

## RATED PRIMARY VOLTAGE [V]

This is the supply voltage assigned to the transformer by the manufacturer for the specified operating conditions of the transformer.

## RATED SECONDARY VOLTAGE [V]

This is the output voltage assigned to the transformer when supplied with the rated primary voltage, frequency range, rated output current, at rated power factor, all assigned by the manufacturer for the specified operating conditions of the transformer.

## RATED SECONDARY CURRENT [A]

This is the output current at rated primary voltage and rated frequency, assigned to the transformer by the manufacturer for the specified operating conditions of the transformer

## NO-LOAD SECONDARY VOLTAGE [V]

This is theoretical maximum of the output voltage when the transformer is connected to rated supply voltage at rated frequency, with no load on the output.

## RATED FREQUENCY [Hz]

The frequency assigned to the transformer by the manufacturer for the specified operating conditions of the transformer.

## RATED POWER [VA]

The specified power levels in this catalogue are the secondary power levels, which means that, they are available when the transformer is loaded. It is the product of the RMS rated secondary voltage and the RMS rated current. If the transformer has more than one output winding, the rated power is defined for rated ambient temperature conditions.

Example: P=4.5VA, ta 40/B

This means that the transformer can deliver 4.5VA at maximum ambient of 40°C. The load consisting of a resistor is defined by:

$$R(\text{load}) = U(\text{sec})^2 / P$$

and maximum heating of the transformer does not exceed the relevant limit for Class B components used in this construction

NOTE: When the transformer is intended to supply DC voltage and current in conjunction with rectifiers and smoothing capacitors, the VA power required from the transformer is far higher than the U(DC) and I(DC) product. To help you to determine the true transformer power our Technical Department is at your disposal.

## AMBIENT TEMPERATURE (ta)

The maximum temperature at which the transformer may be operated continuously under nominal conditions of use. It is the air temperature measured close to the transformer after thermal stabilization when operating at rated conditions.

## HEATING (dT)

The increase of the winding temperature when operating at rated conditions and maximum ambient temperature. The heating must be determined by the resistance method.

## TEMPERATURE CLASS

The international classification of temperature classes is as follows

A	105°C	H	180°C
E	120°C	200	200°C
B	130°C	220	220°C
F	155°C	250	250°C

It defines the maximum temperature the transformer components must withstand in continuous operation, in compliance with the N° 85 IEC publication classification. There insulating materials are therefore certificated for the thermal index corresponding to the declared class in accordance with N° 216 IEC standard.

## CLASS I TRANSFORMER

A transformer in which protection against electric shock does not rely on basic insulation only, but which includes an additional safety precaution in such a way that means, such as an earthing terminal, are provided for the connection of accessible conductive parts to the protective earthing conductor in the fixed wiring of the installation, so that accessible conductive parts cannot become live in the event of a failure of the basic insulation.

NOTE Class I transformers may have parts with double or reinforced insulation.

## CLASS II TRANSFORMER

A transformer in which protection against electric shock does not rely on basic insulation only, but in which additional safety precautions such as double insulation or reinforced insulation are provided, there being no provision for protective earthing or reliance upon installation conditions.

## DEGREES OF POLLUTION

For the purpose of evaluating clearances and creepage distances the following degrees of pollution in the micro-environment are established.

POLLUTION DEGREE 1 (P1): No pollution or only dry, non-conductive pollution occurs. The pollution has no influence.

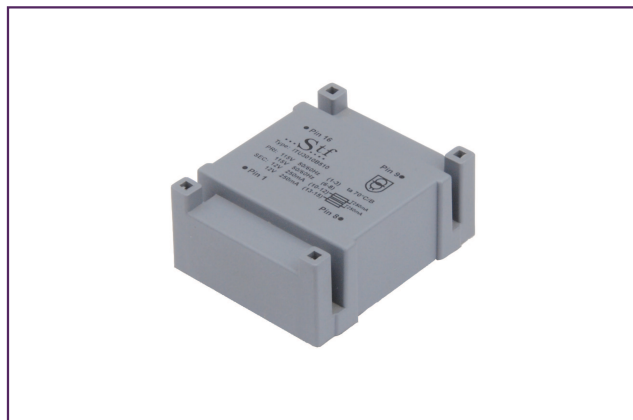
POLLUTION DEGREE 2 (P2): Only nonconductive pollution occurs, except that occasionally a temporary conductivity caused by condensation is to be expected.

NOTE Transformers having a reasonably tight enclosure are considered to have pollution degree 2 (P2), hermetic sealing is not required.

POLLUTION DEGREE 3 (P3): Conductive pollution occurs, or dry nonconductive pollution occurs which becomes conductive due to the condensation which is to be expected.

# 4.ITU SERIES

## PCB-Encapsulated Transformer



- Rated power: 6.0VA
- Non short-circuit proof safety isolating transformer
- Vacuum filling
- Two compartments bobbin
- Protection: Class II transformer
- Ambient temperature 70°C
- Temperature Class B
- Self-extinguishing resin UL94V0
- Degree of protection IP00
- Insulation voltage test 4kV
- High electrical safety and long service-life features
- In compliance with: EN61558, VDE0570, UI506
- Weight: 180g



### Approvals:

### Electrical Data:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	4.ITA Series
	With Load		No Load					
[V]	[V]	@ [A]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
2 x 115	2 x 6	0.500	2 x 8.4	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.504
2 x 115	2 x 7.5	0.400	2 x 10.5	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.506
2 x 115	2 x 9	0.333	2 x 12.6	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.508
2 x 115	2 x 12	0.250	2 x 16.8	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.510
2 x 115	2 x 15	0.200	2 x 21.0	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.512
2 x 115	2 x 18	0.167	2 x 25.2	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.514
2 x 115	2 x 21	0.143	2 x 29.4	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.516
2 x 115	2 x 24	0.125	2 x 33.6	40	6.0	22.4	1-3;6-8/10-12;13-15	4.ITU.U03010.518

\* See Mechanical Data

### Types available on request:

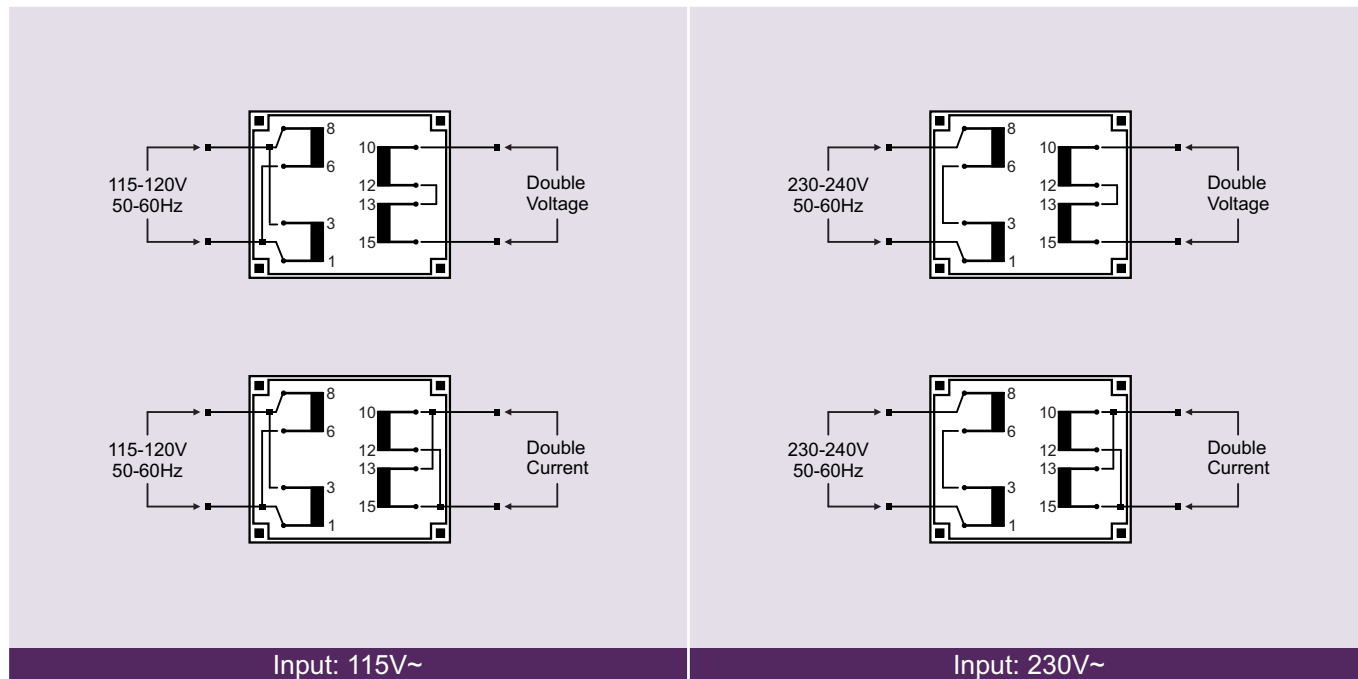
Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	ITA Series
	With Load		No Load					
[V]	[V]	@ [mA]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
<600			<400	60	3.0	17.4	1 - 8 / 9 - 16	9.xxx.U03005.xxx
<600			<400	55	4.0	19.4	1 - 8 / 9 - 16	9.xxx.U03007.xxx
<600			<400	40	6.0	22.4	1 - 8 / 9 - 16	9.xxx.U03010.xxx
<600			<400	30	10.0	28.4	1 - 8 / 9 - 16	9.xxx.U03016.xxx

\* See Mechanical Data

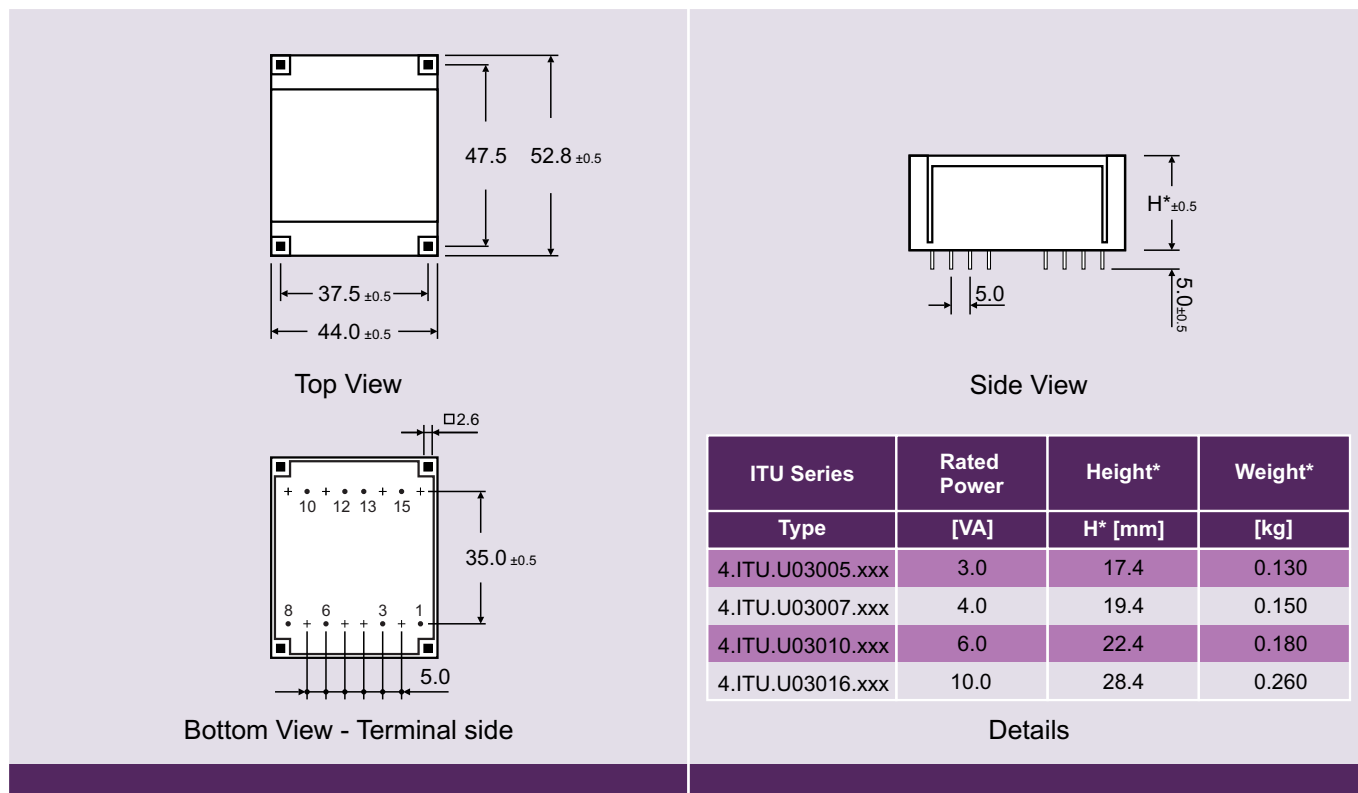
# 4.ITU SERIES

## PCB-Encapsulated Transformer

### Possible Connection Types:



### Mechanical Data:



\*Transformer height is also given in table with Electrical Data

Several hundreds of types provide high electrical safety and long service-life for printed circuit boards, household appliances, leisure electronics, heating and control technology as well as in assembly techniques. Transformers for special requirements with lower open-circuit (no load) loss capacity are also available on request as well as transformers for special ambient temperature and frequency conditions.

# 4.ITU SERIES

## PCB-Encapsulated Transformer



#### Approvals:

- Rated power: 10.0VA
- Non short-circuit proof safety isolating transformer
- Vacuum filling
- Two compartments bobbin
- Protection: Class II transformer
- Ambient temperature 70°C
- Temperature Class B
- Self-extinguishing resin UL94V0
- Degree of protection IP00
- Insulation voltage test 4kV
- High electrical safety and long service-life features
- In compliance with: EN61558, VDE0570, UI506
- Weight: 260g



#### Electrical Data:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	4.ITA Series
	With Load		No Load					
[V]	[V]	@ [A]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
2 x 115	2 x 6	0.833	2 x 7.8	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.504
2 x 115	2 x 7.5	0.667	2 x 9.8	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.506
2 x 115	2 x 9	0.556	2 x 11.7	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.508
2 x 115	2 x 12	0.417	2 x 15.6	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.510
2 x 115	2 x 15	0.333	2 x 19.5	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.512
2 x 115	2 x 18	0.278	2 x 23.4	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.514
2 x 115	2 x 21	0.238	2 x 27.3	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.516
2 x 115	2 x 24	0.208	2 x 31.2	30	10.0	28.4	1-3;6-8/10-12;13-15	4.ITU.U03016.518

\* See Mechanical Data

#### Types available on request:

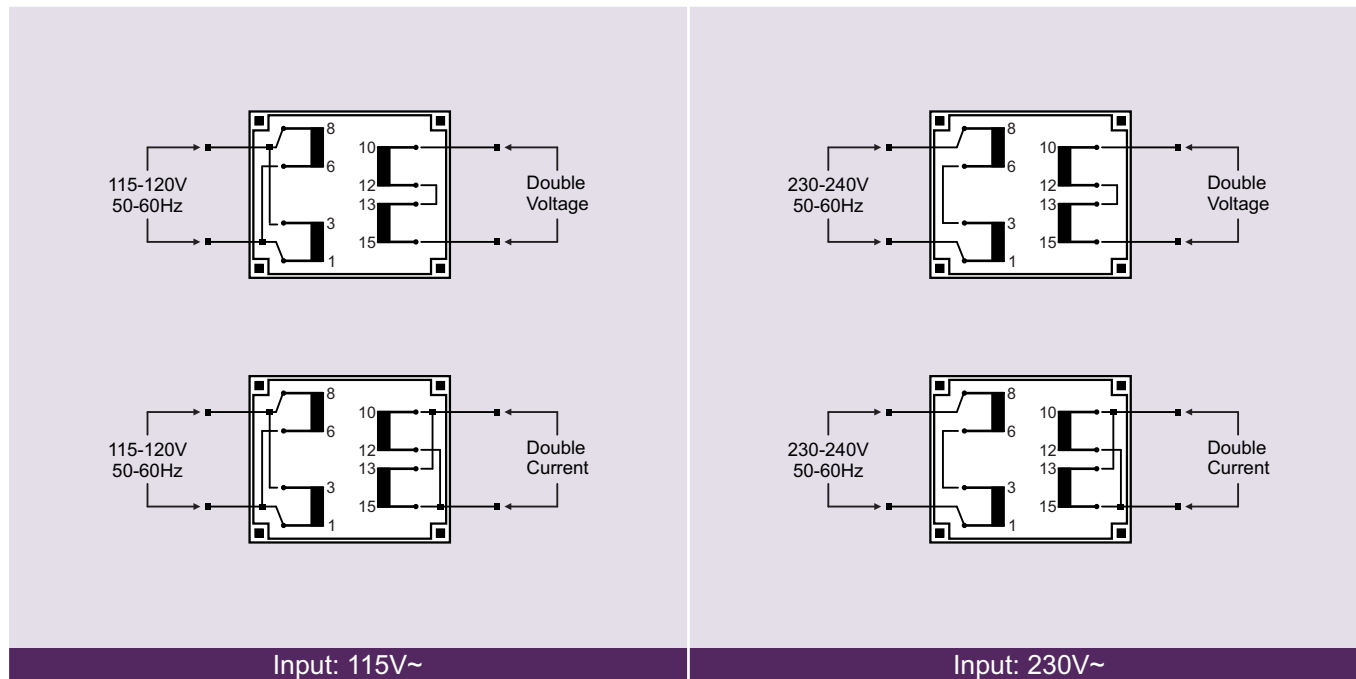
Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	ITA Series
	With Load		No Load					
[V]	[V]	@ [mA]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
<600			<400	60	3.0	17.4	1 - 8 / 9 - 16	9.xxx.U03005.xxx
<600			<400	55	4.0	19.4	1 - 8 / 9 - 16	9.xxx.U03007.xxx
<600			<400	40	6.0	22.4	1 - 8 / 9 - 16	9.xxx.U03010.xxx
<600			<400	30	10.0	28.4	1 - 8 / 9 - 16	9.xxx.U03016.xxx

\* See Mechanical Data

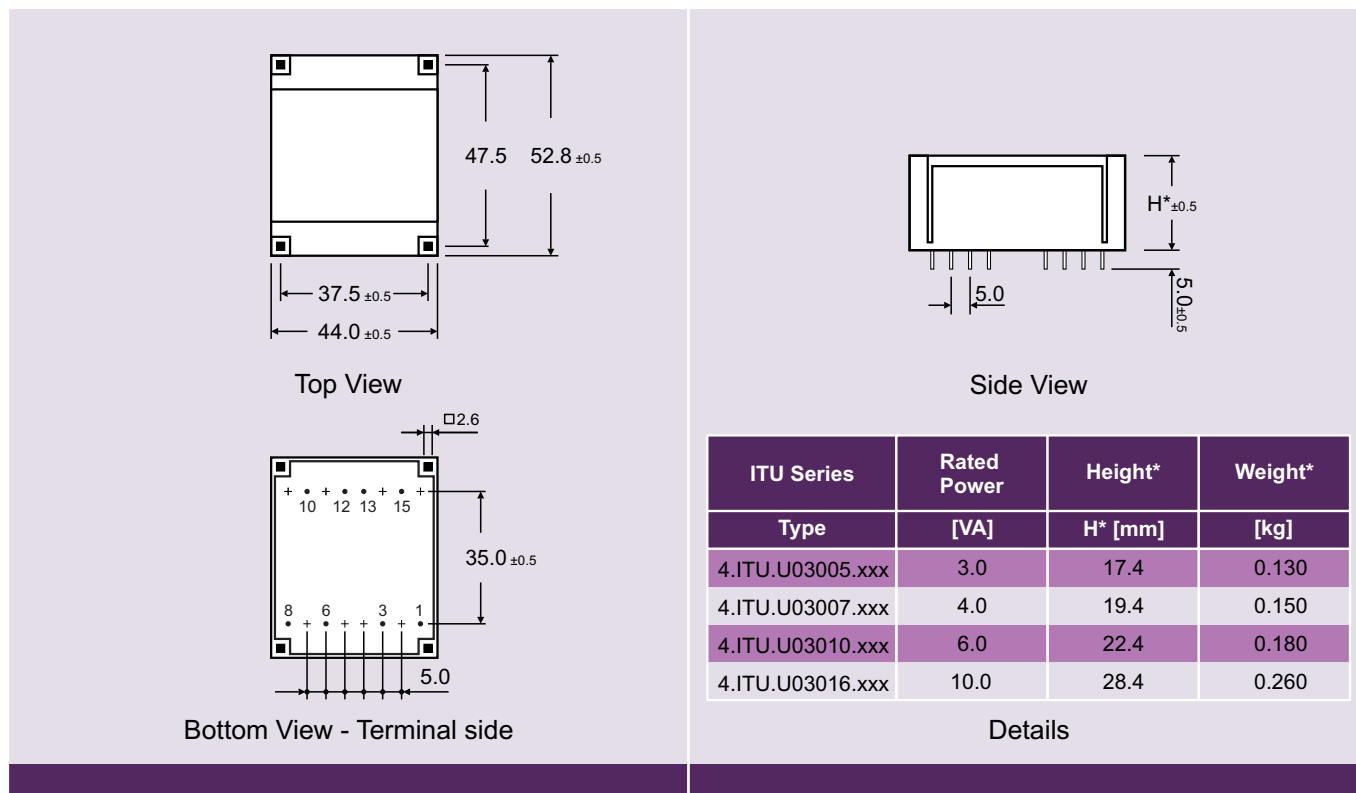
# 4.ITU SERIES

## PCB-Encapsulated Transformer

### Possible Connection Types:



### Mechanical Data:



\*Transformer height is also given in table with Electrical Data

Several hundreds of types provide high electrical safety and long service-life for printed circuit boards, household appliances, leisure electronics, heating and control technology as well as in assembly techniques. Transformers for special requirements with lower open-circuit (no load) loss capacity are also available on request as well as transformers for special ambient temperature and frequency conditions.

# 4.ITU SERIES

## PCB-Encapsulated Transformer



- Rated power: 14.0VA
- Non short-circuit proof safety isolating transformer
- Vacuum filling
- Two compartments bobbin
- Protection: Class II transformer
- Ambient temperature 70°C
- Temperature Class B
- Self-extinguishing resin UL94V0
- Degree of protection IP00
- Insulation voltage test 4kV
- High electrical safety and long service-life features
- In compliance with: EN61558, VDE0570, UI506
- Weight: 330g



### Approvals:

### Electrical Data:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	4.ITA Series
	With Load		No Load					
[V]	[V]	@ [A]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
2 x 115	2 x 6	1.167	2 x 7.5	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.504
2 x 115	2 x 7.5	0.933	2 x 9.4	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.506
2 x 115	2 x 9	0.778	2 x 11.3	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.508
2 x 115	2 x 12	0.583	2 x 15.0	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.510
2 x 115	2 x 15	0.467	2 x 18.8	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.512
2 x 115	2 x 18	0.389	2 x 22.5	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.514
2 x 115	2 x 21	0.333	2 x 26.3	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.516
2 x 115	2 x 24	0.292	2 x 30.0	25	14.0	24.5	1-4;7-10/12-14;17-19	4.ITU.U03910.518

\* See Mechanical Data

### Types available on request:

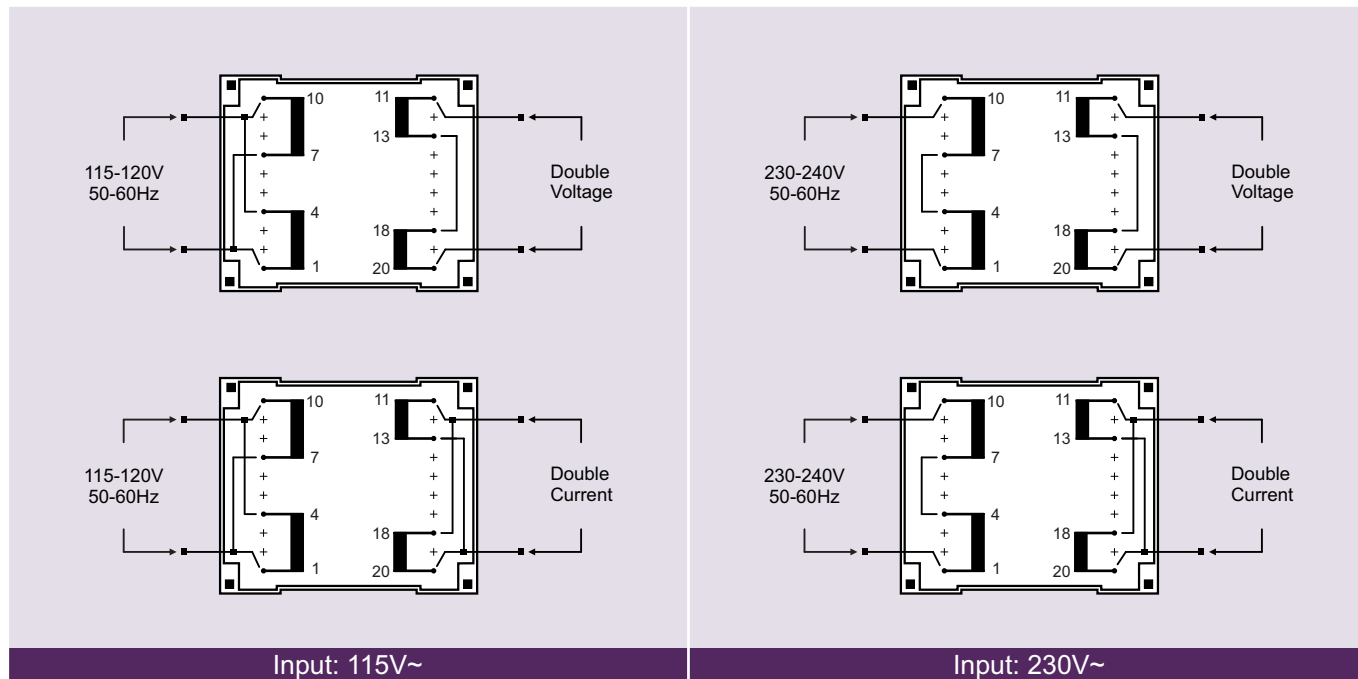
Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	ITA Series
	With Load		No Load					
[V]	[V]	@ [mA]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
<600			<400	25	14.0	24.5	1 - 10 / 11 - 20	9.xxx.U03910.xxx
<600			<400	25	18.0	27.8	1 - 10 / 11 - 20	9.xxx.U03913.xxx
<600			<400	25	24.0	31.3	1 - 10 / 11 - 20	9.xxx.U03917.xxx
<600			<400	15	30.0	35.3	1 - 10 / 11 - 20	9.xxx.U03921.xxx

\* See Mechanical Data

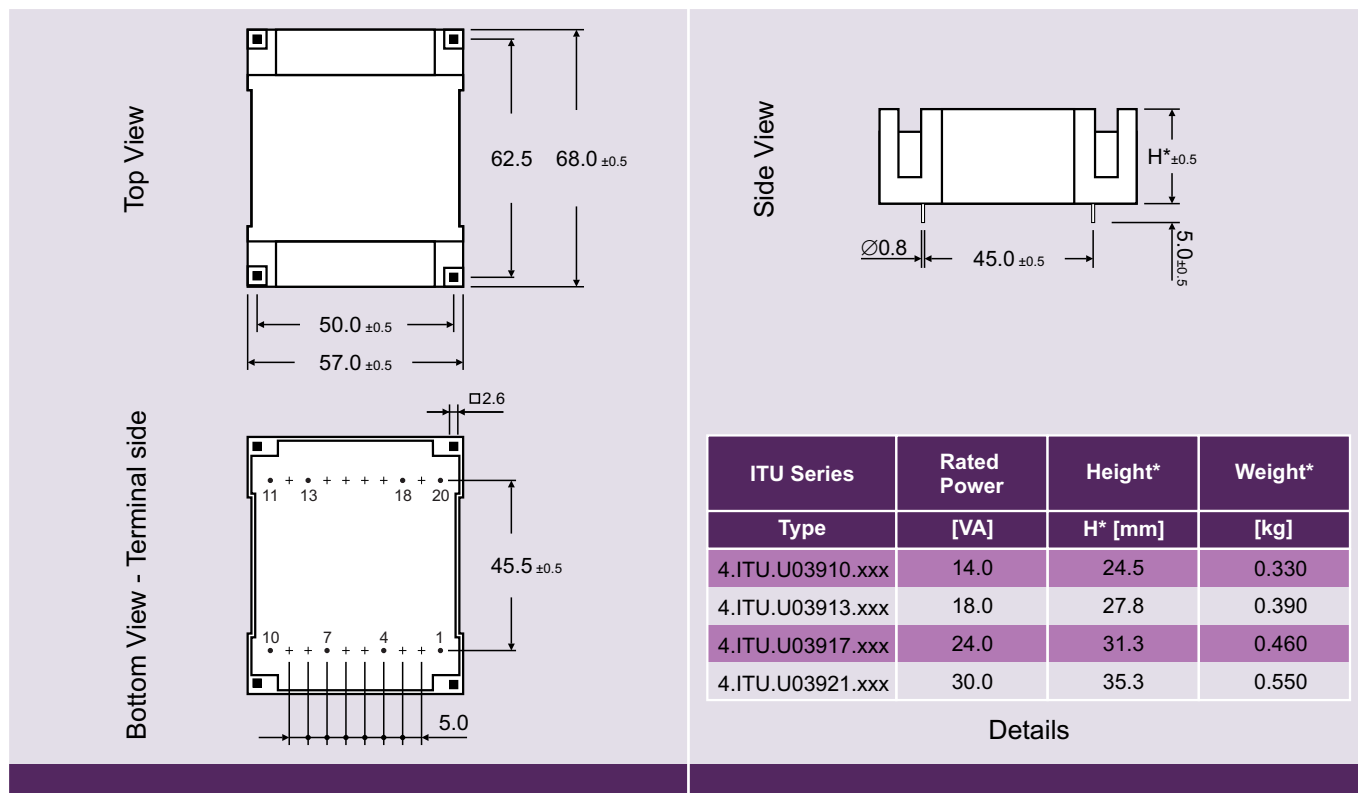
# 4.ITU SERIES

## PCB-Encapsulated Transformer

### Possible Connection Types:



### Mechanical Data:



\*Transformer height is also given in table with Electrical Data

Several hundreds of types provide high electrical safety and long service-life for printed circuit boards, household appliances, leisure electronics, heating and control technology as well as in assembly techniques. Transformers for special requirements with lower open-circuit (no load) loss capacity are also available on request as well as transformers for special ambient temperature and frequency conditions.

# 4.ITU SERIES

## PCB-Encapsulated Transformer



#### Approvals:

- Rated power: 18.0VA
- Non short-circuit proof safety isolating transformer
- Vacuum filling
- Two compartments bobbin
- Protection: Class II transformer
- Ambient temperature 70°C
- Temperature Class B
- Self-extinguishing resin UL94V0
- Degree of protection IP00
- Insulation voltage test 4kV
- High electrical safety and long service-life features
- In compliance with: EN61558, VDE0570, UI506
- Weight: 390g



#### Electrical Data:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	4.ITA Series
	With Load		No Load					
[V]	[V]	@ [A]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
2 x 115	2 x 6	1.500	2 x 7.5	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.504
2 x 115	2 x 7.5	1.200	2 x 9.4	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.506
2 x 115	2 x 9	1.000	2 x 11.3	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.508
2 x 115	2 x 12	0.750	2 x 15.0	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.510
2 x 115	2 x 15	0.600	2 x 18.8	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.512
2 x 115	2 x 18	0.500	2 x 22.5	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.514
2 x 115	2 x 21	0.429	2 x 26.3	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.516
2 x 115	2 x 24	0.375	2 x 30.0	25	18.0	27.8	1-4;7-10/12-14;17-19	4.ITU.U03913.518

\* See Mechanical Data

#### Types available on request:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	ITA Series
	With Load		No Load					
[V]	[V]	@ [mA]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
<600			<400	25	14.0	24.5	1 - 10 / 11 - 20	9.xxx.U03910.xxx
<600			<400	25	18.0	27.8	1 - 10 / 11 - 20	9.xxx.U03913.xxx
<600			<400	25	24.0	31.3	1 - 10 / 11 - 20	9.xxx.U03917.xxx
<600			<400	15	30.0	35.3	1 - 10 / 11 - 20	9.xxx.U03921.xxx

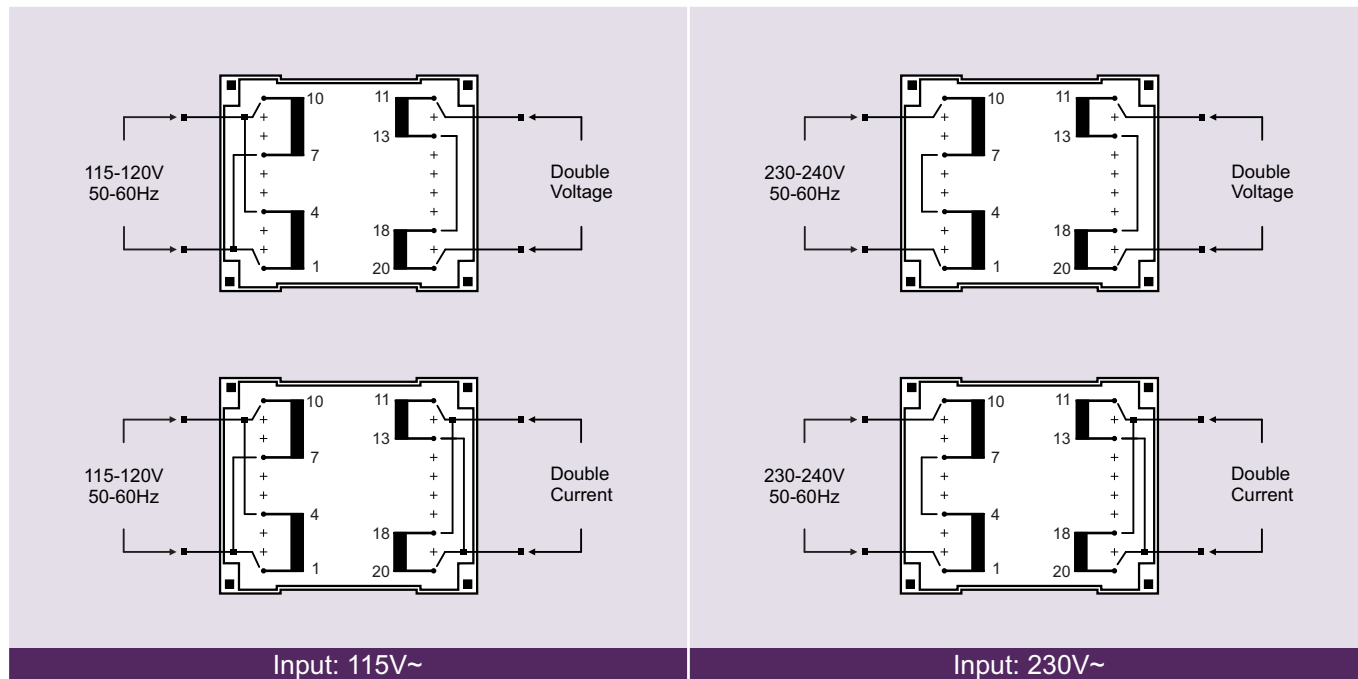
\* See Mechanical Data



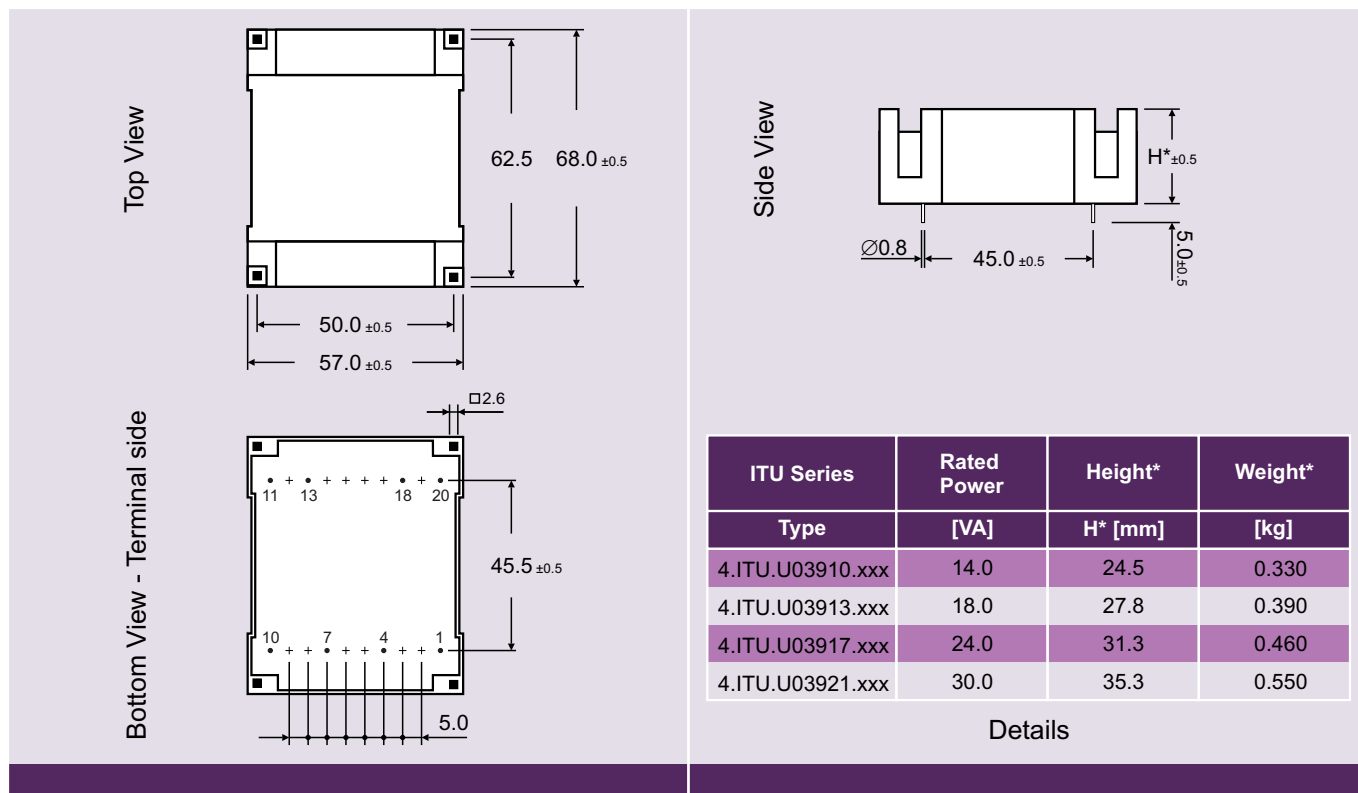
# 4.ITU SERIES

## PCB-Encapsulated Transformer

### Possible Connection Types:



### Mechanical Data:



\*Transformer height is also given in table with Electrical Data

Several hundreds of types provide high electrical safety and long service-life for printed circuit boards, household appliances, leisure electronics, heating and control technology as well as in assembly techniques. Transformers for special requirements with lower open-circuit (no load) loss capacity are also available on request as well as transformers for special ambient temperature and frequency conditions.

# 4.ITU SERIES

## PCB-Encapsulated Transformer



- Rated power: 24.0VA
- Non short-circuit proof safety isolating transformer
- Vacuum filling
- Two compartments bobbin
- Protection: Class II transformer
- Ambient temperature 70°C
- Temperature Class B
- Self-extinguishing resin UL94V0
- Degree of protection IP00
- Insulation voltage test 4kV
- High electrical safety and long service-life features
- In compliance with: EN61558, VDE0570, UI506
- Weight: 460g



### Approvals:

### Electrical Data:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	4.ITA Series
	With Load		No Load					
[V]	[V]	@ [A]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
2 x 115	2 x 6	2.000	2 x 7.5	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.504
2 x 115	2 x 7.5	1.600	2 x 9.4	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.506
2 x 115	2 x 9	1.333	2 x 11.3	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.508
2 x 115	2 x 12	1.000	2 x 15.0	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.510
2 x 115	2 x 15	0.800	2 x 18.8	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.512
2 x 115	2 x 18	0.667	2 x 22.5	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.514
2 x 115	2 x 21	0.571	2 x 26.3	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.516
2 x 115	2 x 24	0.500	2 x 30.0	25	24.0	31.3	1-4;7-10/12-14;17-19	4.ITU.U03917.518

\* See Mechanical Data

### Types available on request:

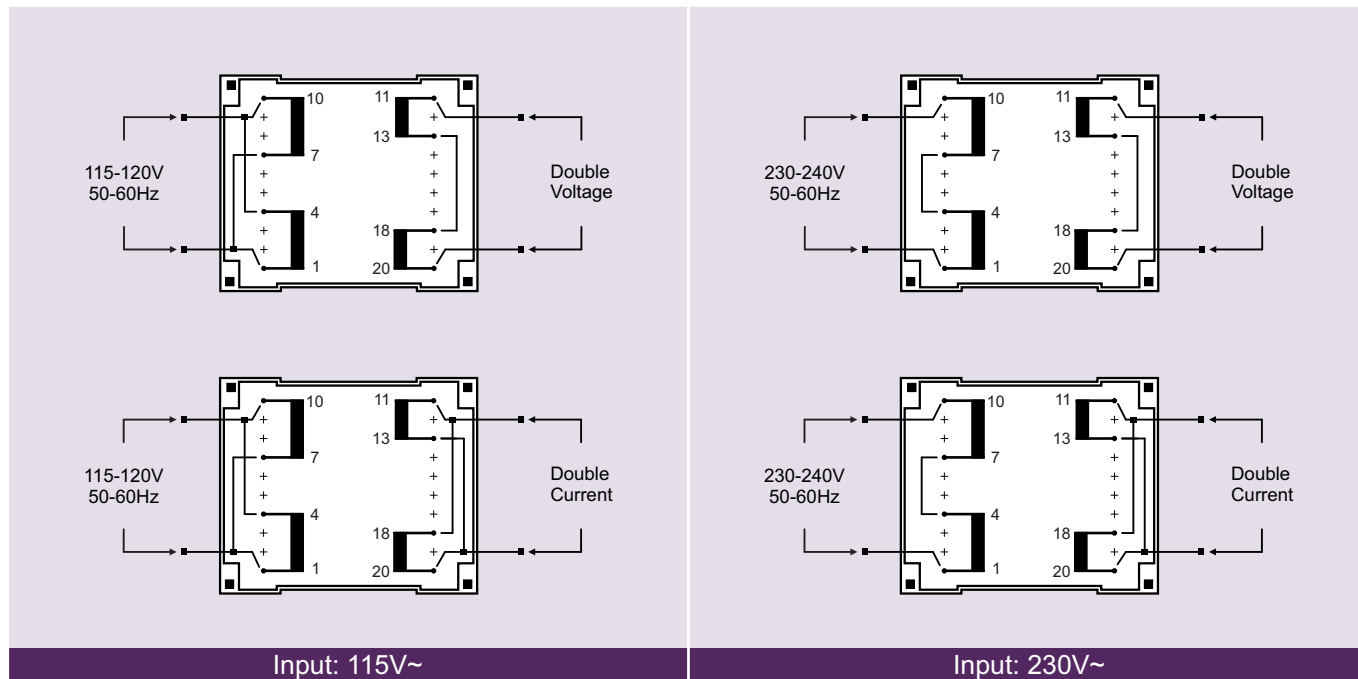
Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	ITA Series
	With Load		No Load					
[V]	[V]	@ [mA]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
<600			<400	25	14.0	24.5	1 - 10 / 11 - 20	9.xxx.U03910.xxx
<600			<400	25	18.0	27.8	1 - 10 / 11 - 20	9.xxx.U03913.xxx
<600			<400	25	24.0	31.3	1 - 10 / 11 - 20	9.xxx.U03917.xxx
<600			<400	15	30.0	35.3	1 - 10 / 11 - 20	9.xxx.U03921.xxx

\* See Mechanical Data

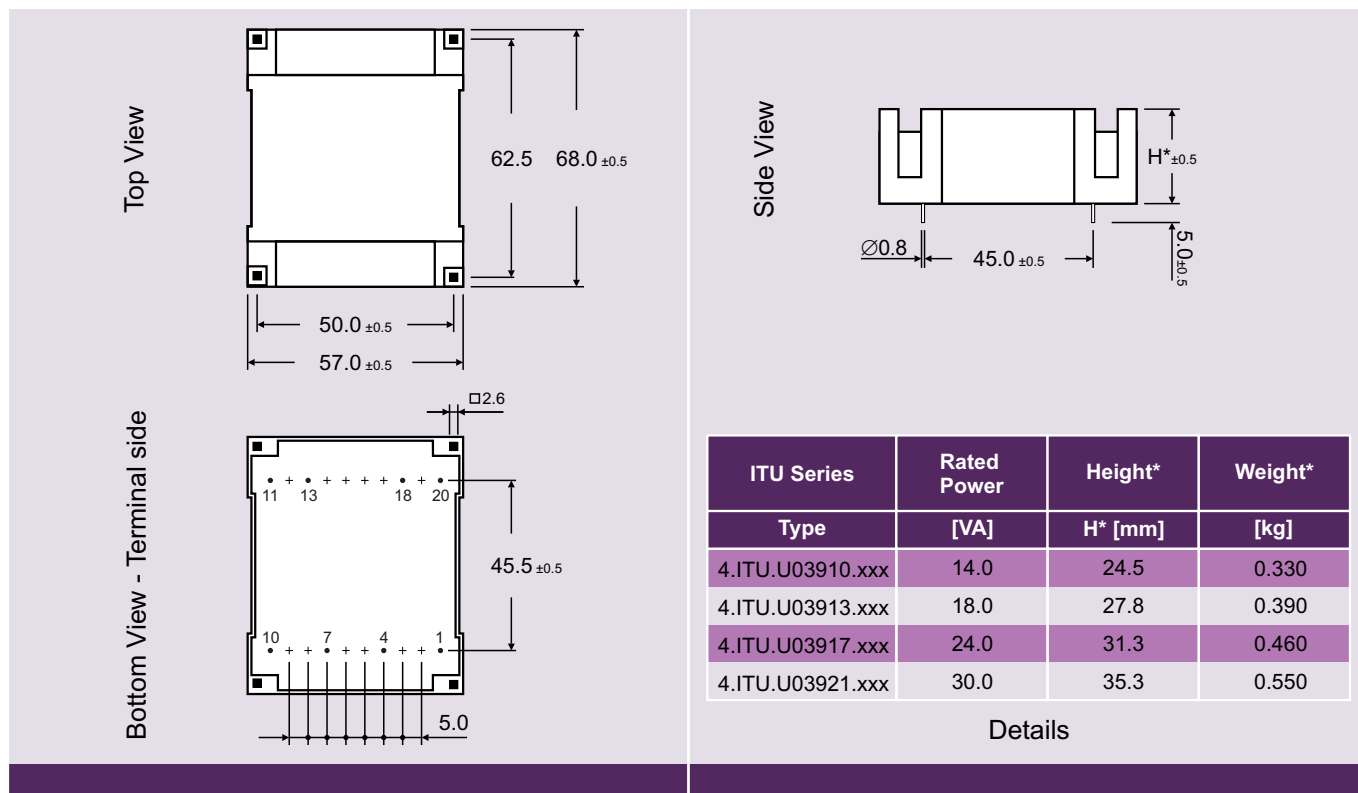
# 4.ITU SERIES

## PCB-Encapsulated Transformer

### Possible Connection Types:



### Mechanical Data:



\*Transformer height is also given in table with Electrical Data

Several hundreds of types provide high electrical safety and long service-life for printed circuit boards, household appliances, leisure electronics, heating and control technology as well as in assembly techniques. Transformers for special requirements with lower open-circuit (no load) loss capacity are also available on request as well as transformers for special ambient temperature and frequency conditions.

# 4.ITU SERIES

## PCB-Encapsulated Transformer



#### Approvals:

- Rated power: 30.0VA
- Non short-circuit proof safety isolating transformer
- Vacuum filling
- Two compartments bobbin
- Protection: Class II transformer
- Ambient temperature 70°C
- Temperature Class B
- Self-extinguishing resin UL94V0
- Degree of protection IP00
- Insulation voltage test 4kV
- High electrical safety and long service-life features
- In compliance with: EN61558, VDE0570, UI506
- Weight: 550g



#### Electrical Data:

Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	4.ITA Series
	With Load		No Load					
[V]	[V]	@ [A]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
2 x 115	2 x 6	2.500	2 x 6.9	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.504
2 x 115	2 x 7.5	2.000	2 x 8.6	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.506
2 x 115	2 x 9	1.667	2 x 10.4	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.508
2 x 115	2 x 12	1.250	2 x 13.8	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.510
2 x 115	2 x 15	1.000	2 x 17.3	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.512
2 x 115	2 x 18	0.833	2 x 20.7	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.514
2 x 115	2 x 21	0.714	2 x 24.2	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.516
2 x 115	2 x 24	0.625	2 x 27.6	15	30.0	35.3	1-4;7-10/12-14;17-19	4.ITU.U03921.518

\* See Mechanical Data

#### Types available on request:

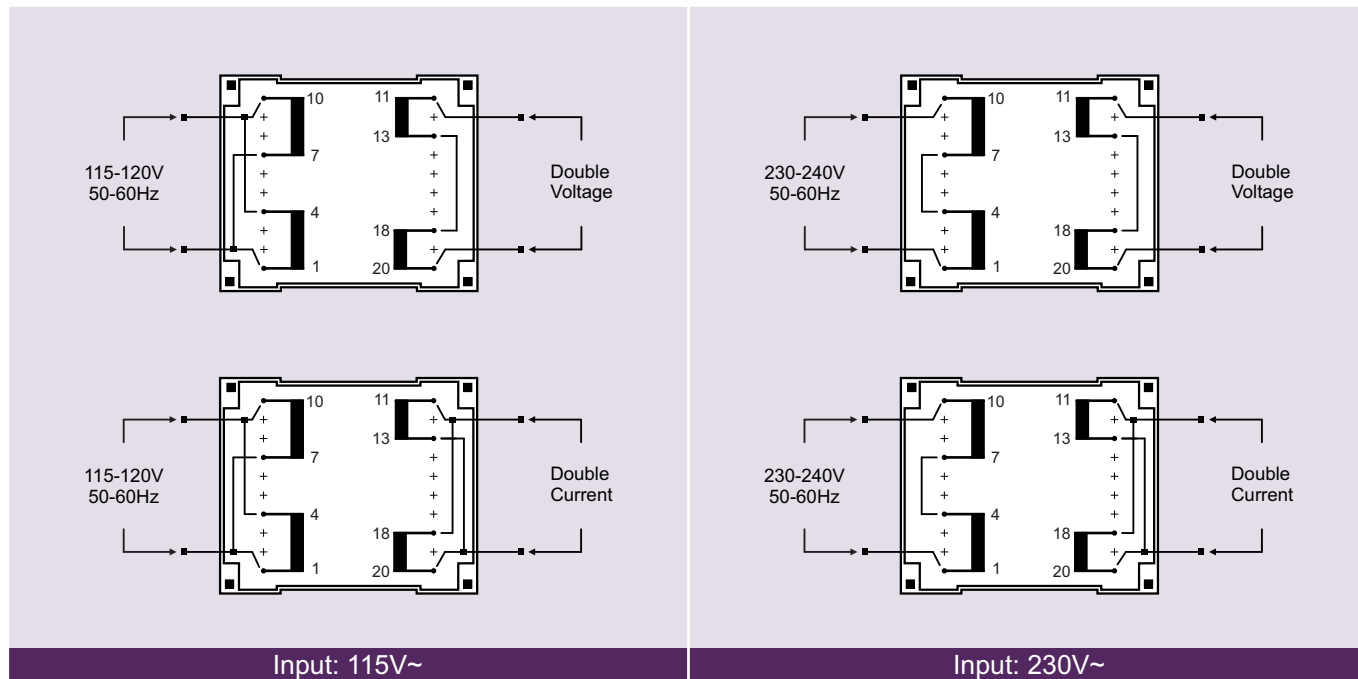
Primary Voltage	Secondary Voltage			Voltage Drop	Rated Power	Height*	Pin	ITA Series
	With Load		No Load					
[V]	[V]	@ [mA]	[V]	[%]	[VA]	H* [mm]	[Prim / Sec]	Order code
<600			<400	25	14.0	24.5	1 - 10 / 11 - 20	9.xxx.U03910.xxx
<600			<400	25	18.0	27.8	1 - 10 / 11 - 20	9.xxx.U03913.xxx
<600			<400	25	24.0	31.3	1 - 10 / 11 - 20	9.xxx.U03917.xxx
<600			<400	15	30.0	35.3	1 - 10 / 11 - 20	9.xxx.U03921.xxx

\* See Mechanical Data

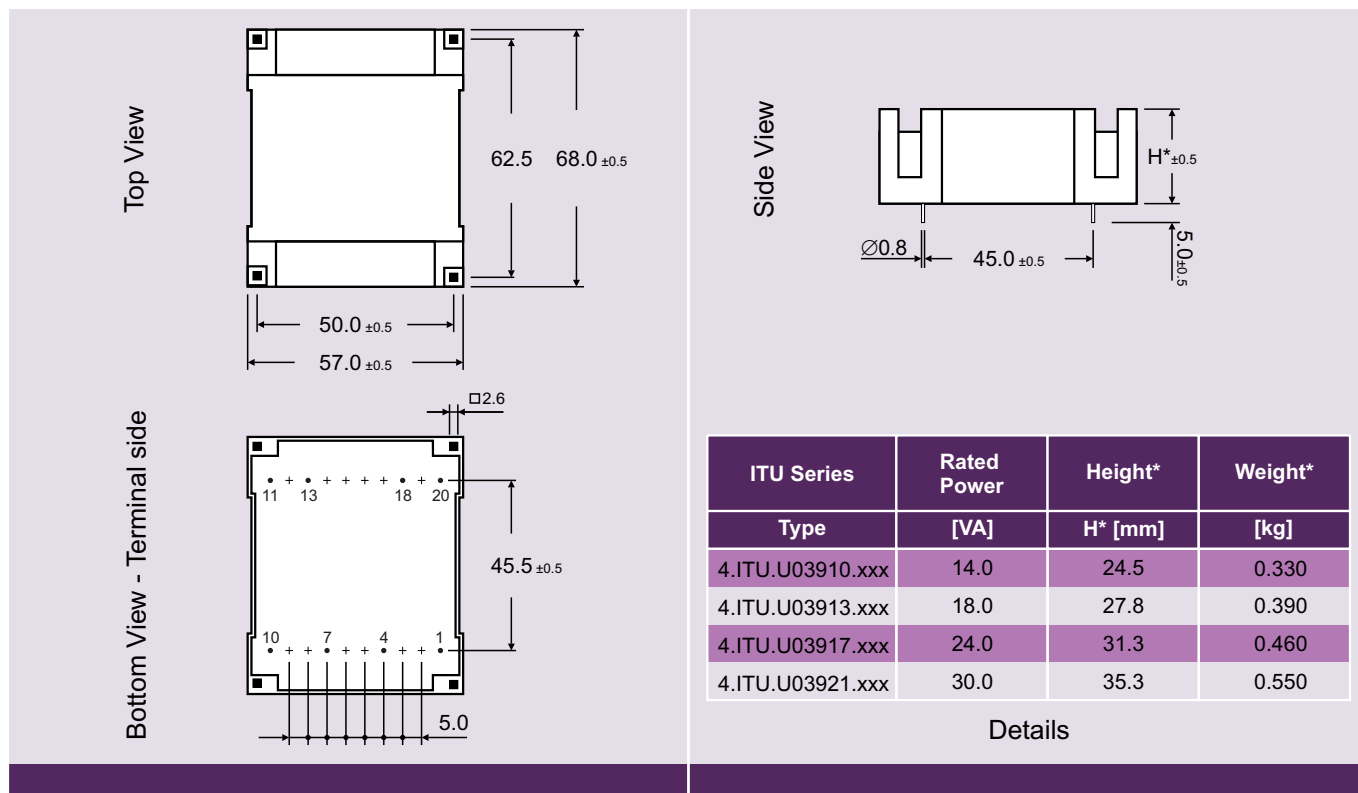
# 4.ITU SERIES

## PCB-Encapsulated Transformer

### Possible Connection Types:



### Mechanical Data:



\*Transformer height is also given in table with Electrical Data

Several hundreds of types provide high electrical safety and long service-life for printed circuit boards, household appliances, leisure electronics, heating and control technology as well as in assembly techniques. Transformers for special requirements with lower open-circuit (no load) loss capacity are also available on request as well as transformers for special ambient temperature and frequency conditions.