

**PURCHASE SPECIFICATIONS**  
**FOR**  
**VOLTAGE TRANSFORMERS (PT)**  
**600 V / 120 V**  
**FOR**  
**OIL RIG APPLICATIONS**



SPECIFICATION NO. : OR 12081  
REVISION NO. : REV 01  
DATE OF REVISION : 20.3.09  
DISTRIBUTION : AS PER REQUIREMENT  
O/C -1

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## GENERAL SPECIFICATIONS FOR VOLTAGE TRANSFORMER FOR OIL RIGS APPLICATION

### SCOPE :

This specification applies to the requirement of 600V : 120V 50 Hz Single phase Voltage transformer (PT) with rating of 15/50VA, primarily intended for indoor oil rig application for salt laden 95% humid atmospheric environment at 50 deg C ambient.

### 1.0 Technical parameters

#### 1.1 Item 1 & 2 : Generator PT

Applicable standard	IS 3156 part 1 & 2
Rating	15VA at 1% accuracy. 50 VA at 5% accuracy.
No. of Phases	One
Primary Voltage	Item 1 : 600 VAC +/- 7%,50Hz +/- 3%,1ph Item 2 : 660 VAC +/- 7%,50Hz +/- 3%,1ph
Secondary Voltage	120 VAC
Insulation class	H
Accuracy Class	1% at 15VA burden
Phase angle displacement	As per IS 3156
Temperature Rise allowed	<75 deg C
Core Type	R core / EI core
Cooling	Natural air cooled.
Construction	Open frame with mounting feet, varnished, vacuum impregnated, epoxy dip. Mark the terminals with numbers mentioned above on side & top. Also mark : CONTROL SUPPLY TRANSFORMER Complete winding on shall be covered with non-inflammable insulating material. Terminals to be suitable for 2x1.5 sqmm wire. Screw type terminals to be provided.

	"DEGSON" DG78 series terminals are recommended.
Dimensions	100mm (H) x 100mm(L) x 100mm(D) max Mounting feet 100mm(L)x100mm(D) max Mounting slots size 6.5 x 12mm. Mounting slots to be located on base frame at 80 mm (along L) x 80 mm (along D).
Terminations Numbering	Primary - 0V (2), 600V (1) Secondary- 120V (3), 0V (4) Primary and secondary terminals to be numbered as per numbers given in bracket against each voltage terminal.
Markings on transformer	Gen PT Item 1 : 600/120V, 15/50VA 1% <b>Style Code : BP9048094186</b> Item 2 : 660/120V, 15/50VA 1% <b>Style Code : BP9048124859</b>

## 1.2 Item 3 & 4: BUS PT (For Feeder Panel)

Applicable standard	IS 3156 part 1 & 2
Rating	50VA at 1% accuracy. 200 VA at 5% accuracy.
No. of Phases	One
Primary Voltage	Item 3 : 600VAC +/- 7%, 50Hz +/- 3%, 1ph Item 4 : 660VAC +/- 7%, 50Hz +/- 3%, 1ph
Secondary Voltage	120 VAC
Insulation class	H
Accuracy Class	1% at 50VA burden
Phase angle displacement	As per IS 3156
Temperature Rise allowed	<75 deg C
Core Type	R core / EI core
Cooling	Natural air cooled.
Construction	Open frame with mounting feet, varnished, vacuum impregnated, epoxy

dip. Mark the terminals with numbers mentioned above on side & top. Also mark : CONTROL SUPPLY TRANSFORMER  
Complete winding on shall be covered with non-inflammable insulating material.  
Terminals to be suitable for 2x1.5 sqmm wire. Screw type terminals to be provided. "DEGSON" DG78 series terminals are recommended.

Dimensions	120mm (H) x 130mm(L) x 100mm(D) max Mounting feet 130mm(L)x100mm(D) max Mounting slots size 6.5 x 12mm. Mounting slots to be located on base frame at 108 mm (along L) x 80 mm (along D).
Terminations Numbering	Primary - 0V (2), 600V (1) Secondary- 120V (3), 0V (4) Primary and secondary terminals to be numbered as per numbers given in bracket against each voltage terminal.
Markings on transformer	Gen/Bus PT Item 3 : 600/120V, 50/200VA 1% <b>Style Code : BP9048093287</b> Item 4 : 660/120V, 50/200VA 1% <b>Style Code : .....</b>

## 2.0 Tests

Following acceptance tests to be conducted on each transformer before dispatch by supplier at their premises. Refer applicable standard for tests method.

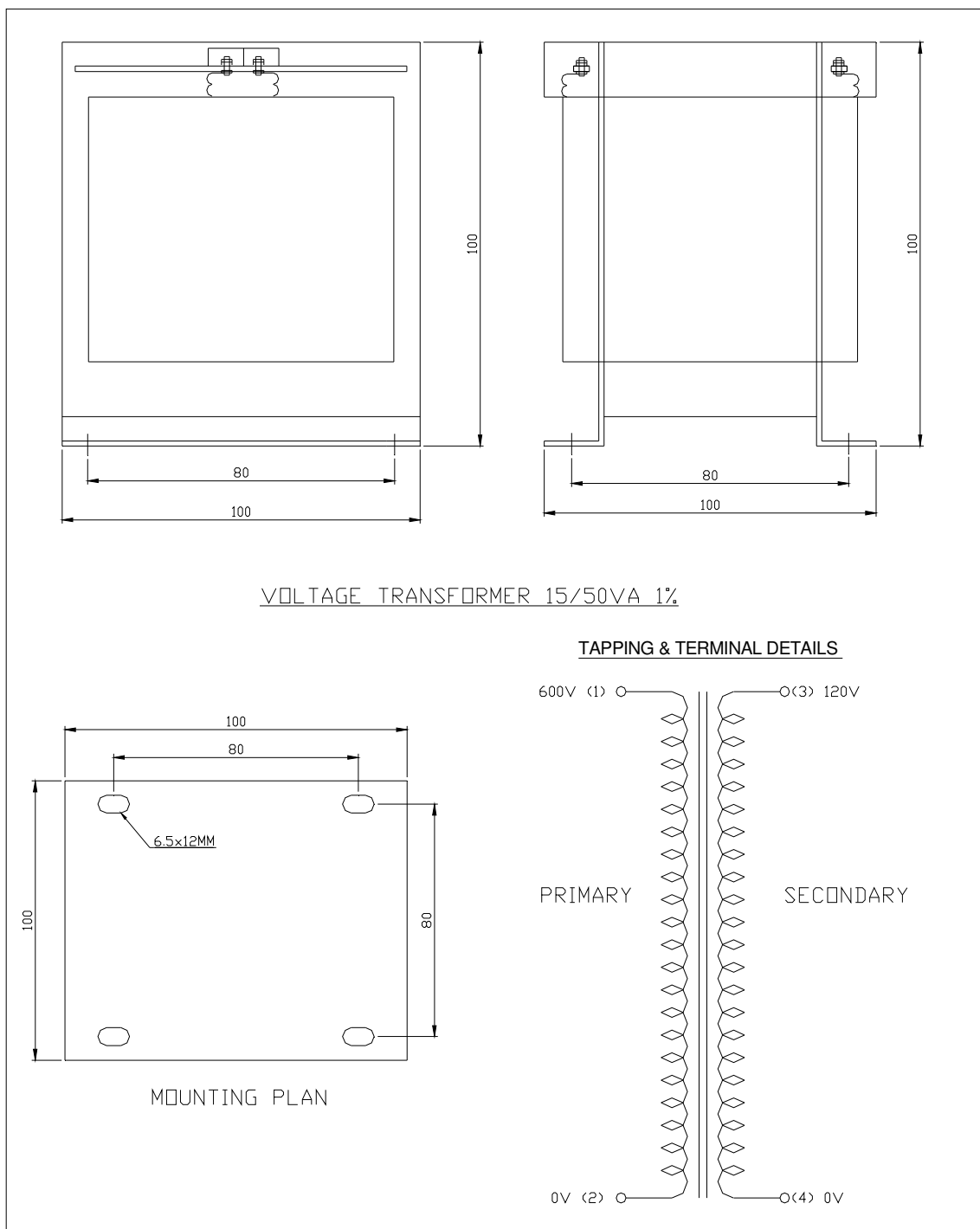
### Acceptance tests

- i) Transformer Ratio Test.
- ii) Winding Resistance Test.
- iii) Phase sequence test for Secondary winding : Test with dual channel oscilloscope or any other acceptable method for correct phase sequence of secondary winding to the primary winding.
- iv) Accuracy Class test (On first unit of each PO).
- v) Temperature rise test (On first unit of each PO).
- vi) Dielectric test at 3 KV AC rms 50 Hz for One Minute between primary and secondary winding (with each winding separately) & between shorted windings and frame.

## 3.0 Documents required along with consignment

- i) Test reports - 3 copies

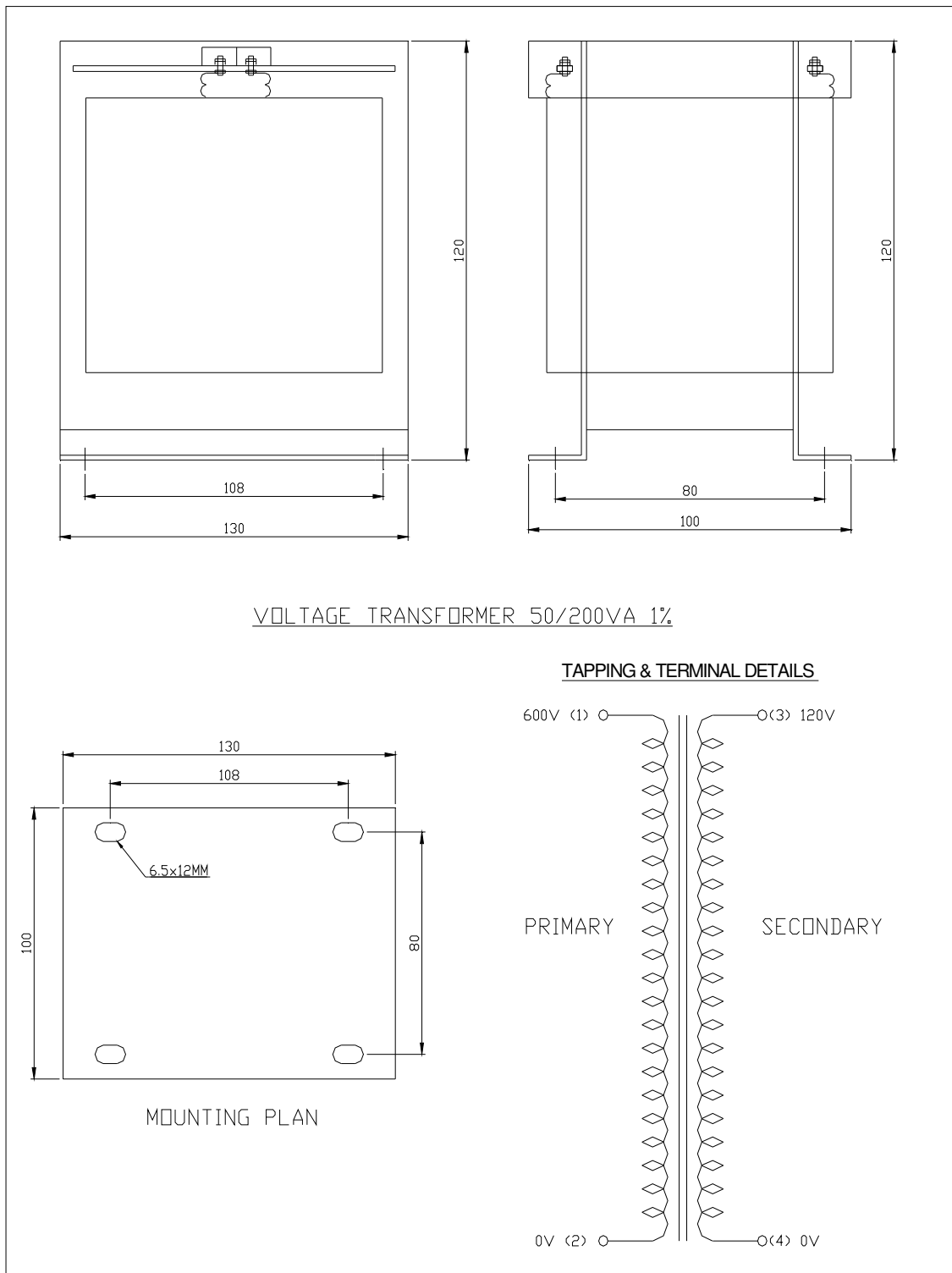
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**Winding detail shown for item 1, for item 2 primary is 660V**

**Item 1 : 600 : 120V - Style Code : BP9048094186**

**Item 2 : 660 : 120V - Style Code : BP9048124859**



Winding detail shown for item 3, for item 4 primary is 660V  
 Item 3 : 600 : 120V - Style Code : BP9048093287  
 Item 4 : 660 : 120V - Style Code : .....