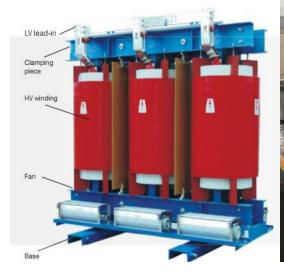




## TECHNICAL DATA SHEET







**Kiosk Enclosure** 

\*images are of a similar transformer unit.





## 1. Technical Data

| Rated power   Rated voltage   | Item 1 – Dry Type Transformer                |                      | HV Winding 1                       | LV Winding 1             |  |
|---|--|----------------------|------------------------------------|--------------------------|--|
| Frequency         Hz         50           Off circuit tapping links         %         ±2.5%, +-5%         Nil           Connection         Delta         Star           Vector group         Dyn11         Insulation level (Maximum BIL/AC)         kV         (145-20)/(3-70)         (145-   |  | •                    |                                    | •                        |  |
| Frequency         Hz         50           Off circuit tapping links         %         ±2.5%, +-5%         Nil           Connection         Delta         Star           Vector group         Dyn11         Insulation level (Maximum BIL/AC)         kV         (145-20)/(3-70)         (145-   |  | kV                   | 0.415/11/22/33                     | 0-1 kV                   |  |
| Delta   Star  | -  | Hz                   | ·                                  |                          |  |
| Delta   Star  | Off circuit tapping links                    | %                    | ±2.5%, +-5%                        | Nil                      |  |
| Insulation level (Maximum BIL/AC)   | ' ' '  |                      | ·                                  | Star                     |  |
| Insulation level (Maximum BIL/AC)   | Vector group                                 |                      |                                    |                          |  |
| Minding material   Aluminium/Copper   Aluminium/Copper  | Insulation level                             | 117                  | (4.45.20) /(2.70)                  | (4.45.20) /(2.70)        |  |
| Type of winding   | (Maximum BIL/AC)                             | KV                   | (145-20) <b>/</b> (3-70)           | (145-20) <b>/</b> (3-70) |  |
| Standard Installation Indoor/Outdoor Degree of protection IP00-IP56 Type of cooling Installation altitude   \$\ \text{1000 a.m.s.l}\$ Climatic/environmental and fire behaviour class   \$\ \text{1000 a.m.s.l}\$ Indicative values   \$\ \text{Reference Temperature: 75°C}\$ Standard tolerances per AS 60076 are applicable to the following values No-load loss   W   360   | Winding material                             |                      | Aluminium/Copper                   | Aluminium/Copper         |  |
| Installation  | Type of winding                              |                      | Oil Type                           | Oil Type                 |  |
| Degree of protection Type of cooling Type of cooling Installation altitude Climatic/environmental and fire behaviour class Indicative values Reference Temperature: 75°C Standard tolerances per AS 60076 are applicable to the following values No-load loss W 360 Load loss W 1492 Impedance W 1492 Impedance W 1492 Impedance Bfficiency @ 75degC Cosop = 1 Load Efficiency @ 75degC Cosop = 0.8 Load  Efficiency @ 75degC Cosop = 0.8 Load  Efficiency Bridge For AS 60076 are applicable to the following values  No-load loss W 1492 Impedance Private P  | Standard                                     |                      | AS 60076-1                         | 1, AS 2374               |  |
| Type of cooling Installation altitude Climatic/environmental and fire behaviour class Indicative values Standard tolerances per AS 60076 are applicable to the following values No-load loss W 360 Load loss W 1492 Impedance Bfficiency @ 75degC G cosφ = 1 Load Efficiency @ 75degC G cosφ = 0.8 Load Insulation Class Max.ambient temperature class Temperature Class Temperature Class Temperature Class Temperature Class Temperature Class Temperature rise C Overall dimensions and weights (Preliminary) Width x Depth x Height (IP00) Mass (IP00) Mass (IP00) Kg Soverale Color (IP01) Kefficiency (IP02) Kefficiency (IP03) Kefficiency (IP04) Keffic   | Installation                                 |                      |                                    |                          |  |
| Type of cooling Installation altitude Climatic/environmental and fire behaviour class Indicative values Standard tolerances per AS 60076 are applicable to the following values No-load loss W 360 Load loss W 1492 Impedance Bfficiency @ 75degC G cosφ = 1 Load Efficiency @ 75degC G cosφ = 0.8 Load Insulation Class Max.ambient temperature temperature class Temperature class Temperature rise Oc Overall dimensions and weights (Preliminary) Width x Depth x Height (IP00) Mass (IP00) Mass (IP00) Kg Standard tolerances AS 60076 are applicable to the following values Reference Temperature: 5°C 98.18/98.43/98.56 (MEPS COMPLIANT) (998.18/98.43/98.56 (MEPS COMPLIANT) (997.74/98.04/98.20 (MEPS COMPLIANT) (97.74/98.04/98.20 (MEPS COMPLIANT) (97.74/98.04/9   | Degree of protection                         |                      | ·                                  |                          |  |
| Installation altitude Climatic/environmental and fire behaviour class  Indicative values  Standard tolerances per AS 60076 are applicable to the following values No-load loss W 360 Load loss W 1492 Impedance Bfficiency @ 75degC 50% /75%/100%   | •  |                      |                                    |                          |  |
| Indicative values  Standard tolerances per AS 60076 are applicable to the following values  No-load loss  Load loss  W  1492  Impedance  ### ### ### ### #### ###############   |  |                      |                                    |                          |  |
| Indicative values  Standard tolerances per AS 60076 are applicable to the following values  No-load loss  Load loss  W  1492  Impedance  ### ### ### ### #### ###############   | Climatic/environmental                       |                      |                                    |                          |  |
| Standard tolerances per AS 60076 are applicable to the following valuesNo-load lossW360Load lossW1492Impedance%4-6%Efficiency @ 75degC50% /75%/100%98.18/98.43/98.56 (MEPS COMPLIANT)@ cosφ = 1LoadEfficiency @ 75degC50% /75%/100%97.74/98.04/98.20 (MEPS COMPLIANT)@ cosφ = 0.8LoadInsulation ClassWax.ambient<br>temperature°C45Insulation temperature<br>classHV windingLV windingInsulation temperature rise°C100Overall dimensions and weights (Preliminary)Width x Depth x<br>Height (IP00)mm750 x 500 x 890Mass (IP00)Kg590NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.Accessories  | I  |                      | E2-C2-F_ (0/1)                     |                          |  |
| No-load loss         W         360           Load loss         W         1492           Impedance         %         4-6%           Efficiency @ 75degC         50% /75%/100%         98.18/98.43/98.56 (MEPS COMPLIANT)           @ cosφ = 1         Load         97.74/98.04/98.20 (MEPS COMPLIANT)           @ cosφ = 0.8         Load         97.74/98.04/98.20 (MEPS COMPLIANT)           Insulation Class         W         45           Max. ambient temperature         °C         45           Insulation temperature class         F (155°C) / H (180°C)           Temperature rise         °C         100           Overall dimensions and weights (Preliminary)         Width x Depth x Height (IP00)         mm         750 x 500 x 890           Mass (IP00)         Kg         590           NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.         Accessories   | <b>Indicative values</b>                     |                      | Reference Temperature: 75°C        |                          |  |
| Load loss   W   | *  |                      |                                    |                          |  |
| $ \begin{array}{ c c c c } \hline \mbox{Impedance} & \% & 4-6\% \\ \hline Efficiency @ 75 degC & 50\% /75\% /100\% & 98.18/98.43/98.56 (MEPS COMPLIANT) \\ @ \cos \varphi = 1 & Load & 97.74/98.04/98.20 (MEPS COMPLIANT) \\ \hline Efficiency @ 75 degC & 50\% /75\% /100\% & 97.74/98.04/98.20 (MEPS COMPLIANT) \\ @ \cos \varphi = 0.8 & Load & & & & \\ \hline \mbox{Insulation Class} & & & & & \\ \hline \mbox{Max.ambient} & & & & & \\ \hline \mbox{temperature} & & & & & \\ \hline \mbox{Insulation temperature} & & & & & \\ \hline \mbox{Insulation temperature} & & & & & \\ \hline \mbox{Insulation temperature} & & & & \\ \hline \mbox{Temperature rise} & & & & \\ \hline \mbox{C} & & & & \\ \hline \mbox{Temperature rise} & & & & \\ \hline \mbox{C} & & & & \\ \hline \mbox{Width x Depth x} & & & \\ \hline \mbox{Height (IP00)} & & & \\ \hline \mbox{Mass (IP00)} & & & & \\ \hline \mbox{NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.} \\ \hline \mbox{Accessories} & & & & \\ \hline \mbox{Accessories} & & & & \\ \hline \mbox{PS. 18/98.43/98.56 (MEPS COMPLIANT)} \\ \mbox{98.18/98.43/98.56 (MEPS COMPLIANT)} \\ \mbox{97.74/98.04/98.20 (MEPS COMPLIANT)} \\ 97.74/98.04/98.20 (MEPS COMPLIANT$ | No-load loss                                 | W                    |                                    |                          |  |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$  | Load loss                                    | W                    |                                    |                          |  |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$  | Impedance                                    | %                    |                                    |                          |  |
|   |  | 50% /75%/100%        | 98.18/98.43/98.56 (MEPS COMPLIANT) |                          |  |
| (a) cosφ = 0.8       Load         Insulation Class         Max.ambient temperature       °C       45         Insulation temperature class       HV winding       LV winding         Insulation temperature rise       °C       100         Overall dimensions and weights (Preliminary)         Width x Depth x Height (IP00)       mm       750 x 500 x 890         Mass (IP00)       Kg       590         NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.         Accessories  |  | Load                 | ,                                  |                          |  |
| Insulation Class       Max.ambient temperature     °C     45       Insulation temperature class     HV winding     LV winding       Temperature rise     °C     100       Overall dimensions and weights (Preliminary)       Width x Depth x Height (IP00)     mm     750 x 500 x 890       Mass (IP00)     Kg     590       NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.       Accessories   | Efficiency @ 75degC                          | 50% /75%/100%        | 97.74/98.04/98.20 (MEPS COMPLIANT) |                          |  |
| Max.ambient temperature     °C     45       Insulation temperature class     HV winding     LV winding       Temperature rise     °C     100       Overall dimensions and weights (Preliminary)       Width x Depth x Height (IP00)     mm     750 x 500 x 890       Mass (IP00)     Kg     590       NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.       Accessories  | $@ \cos \varphi = 0.8$                       | Load                 | ,                                  |                          |  |
| temperature    MV winding   LV winding  | Insulation Class                             |                      |                                    |                          |  |
| Insulation temperature class  Temperature rise  Overall dimensions and weights (Preliminary)  Width x Depth x Height (IP00)  Mass (IP00)  Kg  Townsions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  HV winding  F (155°C) / H (180°C)  100  Townsions  F (155°C) / H (180°C)  100  Townsions  F (155°C) / H (180°C)  F (155°  | Max.ambient                                  | °C                   |                                    |                          |  |
| Insulation temperature class  Temperature rise  °C  100  Overall dimensions and weights (Preliminary)  Width x Depth x  | temperature                                  | <u> </u>             |                                    |                          |  |
| Class Temperature rise  C 100  Overall dimensions and weights (Preliminary)  Width x Depth x Height (IP00)  Mass (IP00)  Kg 590  NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories  |  |                      | HV winding                         | LV winding               |  |
| Temperature rise  OC  Overall dimensions and weights (Preliminary)  Width x Depth x Height (IP00)  Mass (IP00)  Kg  Too x 500 x 890  NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories  | _  |                      | F (155°C) / H (180°C)              |                          |  |
| Overall dimensions and weights (Preliminary)  Width x Depth x Height (IP00)  Mass (IP00)  Kg  T50 x 500 x 890  NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories  |  |                      | 1 (133 0), 11 (100 0)              |                          |  |
| Width x Depth x Height (IP00)  Mass (IP00)  Kg  To x 500 x 890  NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories   | Temperature rise                             | $^{\circ}\mathrm{C}$ | 100                                |                          |  |
| Width x Depth x Height (IP00)  Mass (IP00)  Kg  To x 500 x 890  NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories   | Overall dimensions and weights (Preliminary) |                      |                                    |                          |  |
| Height (IP00)  Mass (IP00)  Kg  590  NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories  |  |                      |                                    |                          |  |
| NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories   |  | mm                   | 750 x 500 x 890                    |                          |  |
| NOTE: losses dimensions and weights are indicative, to be confirmed following receipt of purchase order and completion of engineering stage.  Accessories   | 8 \  | Kg                   | 590                                |                          |  |
| purchase order and completion of engineering stage.  Accessories  |  |                      |                                    |                          |  |
| Accessories   |  |                      |                                    |                          |  |
|   |  |                      |                                    |                          |  |
|   |  | TRANSFORMER)         | UNITS                              |                          |  |
| HV terminals 3 HV bushing   | ·  | •                    |                                    | HV bushing               |  |
| LV terminals 4 LV bushing   |  |                      |                                    |                          |  |
| Rating plate 1 Stainless Steel  |  |                      |                                    | ·                        |  |





| Routine tests (Included)                   |     |  |  |  |
|--|-----|--|--|--|
| Winding resistance                         | Yes |  |  |  |
| Ratio and phase relationship               | Yes |  |  |  |
| Impedance voltage, short circuit impedance | Yes |  |  |  |
| and load loss                              |     |  |  |  |
| No load loss                               | Yes |  |  |  |
| Induced over voltage withstand             | Yes |  |  |  |
| Separate source voltage withstand          | Yes |  |  |  |
| Insulation resistance                      | Yes |  |  |  |
| Type tests (Optional – additional cost)    |     |  |  |  |
| Temperature rise test                      | Yes |  |  |  |
| Impulse test                               | Yes |  |  |  |
| Noise pressure level test                  | Yes |  |  |  |

Drawings issued 1 week after the order.

Project timeline issued 2 weeks after order.

Inspection and Test Plan, Operation and Maintenance manuals submitted 4 weeks prior to delivery.