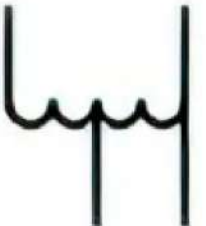

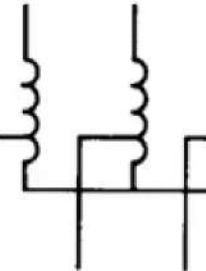
Symbol	Description
	<p>Name: Transformer with two windings, general symbol. Form 1.</p> <p>Source: IEC 60617-2019, IEC 60417-2020, IEEE Std 315-1993</p>
	<p>Name: Transformer with two windings, general symbol. Form 2.</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Transformer with two windings (and instantaneous voltage polarity indicators). Form 2.</p> <p>Remarks: Instantaneous currents entering the marked ends of the windings produce aiding fluxes.</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Transformer with three windings, general symbol. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Transformer with three windings, general symbol. Form 2.</p> <p>Source: IEC 60617-2019</p>

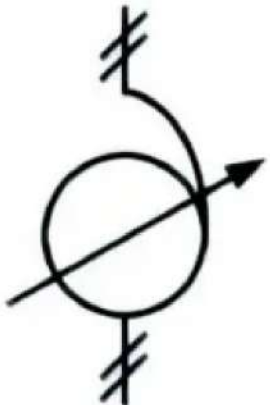
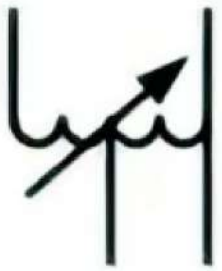
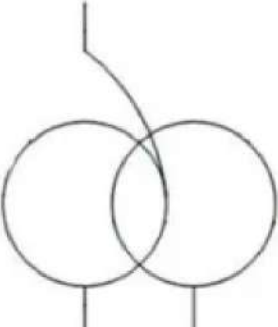
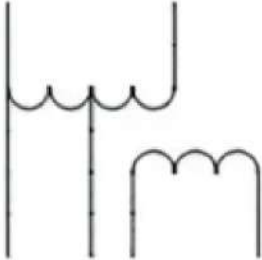
	<p>Name: Transformer with two windings and screen. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Transformer with two windings and screen. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Transformer with centre tap on one winding. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Transformer with centre tap on one winding. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

	<p>Name: Transformer with variable coupling. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Transformer with variable coupling. Form 2.</p> <p>Source: IEC 60617-2019</p>

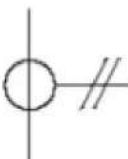

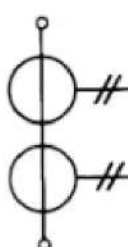
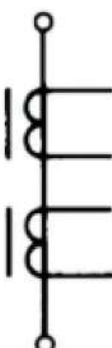
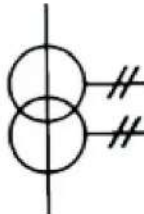
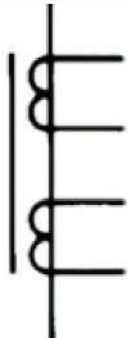
Autotransformer Symbols

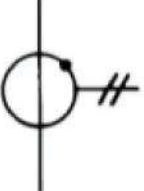

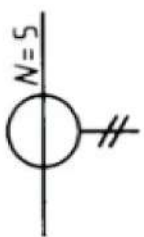

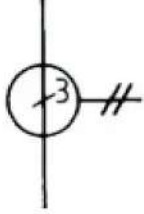
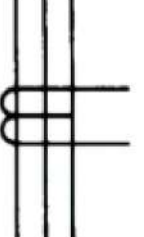
Symbol	Description
	<p>Name: Autotransformer, general symbol. Form 1.</p>
	<p>Name: Autotransformer, general symbol. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

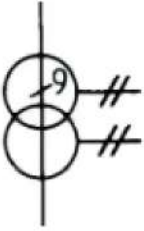
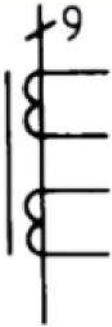
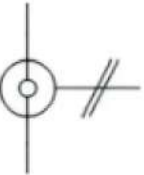
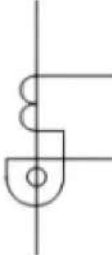
	<p>Name: Autotransformer, single-phase. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Autotransformer, single-phase. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Autotransformer, three-phase, connection star. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Autotransformer, three-phase, connection star. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

	<p>Name: Autotransformer, single-phase with voltage regulation. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Autotransformer, single-phase with voltage regulation. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Autotransformer with tertiary winding, general. Form 1.</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Autotransformer with tertiary winding, general. Form 2.</p> <p>Source: IEC 60617-2019</p>

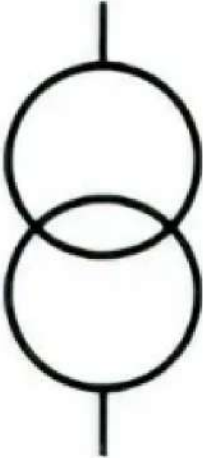
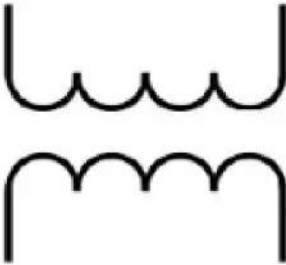
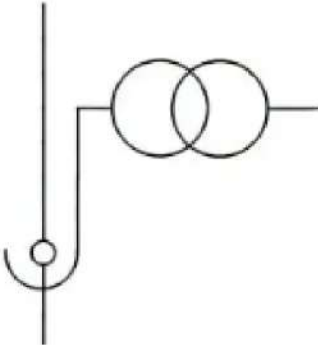
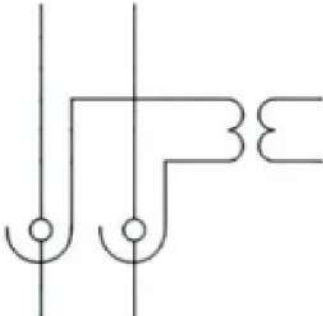
Current Transformer Symbols

Symbol	Description
	<p>Name: Current transformer, general symbol. Form 1.</p> <p>Alternative name: Pulse transformer</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer, general symbol. Form 2.</p> <p>Alternative name: Pulse transformer</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with two cores with one secondary winding on each core. Form 1.</p> <p>Remarks: The terminal symbols shown at each end of the primary circuit indicate that only a single device is represented. The terminal symbols may be omitted if terminal designations are used.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with two cores with one secondary winding on each core. Form 2.</p> <p>Remarks: The terminal symbols shown at each end of the primary circuit indicate that only a single device is represented. The terminal symbols may be omitted if terminal designations are used. In form 2, core symbols may be omitted.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with two secondary windings on one core. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with two secondary windings on one core. Form 2.</p> <p>Remark: In form 2, the core symbol shall be drawn</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

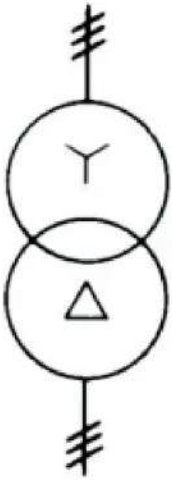
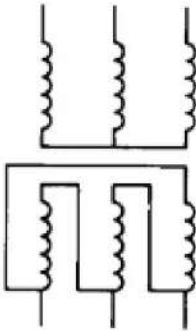

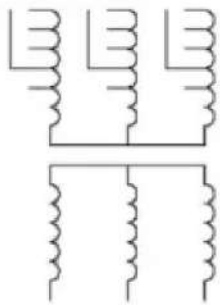
	<p>Name: Current transformer with one secondary winding with one tap. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with one secondary winding with one tap. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with five passages of a conductor acting as a primary winding. Form 1.</p> <p>Remarks: This kind of current transformer has no built-in primary winding</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Current transformer with five passages of a conductor acting as a primary winding. Form 2.</p> <p>Remarks: This kind of current transformer has no built-in primary winding</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Pulse or current transformer with three threaded primary conductors. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Pulse or current transformer with three threaded primary conductors. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

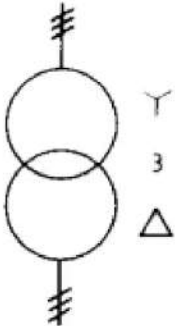
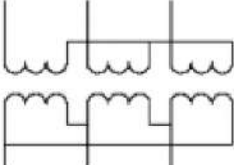
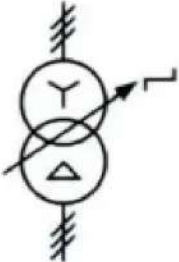
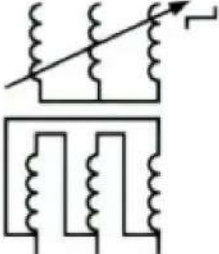
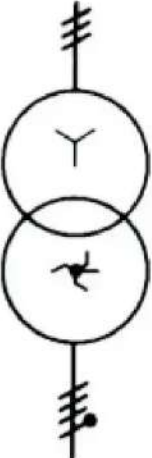
	<p>Name: Pulse or current transformer with two secondary windings on the same core. Form 1.</p> <p>Remark: Shown with nine threaded primary conductors</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Pulse or current transformer with two secondary windings on the same core. Form 2.</p> <p>Remark: Shown with nine threaded primary conductors</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Bushing type current transformer. Form 1.</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Bushing type current transformer. Form 2.</p> <p>Source: IEC 60617-2019</p>

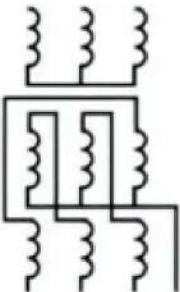
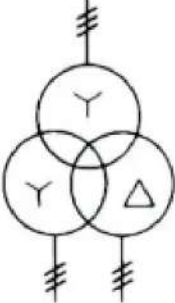
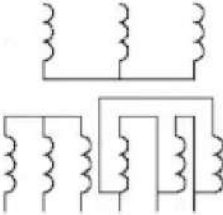
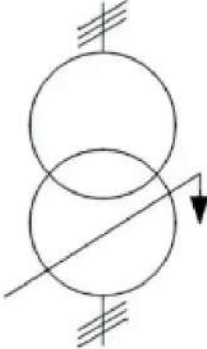
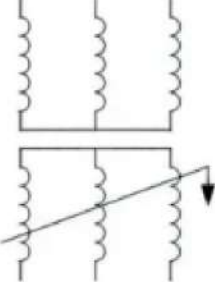
Voltage Transformer Symbols

Symbol	Description
	<p>Name: Voltage transformer. Form 1.</p> <p>Alternative name: Measuring transformer</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Voltage transformer. Form 2.</p> <p>Alternative name: Measuring transformer</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Bushing type voltage transformer. Form 1</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Bushing type voltage transformer. Form 2</p> <p>Source: IEC 60617-2019</p>

Symbols of Three-Phase Transformers

Symbol	Description
	<p>Name: Three-phase transformer, connection star-delta. Form 1.</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Three-phase transformer, connection star-delta. Form 2.</p> <p>Source: IEC 60617-2019</p>
	<p>Name: Three-phase transformer with four taps, connection: star-star. Form 1.</p> <p>Remarks: Each primary winding is shown with four available connection points in addition to those at the winding-ends.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase transformer with four taps, connection: star-star. Form 2.</p> <p>Remarks: Each primary winding is shown with four available connection points in addition to those at the winding-ends.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

	<p>Name: Three-phase bank of single-phase transformers, connection star-delta. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase bank of single-phase transformers, connection star-delta. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase transformer with tap changer. Form 1.</p> <p>Remark: On-load tap changer, connection star-delta.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase transformer with tap changer. Form 2.</p> <p>Remark: On-load tap changer, connection star-delta.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase transformer, connection star-zigzag with the neutral brought out. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>

	<p>Name: Three-phase transformer, connection star-zigzag with the neutral brought out. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase transformer, connection star-star-delta. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Three-phase transformer, connection star-star-delta. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-1993</p>
	<p>Name: Phase-shifting transformer, three-phase. Form 1.</p> <p>Source: IEC 60617-2019, IEEE Std 315-19</p>
	<p>Name: Phase-shifting transformer, three-phase. Form 2.</p> <p>Source: IEC 60617-2019, IEEE Std 315-19</p>