

# ATO

[www.steptransformer.com](http://www.steptransformer.com)

**Transformer Supplier in China**

Designing and providing step up and down transformers



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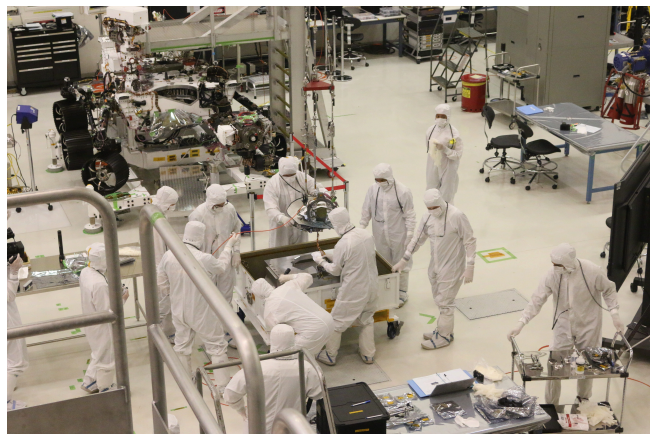
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# ATO

## About ATO

Step up & down Transformer Supplier in China

ATO, a custom step up and down transformer manufacturer with decades of experience in designing and building power transformers for many industries. We provides good quality step up and down transformers, such as isolation transformers, toroidal transformers, control transformers and autotransformers. Our step up transformer and step down transformer are widely used in agriculture, transportation, urban communities and other fields.



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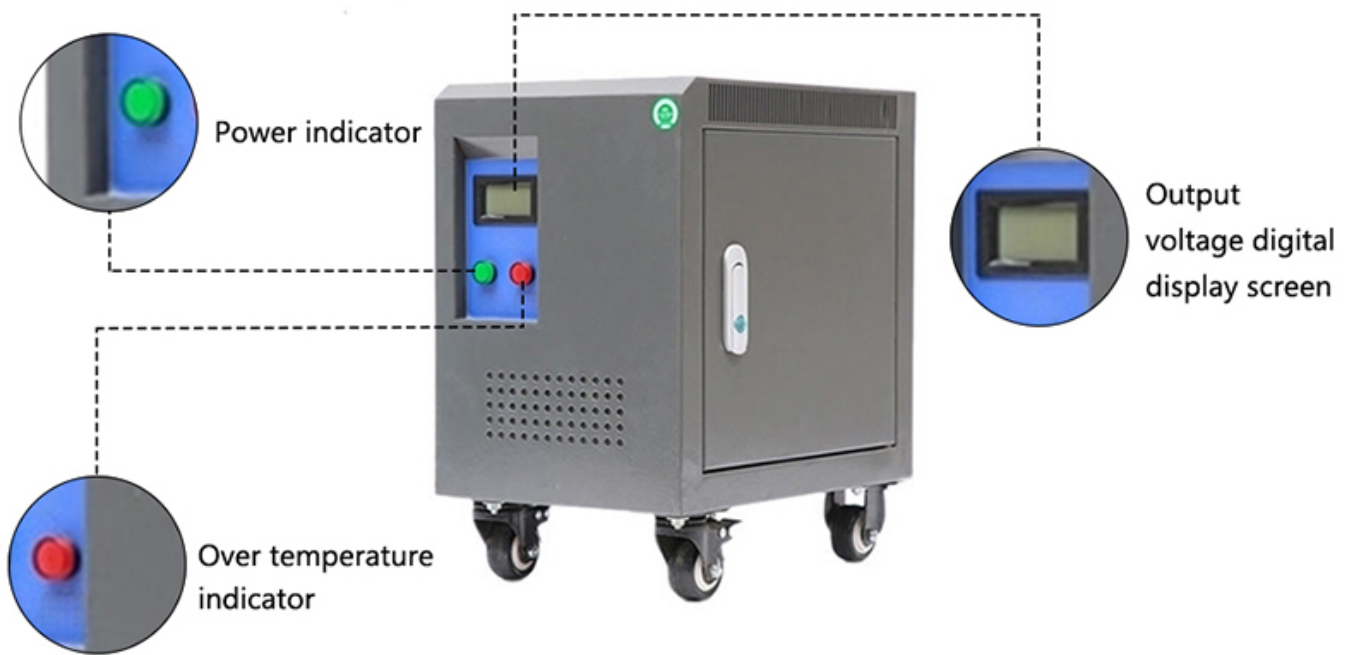
### Hgcwt gu:

- Heat dissipation holes and fans.
- Two-color indicator.
- High temperature resistant enameled wire.
- Oriented silicon steel sheet.
- Long-term continuous work.
- Universal casters.

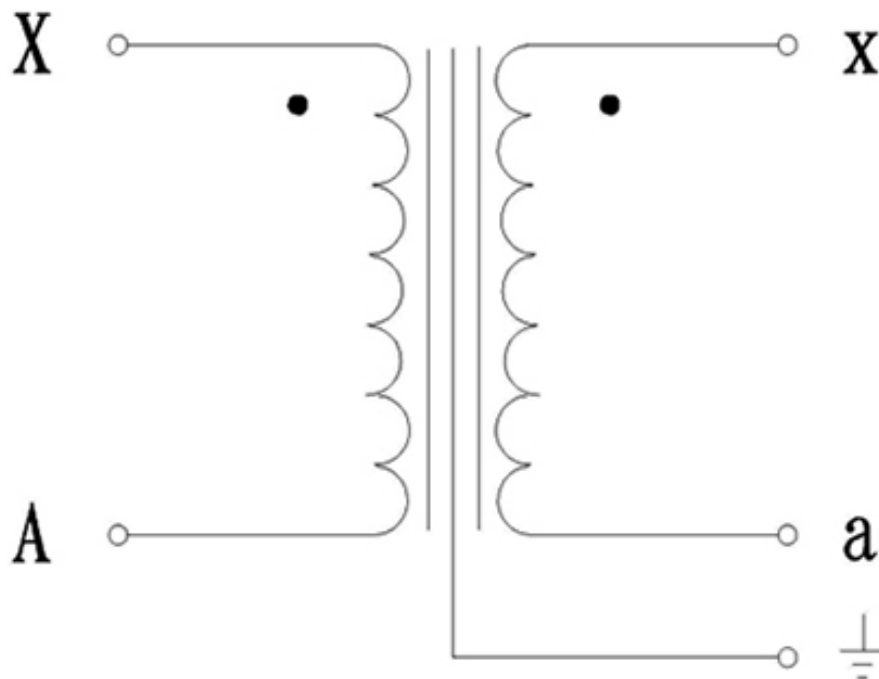
### Ur gekkccvkkp<

<b>Dcukc Ur gekkccvkkpu</b>	<b>O qf gn</b>	ATO-DG
	<b>Rj cug</b>	single phase
	<b>Ecr cckv{</b>	500 VA, 800 VA, 1 kVA, 2 kVA, 3 kVA, 4 kVA, 5 kVA, 8 kVA, 10 kVA, 15 kVA, 20 kVA, 30 kVA
	<b>Y lpf lpi O cvgtken</b>	Aluminum/Copper wire (Optional)
	<b>Ht gs wgp{</b>	50Hz/60Hz
	<b>Y qt mGhkelgpe{</b>	≥95%
	<b>Rt ko ct{ Xqnci g</b>	110V/120V/208V/220V/230V/240V AC
	<b>Ugeqpf ct{ Xqnci g</b>	110V/120V/208V/220V/230V/240V AC
<b>Vgej plccn Ur gekkccvkkpu</b>	<b>Eqqrkpi O qf g</b>	natural or air cooling
	<b>Kpuwccvkkp Tgukccpeg</b>	≥50 MΩ
	<b>Ggevt kccnUvt gpi vj</b>	2000V AC/1 min
	<b>P qkug</b>	≤35 dB (1 meter)
	<b>Kpuwccvkkp I tcf g</b>	Grade B (130°C), Grade F (155°C), Grade H (180°C)
	<b>Qxgt mcf Ecr cckv{</b>	Allow more than 1.2 times rated load to work for up to 1 hour
	<b>Kpf weg{ Qxgt xqnci g Y kj uccpf Vguv</b>	125Hz/800V/min
	<b>Ko r gf cpeg Xqnci g</b>	About 6%
	<b>VqvcnNquugu</b>	10%
	<b>Vgo rgt cwt g</b>	-15 °C ~ +45 °C
	<b>Gpccmwt g Rt qvccvkkp I tcf g</b>	IP20
	<b>Egt vkkccvkkp</b>	CE, ISO
	<b>Y ct tccpv{</b>	12 months

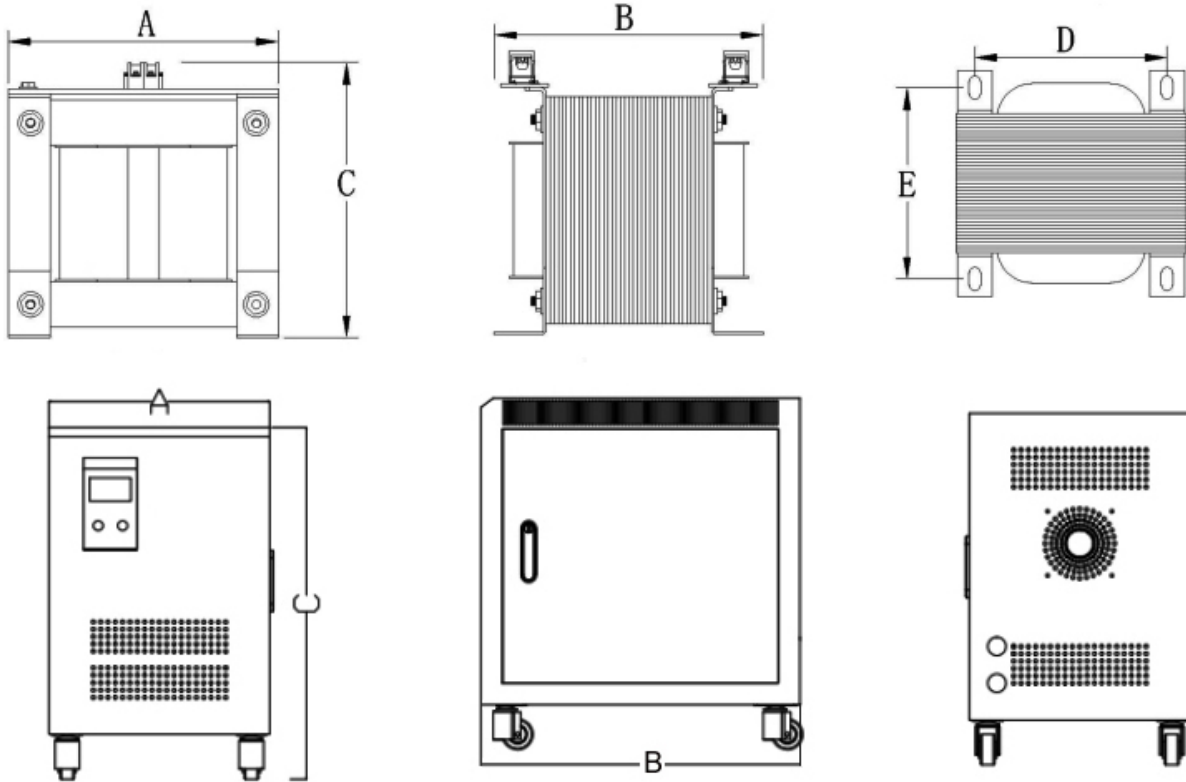
### Single Phase Isolation Transformer Detail:



### Single Phase Isolation Transformer Schematic Diagram:



Dimension (Unit: mm)



	Without Enclosure	Mouting Size	With Enclosure
Aluminium Wire Transformer Size	$a*b*c=150*160*180\text{mm}$	$D*E=120*115\text{mm}$	$A*B*C=250*360*420\text{mm}$
Copper Wire Transformer Size	$a*b*c=132*140*150\text{mm}$	$D*E=100*110\text{mm}$	$A*B*C=200*320*420\text{mm}$

(Take 500 VA single phase isolation transformer as an example. For more information about the model parameters, please contact us.)



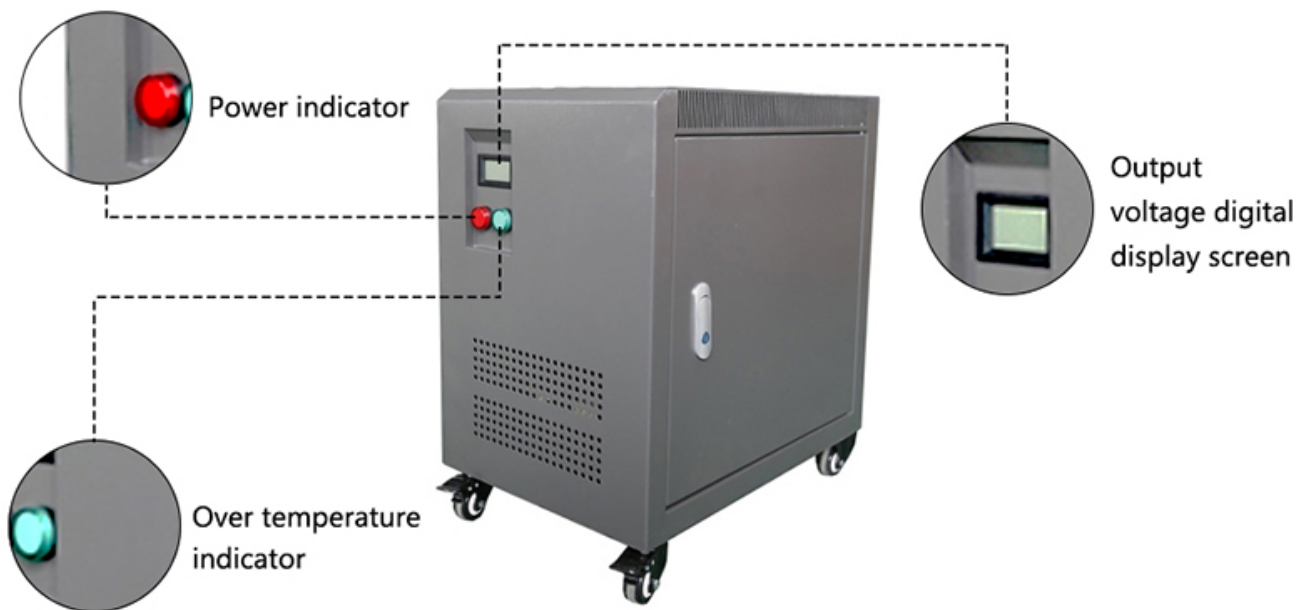
### Features:

- Strong overload capability, low temperature rise design.
- Strong resistance to short circuit, used electrician laminated wood.
- Strong weather resistance.

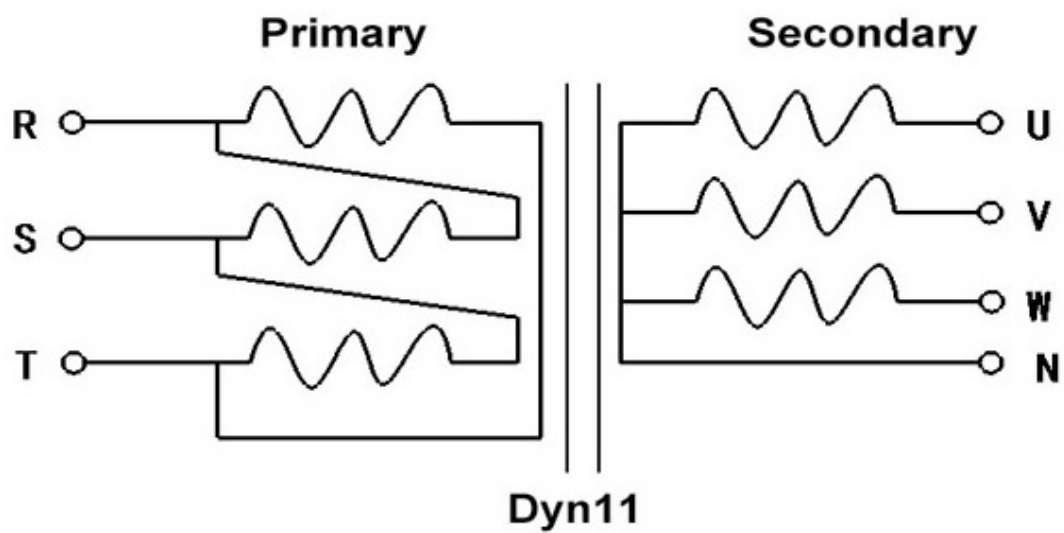
### Specification:

<b>Basic Parameters</b>	<b>Model</b>	ATO-SG
	<b>Phase</b>	3 phase
	<b>Capacity</b>	4kVA/5kVA/6kVA/7kVA/8kVA/10kVA/15kVA/20kVA/25kVA/30kVA/40kVA/45kVA/50kVA/60kVA/75kVA/80kVA/100kVA/150kVA/200 kVA/300 kVA
<b>Technical Parameters</b>	<b>Primary Voltage</b>	120V/190V/208V/220V/230V/240V/380V/400V/415V/480V
	<b>Secondary Voltage</b>	120V/190V/208V/220V/230V/240V/380V/400V/415V/480V
	<b>Frequency</b>	50Hz / 60 Hz
	<b>Winding Material</b>	Aluminium/Copper wire (Optional)
	<b>Work Efficiency</b>	≥95%
	<b>Insulation Resistance</b>	≥50 MΩ
	<b>Electrical Strength</b>	3000V AC/1 min
	<b>Noise</b>	<35-65 dB (1 meter)
	<b>Insulation Grade</b>	H level
	<b>Wiring Mode</b>	Dyn11
	<b>Cooling Mode</b>	Dry type air cooling
	<b>Overload Capacity</b>	Allow more than 1.2 times rated load to work for up to 4 hours
	<b>Enclosure Protection Grade</b>	IP 24
	<b>Certificate</b>	CE, ISO
	<b>Temperature</b>	-15 °C ~ +40 °C
<b>Humidity</b>	≤90%RH, without condensation	
<b>Altitude</b>	<1000m, non corrosive gas and conductive dust	

### 3 Phase Isolation Transformer Detail:

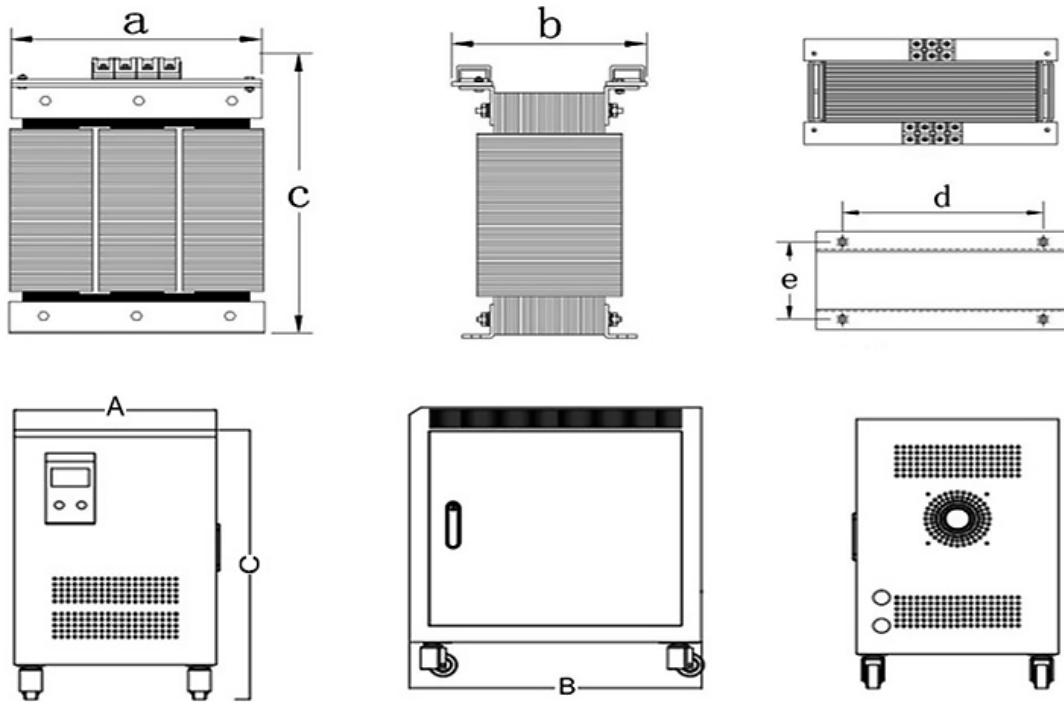


### 3 Phase Isolation Transformer Wiring Method:





### Dimension (Unit: mm)



Aluminium Wire Transformer Size	Copper Wire Transformer Size
Open type: a*b*c=300*155*310 mm	Open type: a*b*c=300*155*310 mm
Mouting size: d*e=180*125 mm	Mouting size: d*e=180*125 mm
Protected type: A*B*C=300*440*500 mm	Protected type: A*B*C=300*440*500 mm

(Take 4 kVA 3 phase isolation transformer as an example. For more information about the model parameters, please contact us.)



### Features:

- Heat dissipation holes and fans.
- High temperature resistant enameled wire.
- Oriented silicon steel sheet.
- Long-term continuous work.
- Universal casters.

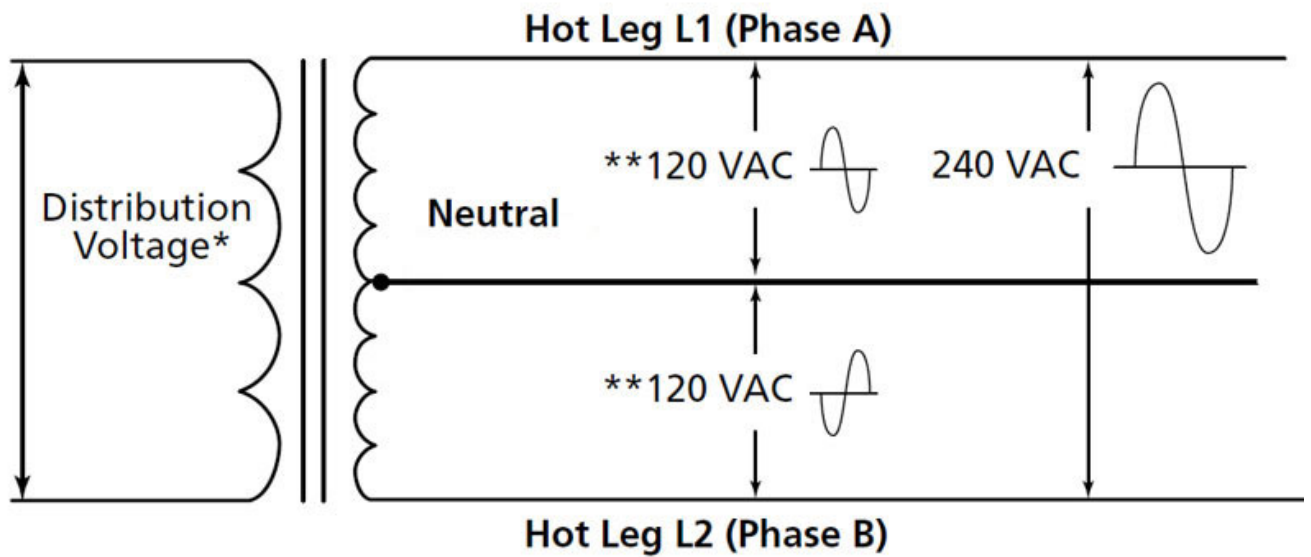
### Specification:

<b>Model</b>	ATO-DGS
<b>Phase</b>	Single phase to split phase
<b>Capacity</b>	1 kVA
<b>Primary Voltage</b>	1 Phase / 2 phase 110, 120, 208, 220, 230, 240, 380, 415, 440, 460, 480V
<b>Secondary Voltage</b>	120V/240V AC (L1、L2、N; L+L=240V, L+N=120V)
<b>Frequency</b>	50/60Hz
<b>Winding Material</b>	Aluminum/Copper wire (Optional)
<b>Work Efficiency</b>	≥95%
<b>Insulation Resistance</b>	≥50 MΩ
<b>Electrical Strength</b>	2000V AC/1 min
<b>Noise</b>	≤35 dB (1 meter)
<b>Insulation Grade</b>	Grade B (130°C), Grade F (155°C), Grade H (180°C)
<b>Cooling Method</b>	Natural or air cooling
<b>Overload Capacity</b>	Allow more than 1.2 times rated load to work for up to 1 hour
<b>Induced Overvoltage Withstand Test</b>	125Hz/800V/min
<b>Transformation Ratio</b>	<3%
<b>Air Carrying Current</b>	<6%
<b>Impedance Voltage</b>	About 6%
<b>Total Losses</b>	0.1
<b>Certification</b>	CE, ISO
<b>Temperature</b>	-15 °C ~ +45 °C
<b>Humidity</b>	≤90%RH, without condensation
<b>Altitude</b>	<2000m, non corrosive gas and conductive dust
<b>Protection Grade</b>	IP20
<b>Warranty</b>	12 months

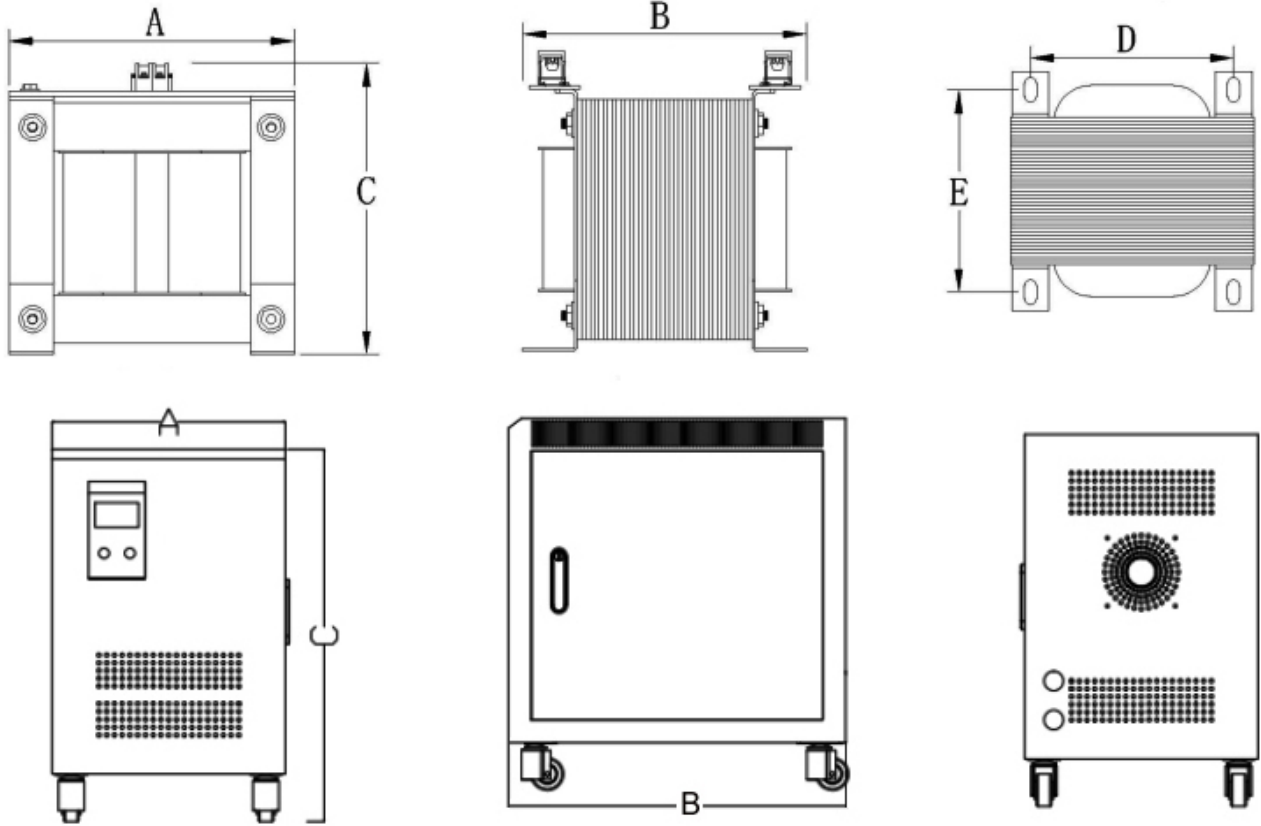
## Split Phase Isolation Transformer Detail:



## Split Transformer Schematic Diagram:



### Dimension (Unit: mm)



Aluminium Wire Transformer Size	Copper Wire Transformer Size
Open type: a*b*c=192*160*220 mm	Open type: a*b*c=180*160*210 mm
Mouting size: D*E=140*120 mm	Mouting size: D*E=130*120 mm
Protected type: A*B*C=250*360*420 mm	Protected type: A*B*C=250*360*420 mm

(Take 1 kVA split phase isolation transformer as an example. For more information about the model parameters, please contact us.)



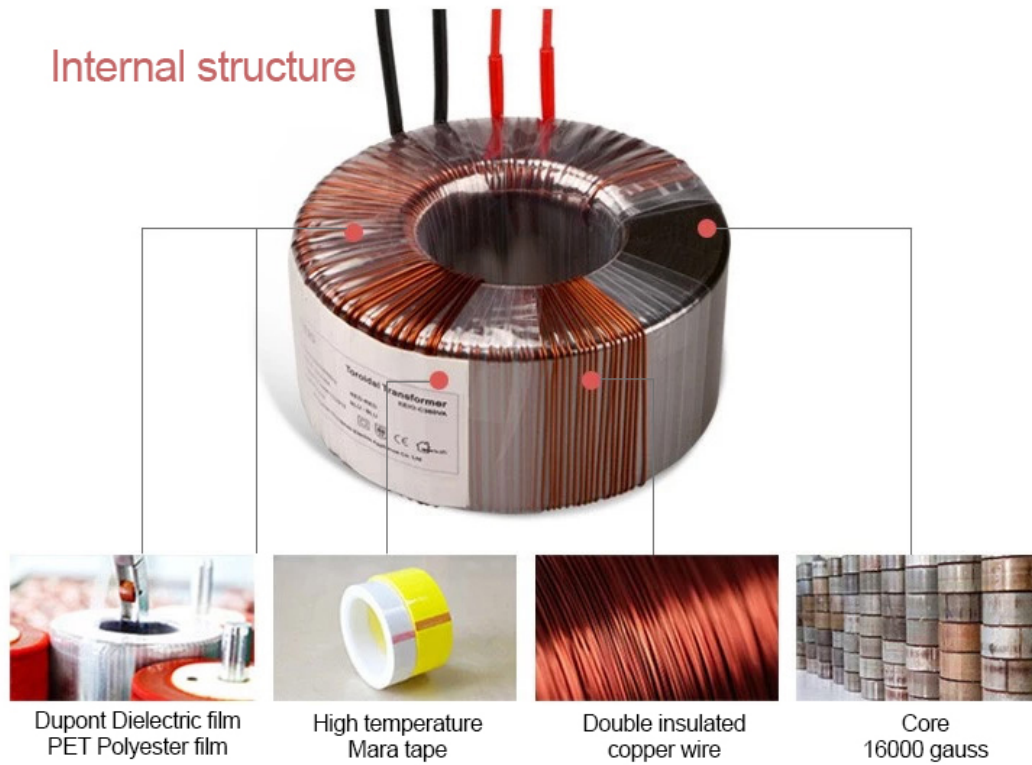
### Features:

- Low noise. The uniform winding that wraps the core leaves no air gap.
- Electrical efficiency. There is less demand for steel and copper, which saves energy.
- Easy to install. Annular transformers require a central screw to be installed, thus reducing assembly time.

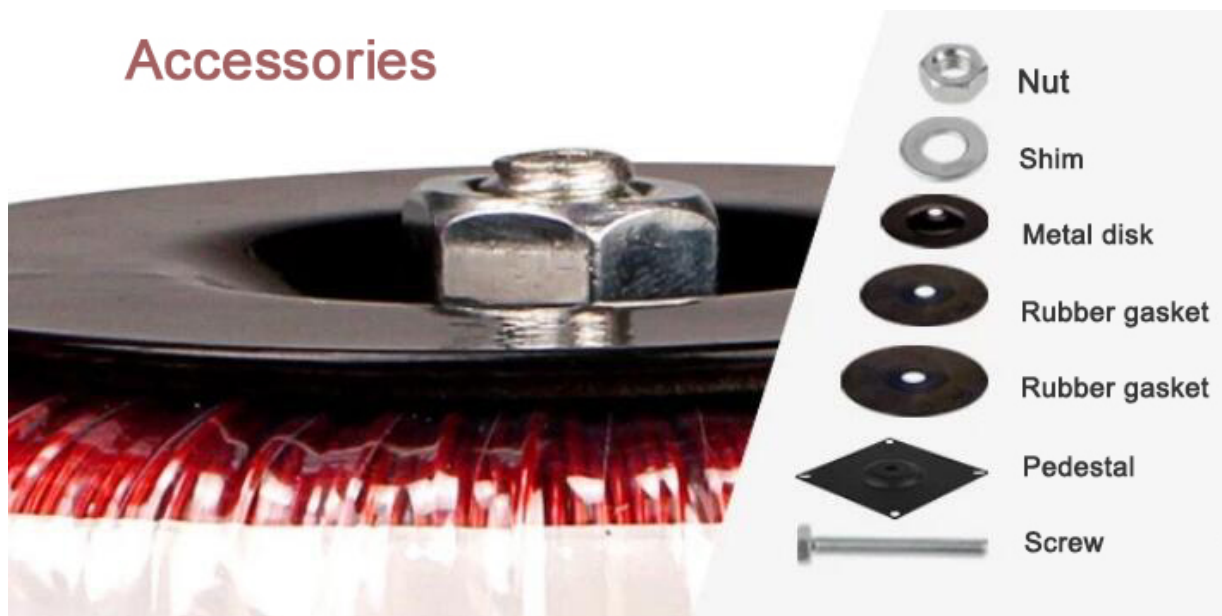
### Specification:

<b>Model</b>	ATO-C
<b>Phase</b>	Single phase
<b>Power</b>	50 VA, 70 VA, 120 VA, 150 VA, 200 VA, 300 VA, 350 VA, 500 VA, 600 VA, 800 VA, 1000 VA, 1500 VA, 4000 VA, 5000 VA
<b>Primary Voltage</b>	110V, 120V, 220V, 230V, 240V AC
<b>Secondary Voltage</b>	12V, 24V, 48V, 110V, 220V, 2x6V, 2x12V, 2x15V, 2x24V, 2x30V, 2x35V, 2x40V, 2x50V
<b>Secondary Current</b>	3A, 4A, 5A, 6A, 10A, 12A, 20A, 33A, 63A, 83A, 125A, 200A
<b>No. of Inputs</b>	1 input
<b>Frequency</b>	50Hz/60Hz
<b>Winding Material</b>	Copper Wire
<b>Coil Structure</b>	Toroidal
<b>Efficiency</b>	90%-96%
<b>Input Wire</b>	UL1015-18#Red
<b>Output Wire</b>	UL1015-16#Blue, Black
<b>Voltage Strength</b>	DC2500V
<b>Insulation Impedance</b>	≥500MΩ
<b>Cooling Method</b>	Natural air cooling
<b>Temperature</b>	40°C
<b>Certification</b>	CE, RoHS, ISO, UL
<b>Warranty</b>	12 months

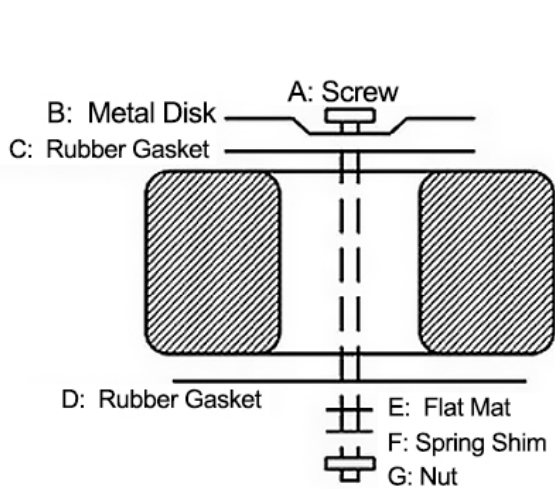
## Toroidal Transformer Internal Structure:



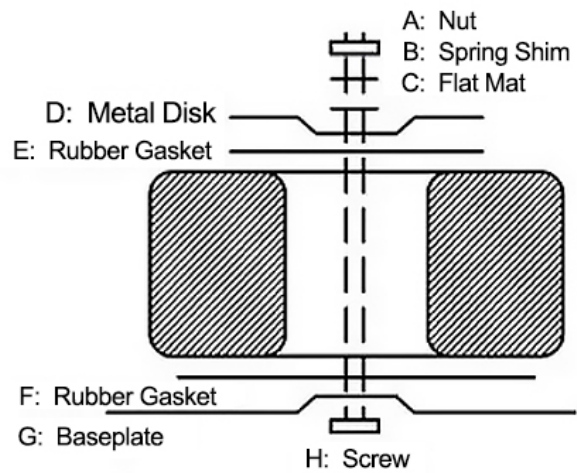
## Toroidal Transformer Accessories:



## Toroidal Transformer Mounting Methods:



Without Baseplate installation



A pedestal installation

## Toroidal Transformer Application:

- Isolation equipment for the medical industry
- Security systems
- Renewable energy (inverter systems)
- LED lighting
- Industrial control equipment
- Power distribution equipment
- Audio/visual equipment
- Automotive electronics
- Telecommunication systems



### Features:

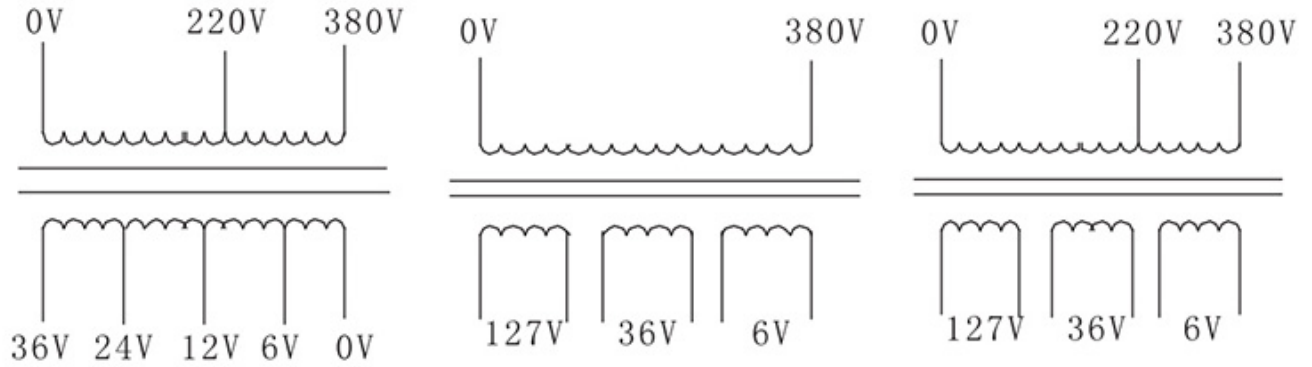
- Energy saving. Obvious power saving effect and low noise.
- Good thermal stability. Strictly control the heating part of the transformer. Strong overload capacity. From the temperature rise, insulation performance and other aspects to meet the overload requirements.

### Specification:

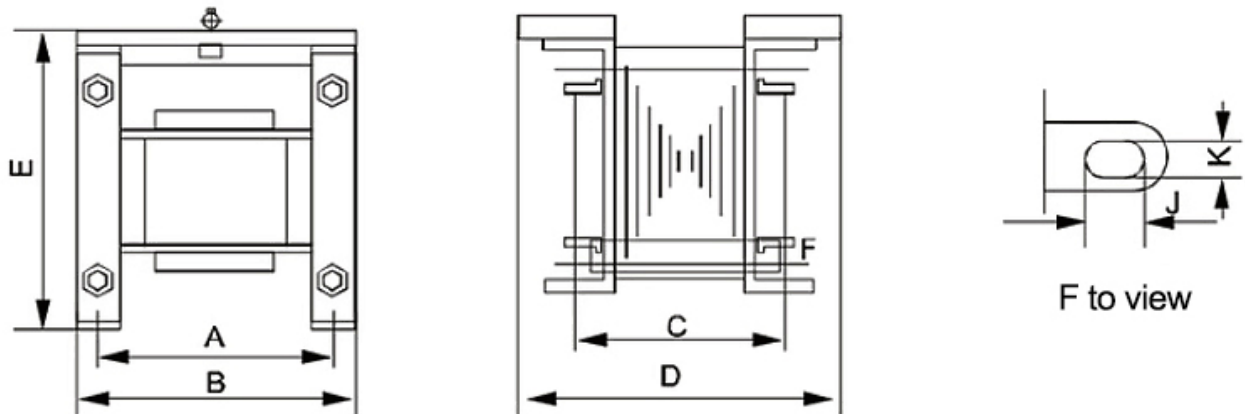
<b>Product Model</b>	ATO-BK
<b>Phase</b>	Single phase
<b>Winding Material</b>	Enameled copper wire or enameled aluminum wire
<b>Capacity</b>	500 VA, 800 VA, 1000 VA, 2000 VA, 3000 VA, 4000 VA, 5000 VA, 6000 VA, 8000 VA, 10 kVA
<b>Primary Voltage (VAC)</b>	110V, 120V, 208V, 220V, 230V, 240V, 380V, 400V, 480V, 110/220V, 120/240V, 240/480V
<b>Secondary Voltage (VAC)</b>	6V, 12V, 24V, 36V, 48V, 120/48V, 110/24V, 208/36V, 220/48V, 230/36V, 240/120V, 120/24/12V, 110/36/24V, 127/36/6V, 208/48/36/24V
<b>Frequency</b>	50/60Hz
<b>Insulation Level</b>	F / H
<b>Withstand Voltage Test</b>	Primary to secondary 2.5KV/min
	Primary to safety ground 2.5KV/min
	Secondary to safety ground 1.5KV/min
<b>Insulation Resistance</b>	Primary to secondary 2500V>100 megohm
	Primary to safety ground 2500V>100 megohm
	Secondary to safety ground 1500V>100 megohm
<b>Induction Withstand Voltage Test</b>	125Hz/ 800V/min
<b>Ground Resistance</b>	25<A80 milliohm
<b>Cooling Method</b>	Natural or air cooling
<b>Transformation Ratio</b>	<3%
<b>Air Carrying Current</b>	<6%
<b>Impedance Voltage</b>	about 6%
<b>Total Losses</b>	0.1
<b>Efficiency</b>	80%~99%
<b>Operating Temperature</b>	-25 °C ~ +40 °C (40°C, 93% RH, 56 days)
<b>Storage Temperature</b>	-25 °C ~ +100 °C (40°C, 93% RH, 56 days)
<b>Certification</b>	CE, ISO
<b>Warranty</b>	12 months



### Control Transformer Schematic Diagram:



### Dimension (Unit: mm)



Overall Size (mm)			Hole Distance for Installation (mm)	
B	E	D	A	C
132	135	140	100	105

(Take 500 VA control transformer as an example. For more information about the model parameters, please contact us.)



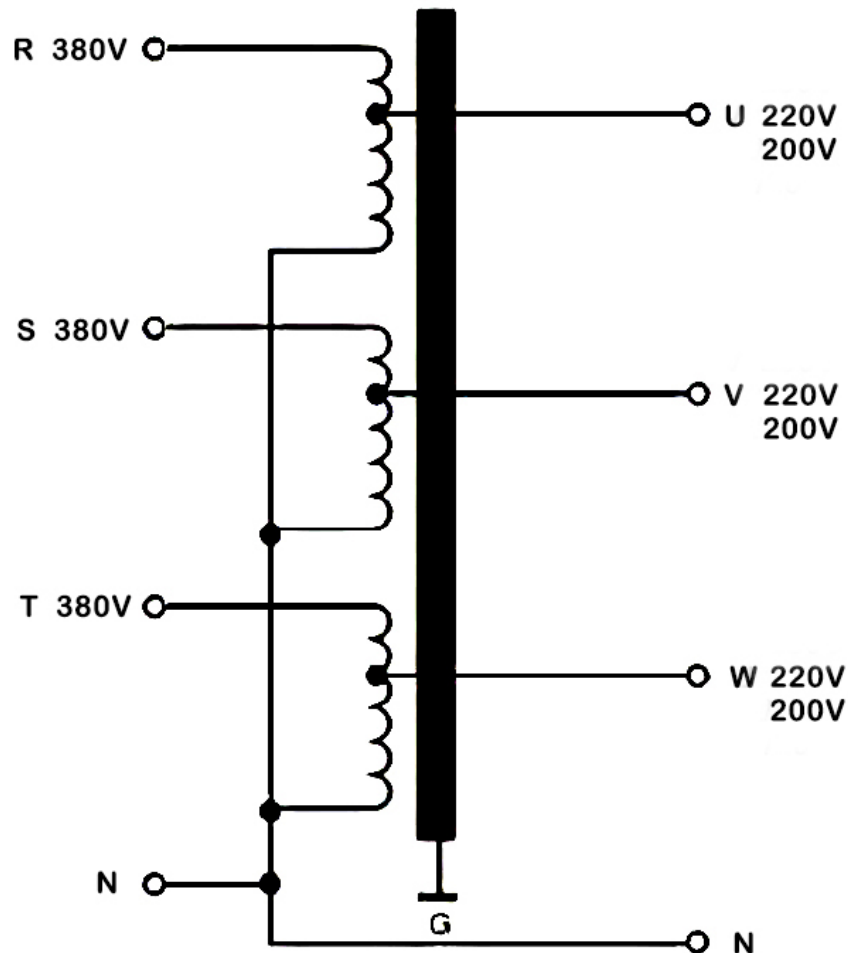
### Features:

- Low loss and high benefit. The use of copper wire and silicon steel sheet is reduced.
- Easy to transport and install. Light weight, small size, small footprint.
- The limit manufacturing capacity of transformer is increased.

### Specification:

<b>Model</b>	ATO-ASG
<b>Phase</b>	3-Phase
<b>Capacity</b>	1 kVA, 5 kVA, 15 kVA, 25 kVA, 30 kVA, 45 kVA, 75 kVA, 100 kVA
<b>Input Voltage</b>	AC 380V
<b>Input Current</b>	2A, 8A, 23A, 37A, 46A, 68A, 114A, 151A
<b>Output Voltage (Optional)</b>	AC 220V, 200V
<b>Frequency</b>	50Hz / 60Hz
<b>Winding Material (Optional)</b>	Aluminum Wire, Copper Wire
<b>Cooling Method</b>	Self-Cooling or Wind-Cooling
<b>Working Efficiency</b>	≥98%
<b>Protection Grade</b>	IP21
<b>Waveform Distortion</b>	No distortion (compared with output wave)
<b>Insulation Resistance</b>	≥ 150 MΩ
<b>Wiring</b>	Yn0
<b>Electrical Strength</b>	Power frequency sinusoidal voltage 3000V lasts for 1 minute, no breakdown and flicker
<b>Overload Protection</b>	Can withstand instantaneous 2 times the rated current
<b>Moisture-Proof Type (Optional)</b>	Open type, sealed type
<b>Ambient Temperature</b>	-20 °C ~ +45 °C
<b>Altitude</b>	≤ 2500m
<b>Relative Humidity</b>	0-95%
<b>Noise</b>	≤35 dB (within 1 meter)

## Autotransformer Schematic Wiring Diagram:



## Autotransformer Application:

- Testing an electronic device after repairs
- To power up an old amplifier or radio
- Line voltage drop compensation
- Temperature adjustment in resistance-type heater
- Changing speed of a fan
- Cutting styrofoam
- Unregulated DC power supply of high current
- AC supply voltage adjustment
- Roasting beans for coffee