TERMINAL BOXES FOR OIL IMMERSED TRANSFORMERS (Series 2009)
GENERAL FEATURES
The measurement, control, check and data recording circuits for medium and high power, oil-cooled, oil-insulated electric transformers require to bring current signals outside from the tank. CEDASPE terminal boxes allow an easy connection between external and internal measuring circuit of transformer tank.

CONSTRUCTION
CEDASPE SM2 Series terminal boxes have the following constructional characteristics:
- casing made of sealed aluminium alloy, its flanged shape allows an easy fixation to the transformer tank with welded studs; casing has also a lowered bottom in order to prevent air pockets from forming when the box is fitted to the transformer tank.
- The cover, in aluminium alloy too, closes hermetically the case and protects the terminals; a nylon lid links cover and housing to avoid any mistake during wiring operation if more terminal boxes are used on the transformer.
- The terminals allow the connection between wiring inside and outside the transformer tank and are designed in such a way to avoid unscrew during assembly or wiring operation.
- The terminal box is provided with an external identification plate and an internal numbered plate for terminals.

MANUFACTURING PROGRAM
Four box sizes as below:
- Terminal box type SM2-XS (pag5-36): max number of terminal 6 max number of cable exit 2
- Terminal box type SM2-S (pag5.37): max number of terminal 12 max number of cable exit 4
- Terminal box type SM2-L (pag5.38): max number of terminal 36 max number of cable exit 6
- Terminal box type SM2-XL (pag5.39): max number of terminal 53 max number of cable exit 4

Drawings at pages 5-36; 5-37; 5-38 and 5-39 illustrate all different execution and location of terminals in standard execution, on demand special execution can be provided.

SETTING TO WORK
Terminal boxes CEDASPE have to be installed as follows:
- If required (i.e. when terminal boxes on transformer are 2 or more on the same tank) engrave the number of terminal box on the external plate; if the numbering of wiring is different from the numbering of terminals write conversion numbers on the plate inside the box.
- Make the wiring inside transformer tank referring to the plate inside the box; wires lug have to be inserted between the two washer M6 and locked by the antirrotational nut.
- Fit the terminal box on the transformer tank.
- Make the wiring outside the tank referring to the plate inside the box following the same procedure as above.

WORKING CONDITIONS
All the materials, components and constructional characteristics allow the SM2 Series terminal boxes to be used with:
- environmental temperature: -20°C to + 50°C
- relative humidity: 95% at 20°C * 80% at 40°C * 50% at 50°C
- working temperature (mineral oil): -20°C to +110°C
For particular environmental conditions and/or other working conditions, special versions can be supplied.

TEST
Following routine test are performed on 100% of production:
- Visual and dimensional test
- Leakage test on assembled terminal box
- Insulation test between terminals ad body at 2500V for 1 min
Result of tests are reported on test certificate.

FINISHING
All external fittings are made in s/steel or brass nickel plated; body and cover are painted with one 50 µm-thick coat of two-pack epoxy primer (compatible with mineral transformer oil) on all external and internal surfaces, even those in contact with the oil, plus one 50 µm-thick coat of grey RAL 7030 two-pack polyurethane paint on all external surfaces not in contact with the oil; total thickness 100µm.

ORDERING INSTRUCTIONS
The following information have to be provided to ask an offer or issue an order:
- In case of a standard execution: only the code shown on drawing and the additional optional parts
- In case of special execution: box size; number of terminals, number of cable exit and their size, special working condition (if present)
**Terminals position & numbering in standard execution**

- **Execution 2T - 2 terminals**
  
  Code: TB002S2000

- **Execution 3T - 3 terminals**
  
  Code: TB003S2000

- **Execution 5T - 5 terminals**
  
  Code: TB005S2000

- **Execution 6T - 6 terminals**
  
  Code: TB006S2000

---

**SCATOLA MORSETTIERA TIPO SM2-XS**

**TERMINAL BOX TYPE SM2-XS**
NR 4 CABLE ENTRIES M25x1.5
(2 CLOSED WITH PLUGS)

Pos. Descrizione / Description
1. Copriporto di Messa a Terra
2. Terminale di Identificazione
3. Vite di fissaggio copriporto
4. Vite di terra
5. Capo di messa a terra
6. Terminale di identificazione
7. Scatola di messa a terra
8. Etichetta di identificazione
9. Tappo M25x1.5

Scatola Morsettiera Tipo SM2-S
Terminal Box Type SM2-S

Execution 4T - 4 terminals
Code: TB104S4200
Execution 6T - 6 terminals
Code: TB106S4200
Execution 9T - 9 terminals
Code: TB109S4200
Execution 12T - 12 terminals
Code: TB112S4200
Nr 2 ADDITIONAL CABLE ENTRIES
B&D SIZE M25x1.5 ON DEMAND

Nr 3 STANDARD CABLE ENTRIES
A,C,E SIZE M25x1.5 (1 PLUG ON C)

<table>
<thead>
<tr>
<th>Pos.</th>
<th>Descrizione / Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>COPORECHIO MORSETTIERA</td>
</tr>
<tr>
<td>2</td>
<td>TERMINAL BOX COVER</td>
</tr>
<tr>
<td>3</td>
<td>TARGHETTA IDENTIFICAZIONE</td>
</tr>
<tr>
<td></td>
<td>TERMINALE IDENTIFICATION</td>
</tr>
<tr>
<td></td>
<td>LABEL</td>
</tr>
<tr>
<td>4</td>
<td>VITE DI TERRA</td>
</tr>
<tr>
<td>5</td>
<td>CAVO TENUTA COPORECHIO</td>
</tr>
<tr>
<td>6</td>
<td>COVER ASSEMBLY SCREW</td>
</tr>
<tr>
<td>7</td>
<td>VITE FISSAGGIO COPORECHIO</td>
</tr>
<tr>
<td></td>
<td>COVER HOLDING SCREW</td>
</tr>
<tr>
<td>8</td>
<td>TERMINAL</td>
</tr>
<tr>
<td></td>
<td>TERMINAL BOX HOUSING</td>
</tr>
<tr>
<td>9</td>
<td>TAPPO M25x1.5</td>
</tr>
<tr>
<td></td>
<td>PLUR M25x1.5</td>
</tr>
</tbody>
</table>

SEAT FOR O/RING OR 4725
(SUPPLIED WITH THE BOX)

NR 8 HOLES DIA 18 mm
ON PCD 240 mm

Options for cable entries M25x1.5

1) ADAPTOR TO M20x1.5
2) GLAND M20x1.5
3) GLAND M25x1.5
4) ADAPTOR TO PG16
5) GLAND PG16
6) PLUG M25x1.5
7) ? SPECIAL ?

SCALA 1:4 SCALE 1:4

Terminals position & numbering in standard execution

Execution 15T - 15 terminals
CODE: TB21553100

Execution 18T - 18 terminals
CODE: TB21653100

Execution 24T - 24 terminals
CODE: TB22453100

Execution 36T - 36 terminals
CODE: TB23653100

SCATOLA MORSETTIERA TIPO SM2-L
TERMINAL BOX TYPE SM2-L