

# Transformers

## Moulded Power Transformers



# Features

## Moulded Power Transformers

- VDE approved DIN EN 61558
- UL 1585 approved (0,6 to 2,3 VA)
- Vacuum Filled
- Split Bobbin Design
- Self-Extinguishing Plastics UL94V-0
- Dielectric Strength 4200Vrms  
Operation Frequency 50/60Hz
- Inherently Energy Limited
- Resin Temperature-Class B IEC 85  
(20,000 h Testing to IEC 216)
- Conforms to EN 61558 and EN 60950
- 100% Production Tested

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# Ordering-Code

XXXXXXXXXX - ZU TUBE PACKAGING  
 XXXXXXXXXXX - ZR TRAY PACKAGING  
 P/N



BV 30 2 S 15 010 - Z U

Sealed Transformer

El Lamination Size

Input V

1 = 115V · 2 = 230V

Output Type

S = Single · D = Dual

Output Voltage

06 = 6V · 09 = 9V

12 = 12V, etc.

010 = 1VA · 015 = 1.5VA

028 = 2.8VA, ect.

ZU Tube Packaging

ZR Tray Packaging

# Technical Information

## Rated primary voltage(V)

This is the supply voltage assigned to the transformer by the manufacturer.

## Rated Secondary voltage(V)

This is the secondary output voltage assigned to the transformer when supplied with the rated primary voltage, frequency range, rated secondary current, all assigned 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, in other words, those available when the transformer is loaded. It is the product of the RMS rated secondary voltage by the RMS rated current. If the transformer has more than one output winding, the rated power denotes the maximum sum of the products of RMS rated secondary voltage by the RMS rated secondary current, respectively. This rated power is defined for rated ambient temperature conditions.

## Ambient temperature ( $T_a$ )

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.

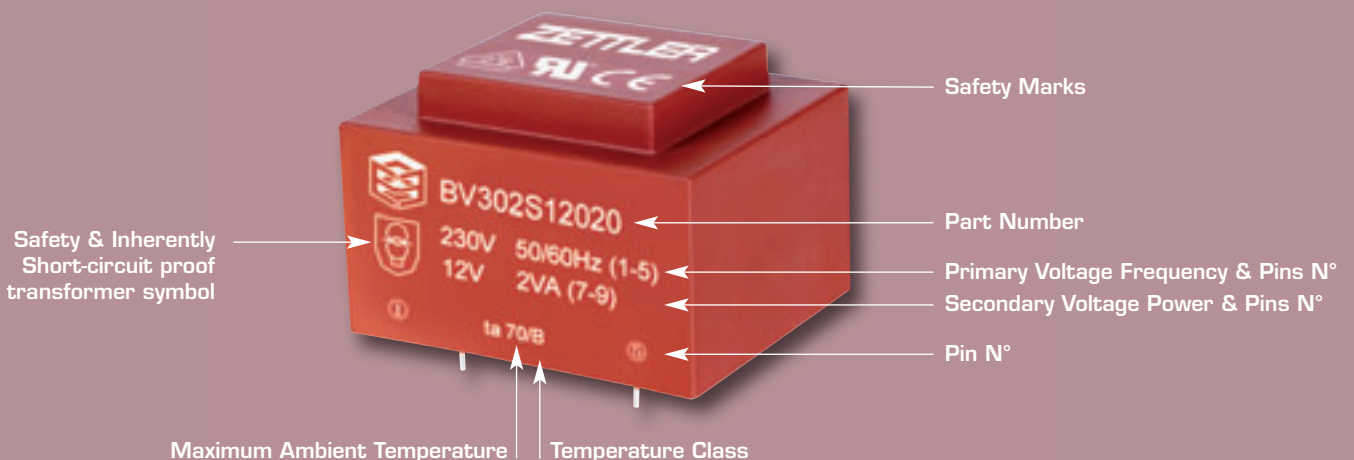
## Particular points of EN 61558-2-6 standard for safety transformers

On-load secondary voltage tolerance. This should not differ from the rated value by more than:

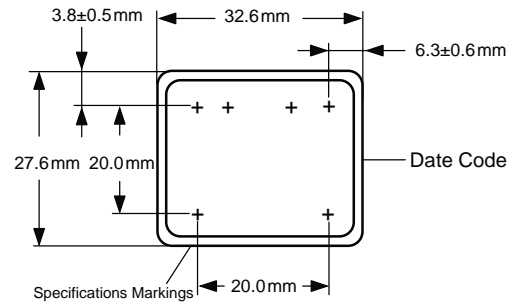
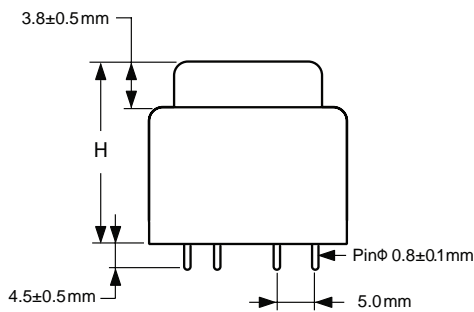
- 10% for transformers with build-in resistance to short-circuits (a supplement of 5% is granted on the 2nd secondary for transformers with 2 secondaries).
- 5% for other transformers whatever the secondaries number.

Off-load secondary voltage. The values given in this catalogue are maximum theoretical values.

# Explanation

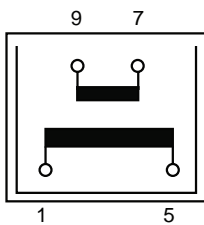


# Outline Dimensions

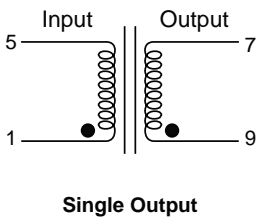


Recommended Drill Hole Diameter for Pins 1.30 mm

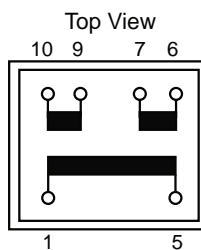
## 1 Secondary winding



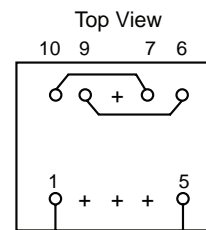
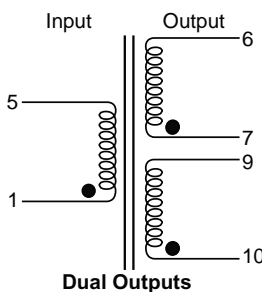
## Primary winding



## 2 Secondary winding



## Primary winding



Recommended layout for transformers with 1 Secondary winding (allows the use of a transformer with 2 secondary windings)

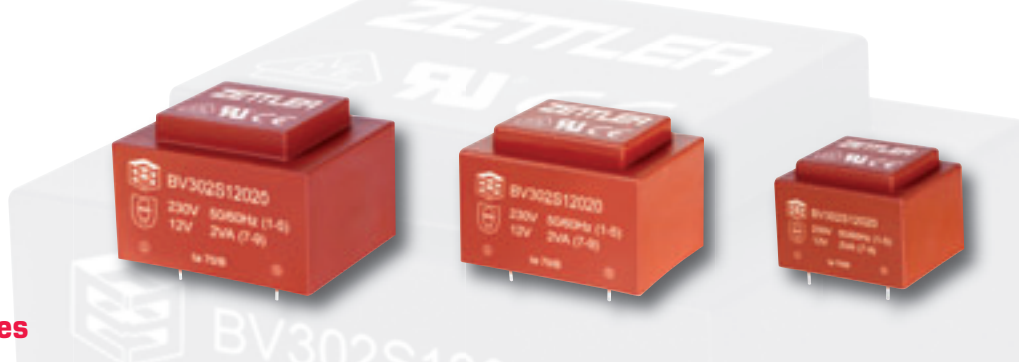
# Electrical Specifications

## 0.6VA EI30-5 Series

Order Number 115V	Order Number 230V	SEC. Voltage (V)	Rated Power (VA)	No-load Voltage (V)	Ambient Temp. (°C)	Max. Height H (mm)	Weight (g)
BV301S06006	BV302S06006	6	0.6	9.94	70	15.4	40
BV301S09006	BV302S09006	9	0.6	14.95	70	15.4	40
BV301S12006	BV302S12006	12	0.6	19.9	70	15.4	40
BV301S15006	BV302S15006	15	0.6	24.9	70	15.4	40
BV301S18006	BV302S18006	18	0.6	29.9	70	15.4	40
BV301S24006	BV302S24006	24	0.6	39.8	70	15.4	40
BV301D06006	BV302D06006	2 x 6	0.6	2 x 9.94	70	15.4	40
BV301D09006	BV302D09006	2 x 9	0.6	2 x 14.95	70	15.4	40
BV301D12006	BV302D12006	2 x 12	0.6	2 x 19.9	70	15.4	40
BV301D15006	BV302D15006	2 x 15	0.6	2 x 24.9	70	15.4	40
BV301D18006	BV302D18006	2 x 18	0.6	2 x 29.9	70	15.4	40
BV301D24006	BV302D24006	2 x 24	0.6	2 x 39.8	70	15.4	40

0.15±0.02  
[3.8±0.5]

0.18±0.2  
[4.5±0.5]



### 1-1.5VA EI30-10.5 Series

Order Number 115V	Order Number 230V	SEC. Voltage (V)	Rated Power (VA)	No-load Voltage (V)	Ambient Temp. (°C)	Max. Height H (mm)	Weight (g)
BV301S06010	BV302S06010	6	1	8.6	70	22.3	70
BV301S09010	BV302S09010	9	1	12.9	70	22.3	70
BV301S12010	BV302S12010	12	1	17.2	70	22.3	70
BV301S15010	BV302S15010	15	1	21.6	70	22.3	70
BV301S18010	BV302S18010	18	1	25.9	70	22.3	70
BV301S24010	BV302S24010	24	1	37.9	70	22.3	70
BV301D06010	BV302D06010	2x6	1	2x8.6	70	22.3	70
BV301D09010	BV302D09010	2x9	1	2x12.9	70	22.3	70
BV301D12010	BV302D12010	2x12	1	2x19	70	22.3	70
BV301D15010	BV302D15010	2x15	1	2x23.6	70	22.3	70
BV301D18010	BV302D18010	2x18	1	2x24.9	70	22.3	70
BV301D24010	BV302D24010	2x24	1	2x37.9	70	22.3	70
BV301S06015A	BV302S06015A	6	1.5	10.1	40	22.3	70
BV301S09015A	BV302S09015A	9	1.5	15.3	40	22.3	70
BV301S12015A	BV302S12015A	12	1.5	20.2	40	22.3	70
BV301S15015A	BV302S15015A	15	1.5	25.3	40	22.3	70
BV301S18015A	BV302S18015A	18	1.5	31.2	40	22.3	70
BV301S24015A	BV302S24015A	24	1.5	43.3	40	22.3	70
BV301D06015A	BV302D06015A	2x6	1.5	2x10.1	40	22.3	70
BV301D09015A	BV302D09015A	2x9	1.5	2x15.3	40	22.3	70
BV301D12015A	BV302D12015A	2x12	1.5	2x20.2	40	22.3	70
BV301D15015A	BV302D15015A	2x15	1.5	2x25.0	40	22.3	70
BV301D18015A	BV302D18015A	2x18	1.5	2x31	40	22.3	70
BV301D24015A	BV302D24015A	2x24	1.5	2x43	40	22.3	70

### 1.5-1.8VA EI30-12.5 Series

Order Number 115V	Order Number 230V	SEC. Voltage (V)	Rated Power (VA)	No-load Voltage (V)	Ambient Temp. (°C)	Max. Height H (mm)	Weight (g)
BV301S06015	BV302S06015	6	1.5	9.7	70	24.4	80
BV301S09015	BV302S09015	9	1.5	14.5	70	24.4	80
BV301S12015	BV302S12015	12	1.5	19.3	70	24.4	80
BV301S15015	BV302S15015	15	1.5	24.2	70	24.4	80
BV301S18015	BV302S18015	18	1.5	29.8	70	24.4	80
BV301S24015	BV302S24015	24	1.5	38.6	70	24.4	80
BV301D06015	BV302D06015	2x6	1.5	2x9.7	70	24.4	80
BV301D09015	BV302D09015	2x9	1.5	2x15.3	70	24.4	80
BV301D12015	BV302D12015	2x12	1.5	2x19.3	70	24.4	80
BV301D15015	BV302D15015	2x15	1.5	2x24.2	70	24.4	80
BV301D18015	BV302D18015	2x18	1.5	2x29	70	24.4	80
BV301D24015	BV302D24015	2x24	1.5	2x38.6	70	24.4	80
BV301S06018	BV302S06018	6	1.8	9.8	70	24.4	80
BV301S09018	BV302S09018	9	1.8	14.8	40	24.4	80
BV301S12018	BV302S12018	12	1.8	19.7	40	24.4	80
BV301S15018	BV302S15018	15	1.8	24.6	40	24.4	80
BV301S18018	BV302S18018	18	1.8	30.3	40	24.4	80
BV301S24018	BV302S24018	24	1.8	39.3	40	24.4	80
BV301D06018	BV302D06018	2x6	1.8	2x9.8	40	24.4	80
BV301D09018	BV302D09018	2x9	1.8	2x15.2	40	24.4	80
BV301D12018	BV302D12018	2x12	1.8	2x19.7	40	24.4	80
BV301D15018	BV302D15018	2x15	1.8	2x24.6	40	24.4	80
BV301D18018	BV302D18018	2x18	1.8	2x29.5	40	24.4	80
BV301D24018	BV302D24018	2x24	1.8	2x39.3	40	24.4	80

## 2-2.4VA EI30-15.5 Series

Order Number 115V	Order Number 230V	SEC. Voltage (V)	Rated Power (VA)	No-load Voltage (V)	Ambient Temp. (°C)	Max. Height H (mm)	Weight (g)
BV301S06020	BV302S06020	6	2	10.4	70	27.4	100
BV301S09020	BV302S09020	9	2	15.5	70	27.4	100
BV301S12020	BV302S12020	12	2	20.7	70	27.4	100
BV301S15020	BV302S15020	15	2	25.8	70	27.4	100
BV301S18020	BV302S18020	18	2	30.8	70	27.4	100
BV301S24020	BV302S24020	24	2	41.4	70	27.4	100
BV301D06020	BV302D06020	2 x 6	2	2 x 10.4	70	27.4	100
BV301D09020	BV302D09020	2 x 9	2	2 x 15.4	70	27.4	100
BV301D12020	BV302D12020	2 x 12	2	2 x 20.7	70	27.4	100
BV301D15020	BV302D15020	2 x 15	2	2 x 25.0	70	27.4	100
BV301D18020	BV302D18020	2 x 18	2	2 x 30.8	70	27.4	100
BV301D24020	BV302D24020	2 x 24	2	2 x 41.4	70	27.4	100
BV301S06024	BV302S06024	6	2.4	10.5	40	27.4	100
BV301S09024	BV302S09024	9	2.4	15.5	40	27.4	100
BV301S12024	BV302S12024	12	2.4	20.7	40	27.4	100
BV301S15024	BV302S15024	15	2.4	25.8	40	27.4	100
BV301S18024	BV302S18024	18	2.4	30.8	40	27.4	100
BV301S24024	BV302S24024	24	2.4	41.4	40	27.4	100
BV301D06024	BV302D06024	2 x 6	2.4	2 x 10.4	40	27.4	100
BV301D09024	BV302D09024	2 x 9	2.4	2 x 15.4	40	27.4	100
BV301D12024	BV302D12024	2 x 12	2.4	2 x 20.7	40	27.4	100
BV301D15024	BV302D15024	2 x 15	2.4	2 x 25.0	40	27.4	100
BV301D18024	BV302D18024	2 x 18	2.4	2 x 30.8	40	27.4	100
BV301D24024	BV302D24024	2 x 24	2.4	2 x 41.4	40	27.4	100

## 2.3-2.8VA EI30-18 Series

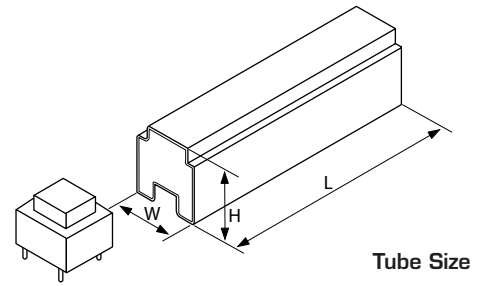
Order Number 115V	Order Number 230V	SEC. Voltage (V)	Rated Power (VA)	No-load Voltage (V)	Ambient Temp. (°C)	Max. Height H (mm)	Weight (g)
BV301S06023	BV302S06023	6	2.3	10.5	70	29.8	110
BV301S09023	BV302S09023	9	2.3	15.7	70	29.8	110
BV301S12023	BV302S12023	12	2.3	21.0	70	29.8	110
BV301S15023	BV302S15023	15	2.3	25.9	70	29.8	110
BV301S18023	BV302S18023	18	2.3	31.4	70	29.8	110
BV301S24023	BV302S24023	24	2.3	41.9	70	29.8	110
BV301D06023	BV302D06023	2 x 6	2.3	2 x 10.5	70	29.8	110
BV301D09023	BV302D09023	2 x 9	2.3	2 x 15.7	70	29.8	110
BV301D12023	BV302D12023	2 x 12	2.3	2 x 21.0	70	29.8	110
BV301D15023	BV302D15023	2 x 15	2.3	2 x 25.9	70	29.8	110
BV301D18023	BV302D18023	2 x 18	2.3	2 x 31.4	70	29.8	110
BV301D24023	BV302D24023	2 x 24	2.3	2 x 41.9	70	29.8	110
BV301S06028	BV302S06028	6	2.8	10.5	40	29.8	110
BV301S09028	BV302S09028	9	2.8	15.4	40	29.8	110
BV301S12028	BV302S12028	12	2.8	21.1	40	29.8	110
BV301S15028	BV302S15028	15	2.8	26.3	40	29.8	110
BV301S18028	BV302S18028	18	2.8	30.9	40	29.8	110
BV301S24028	BV302S24028	24	2.8	42.1	40	29.8	110
BV301D06028	BV302D06028	2 x 6	2.8	2 x 10.5	40	29.8	110
BV301D09028	BV302D09028	2 x 9	2.8	2 x 15.4	40	29.8	110
BV301D12028	BV302D12028	2 x 12	2.8	2 x 21.1	40	29.8	110
BV301D15028	BV302D15028	2 x 15	2.8	2 x 25.0	40	29.8	110
BV301D18028	BV302D18028	2 x 18	2.8	2 x 31.5	40	29.8	110
BV301D24028	BV302D24028	2 x 24	2.8	2 x 42.1	40	29.8	110

0.15±0  
[3.8±0]

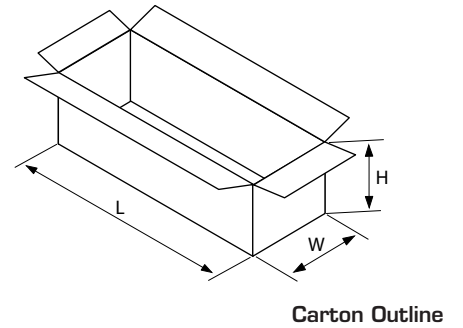
1.087  
[27.6]

# Tube Packaging

Model	Tube Size L x W x H (mm)	QTY (Pcs per Tube)	Weight (Per Tube)
EI30-5 Series	510 x 31 x 26	15	0.668 kg
EI30-10.5 Series	510 x 31 x 32	15	1.124 kg
EI30-12.5 Series	510 x 31 x 35	15	1.275 kg
EI30-15.5 Series	510 x 31 x 38	15	1.579 kg
EI30-18 Series	510 x 31 x 41	15	1.733 kg

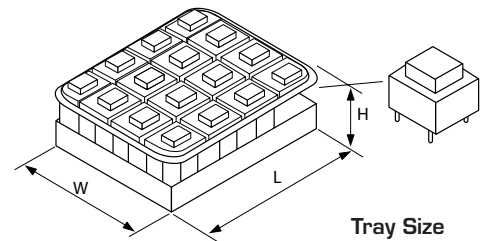


Model	Carton Outline L x W x H (mm)	QTY (Pcs per Carton)	Weight (Per Carton)
EI30-5 Series	565 x 195 x 140	300	13.5 kg
EI30-10.5 Series	565 x 195 x 140	225	16.9 kg
EI30-12.5 Series	565 x 195 x 130	150	12.9 kg
EI30-15.5 Series	565 x 195 x 130	150	15.9 kg
EI30-18 Series	565 x 195 x 140	150	17.5 kg

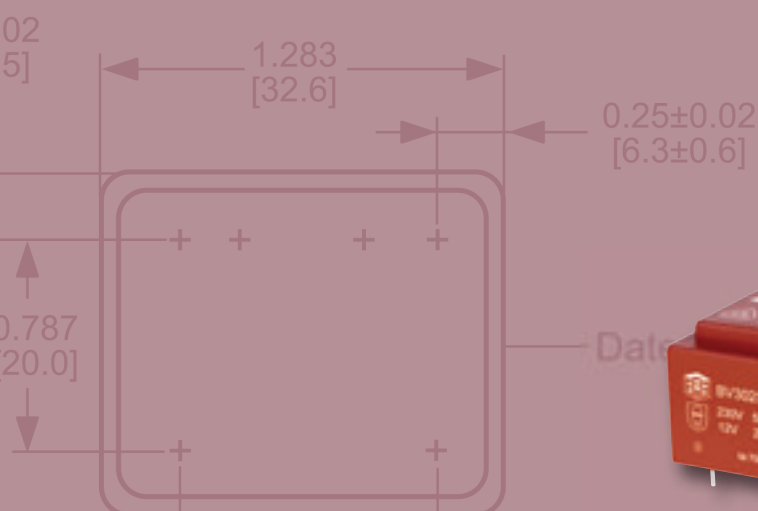
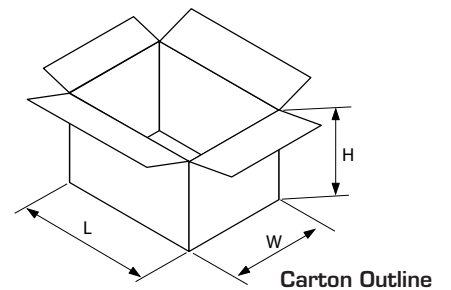


# Tray Packaging

Model	Tray Size L x W x H (mm)	QTY (Pcs per Tray)	Weight (Per Tray)
EI30-5 Series	220 x 170 x 33	20	0.810 kg
EI30-10.5 Series	220 x 170 x 40	20	1.410 kg
EI30-12.5 Series	220 x 170 x 42	20	1.610 kg
EI30-15.5 Series	220 x 170 x 45	20	2.010 kg
EI30-18 Series	220 x 170 x 48	20	2.210 kg



Model	Carton Outline L x W x H (mm)	QTY (Pod per Carton)	Weight (Per Carton)
EI30-5 Series	370 x 250 x 235	240	9.7 kg
EI30-10.5 Series	370 x 250 x 235	200	14.2 kg
EI30-12.5 Series	370 x 250 x 235	200	16.2 kg
EI30-15.5 Series	370 x 250 x 235	160	16.2 kg
EI30-18 Series	370 x 250 x 235	160	17.8 kg



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