

# RING TYPE CURRENT TRANSFORMERS - ORX SERIES



- **Indoor or outdoor**
- **Inner Ø from 53 up to 250 mm**
- **Up to 4 secondary cores**
- **Any protection class**
- **Modularity, wide range**

These ring type current transformers are available for indoor or outdoor use. They have been designed to meet the requirements for measuring:

- line currents
- zero-sequence currents in the neutral of power transformers
- earth fault currents in power transformers.

The secondary terminals are accessible, either directly in the case of indoor equipment (ORX), or through a watertight terminal box (OREX) or a watertight plastic cover (OREX - - - W) in the case of outdoor application.

Several types of terminal boxes are available depending on the required characteristics.

### Technical data

|   |   |
|---|---|
| Highest voltage for equipment           | 0.72 kV                                     |
| Power-frequency withstand voltage       | 3 kV  |
| Rated primary current I <sub>pn</sub>   | 50 to 4000 A                                |
| Rated secondary current I <sub>sn</sub> | 5 or 1 A                                    |
| Rated frequency                         | 50 Hz or 60 Hz                              |
| Network nominal voltage                 | 0.75 - 20 - 72.5 - 100 - 245 - ... - 1000kV |
| Rated output                            | Up to 500 VA                                |
| Accuracy class                          | 0.2 - 0.2S - 0.5 - 0.5S - 1 - 5P - 10P      |
| Accuracy limit factor                   | 5 - 10 - 15 - 20 - 30                       |
| Continuous thermal current              | 1.2 I <sub>pn</sub>                         |
| Short-time thermal current              | 80 I <sub>pn</sub>                          |
| Dynamic current I <sub>dyn</sub>        | 2.5 I <sub>th</sub>                         |
| Inner diameter                          | 53 to 250 mm                                |
| Ambient temperature                     | -25°C to + 40°C                             |
| Insulation material                     | Cast resin                                  |
| Insulation class                        | E   |
| Base plate or fixing brackets           | U-shape brackets - galvanized steel         |
| Standards                               | IEC - IEEE - CSA - AS - BS                  |

### Other characteristics on request

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Highest voltage for equipment     | 2 kV                            |
| Power-frequency withstand voltage | 6 kV                            |
| Multi-ratio                       | by secondary tapping            |
| Accuracy class                    | PX, PXR, PR, TPS, TPX, TPY, TPZ |
| Ambient temperature               | - 40°C to + 70°C                |

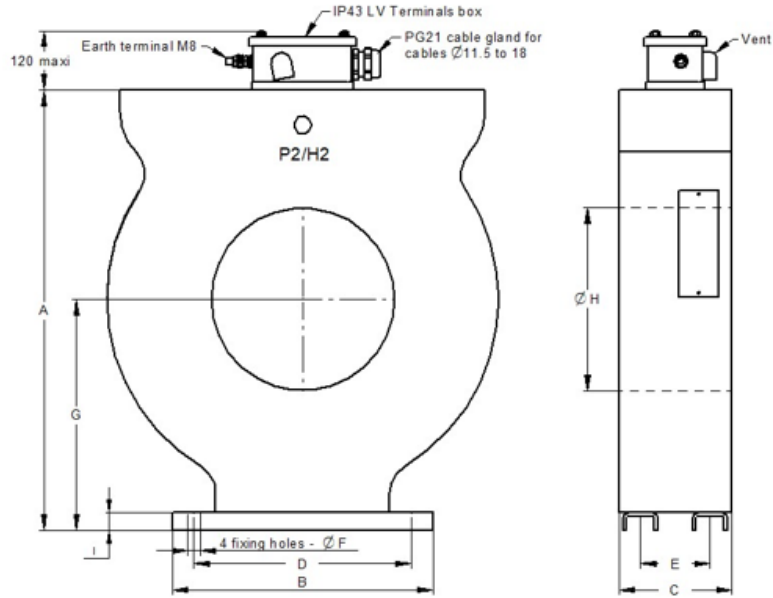
### Accessories / Options

|   |   |
|---|---|
| Watertight terminal box with cable gland (IP43) | as standard on outdoor OREX series optional on indoor ORX |
| Watertight plastic cover (IP54)                 | as standard on outdoor OREX...W optional on indoor ORX    |
| Directive ATEX                                  | As a component of an ATEX system                          |
| Fixing brackets                                 | Stainless steel on request                                |
| Earth terminal                                  | upon request  |
| Voltage limiter                                 | upon request  |
| Filtering capacitor                             | upon request  |

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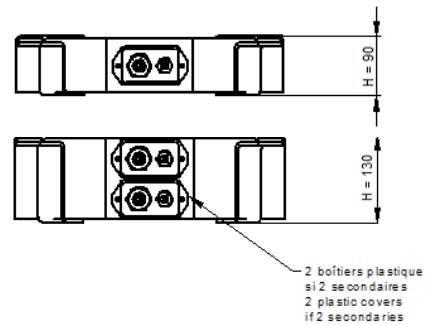
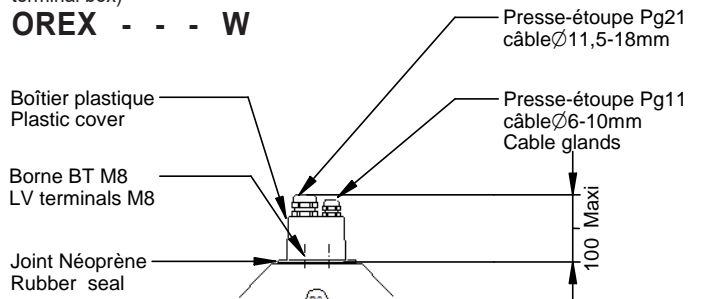
## Dimensions

| ORX         | Weight kg | ØH mm | A mm | B mm | C mm | D mm | E mm | F mm | G mm | I mm |
|-------------|-----------|-------|------|------|------|------|------|------|------|------|
| 53-80-155   | 4         | 53    | 190  | 155  | 80   | 210  | 35   | 9    | 95   | 15   |
| 53-95-155   | 5         | 53    | 190  | 155  | 95   | 210  | 60   | 9    | 95   | 15   |
| 53-95-215   | 15        | 53    | 250  | 215  | 95   | 210  | 60   | 9    | 125  | 15   |
| 53-150-215  | 25        | 53    | 250  | 215  | 150  | 210  | 90   | 9    | 125  | 15   |
| 53-95-320   | 40        | 53    | 355  | 320  | 95   | 210  | 60   | 9    | 190  | 15   |
| 75-75-240   | 15        | 75    | 280  | 240  | 75   | 210  | 35   | 9    | 140  | 15   |
| 75-115-240  | 20        | 75    | 280  | 240  | 115  | 210  | 60   | 9    | 140  | 15   |
| 75-150-240  | 30        | 75    | 280  | 240  | 150  | 210  | 90   | 9    | 140  | 15   |
| 75-190-240  | 40        | 75    | 280  | 240  | 190  | 210  | 90   | 9    | 140  | 15   |
| 75-265-240  | 55        | 75    | 280  | 240  | 265  | 210  | 170  | 9    | 140  | 15   |
| 100-115-200 | 10        | 100   | 240  | 200  | 115  | 210  | 60   | 9    | 125  | 15   |
| 100-115-370 | 55        | 100   | 410  | 370  | 115  | 250  | 80   | 12   | 210  | 15   |
| 100-200-370 | 105       | 100   | 410  | 370  | 200  | 250  | 110  | 12   | 210  | 15   |
| 100-220-370 | 110       | 100   | 410  | 370  | 220  | 250  | 120  | 12   | 210  | 15   |
| 120-110-290 | 30        | 120   | 320  | 290  | 110  | 210  | 60   | 9    | 165  | 15   |
| 120-175-290 | 45        | 120   | 320  | 290  | 175  | 210  | 90   | 9    | 165  | 15   |
| 120-115-320 | 40        | 120   | 355  | 320  | 115  | 250  | 80   | 12   | 190  | 15   |
| 120-200-320 | 70        | 120   | 355  | 320  | 200  | 250  | 110  | 12   | 190  | 15   |
| 140-80-320  | 30        | 140   | 355  | 320  | 80   | 210  | 35   | 9    | 190  | 15   |
| 140-115-320 | 35        | 140   | 355  | 320  | 115  | 250  | 80   | 12   | 190  | 15   |
| 140-200-320 | 65        | 140   | 355  | 320  | 200  | 250  | 110  | 12   | 190  | 15   |
| 175-80-380  | 35        | 175   | 435  | 380  | 80   | 250  | 55   | 14   | 225  | 20   |
| 175-105-380 | 45        | 175   | 435  | 380  | 105  | 250  | 55   | 14   | 225  | 20   |
| 175-130-380 | 60        | 175   | 435  | 380  | 130  | 250  | 80   | 14   | 225  | 20   |
| 175-180-380 | 85        | 175   | 435  | 380  | 180  | 250  | 110  | 14   | 225  | 20   |
| 175-230-380 | 110       | 175   | 435  | 380  | 230  | 250  | 150  | 14   | 225  | 20   |
| 175-260-380 | 130       | 175   | 435  | 380  | 260  | 250  | 180  | 14   | 225  | 20   |
| 175-80-450  | 50        | 175   | 505  | 450  | 80   | 250  | 55   | 14   | 265  | 20   |
| 175-105-450 | 70        | 175   | 505  | 450  | 105  | 250  | 55   | 14   | 265  | 20   |
| 175-130-450 | 90        | 175   | 505  | 450  | 130  | 250  | 80   | 14   | 265  | 20   |
| 175-180-450 | 135       | 175   | 505  | 450  | 180  | 250  | 110  | 14   | 265  | 20   |
| 175-230-450 | 175       | 175   | 505  | 450  | 230  | 250  | 150  | 14   | 265  | 20   |
| 175-260-450 | 200       | 175   | 505  | 450  | 260  | 250  | 180  | 14   | 265  | 20   |
| 175-80-480  | 60        | 175   | 550  | 480  | 80   | 250  | 55   | 14   | 285  | 20   |
| 175-105-480 | 80        | 175   | 550  | 480  | 105  | 250  | 55   | 14   | 285  | 20   |
| 175-130-480 | 105       | 175   | 550  | 480  | 130  | 250  | 80   | 14   | 285  | 20   |
| 175-180-480 | 155       | 175   | 550  | 480  | 180  | 250  | 110  | 14   | 285  | 20   |
| 175-230-480 | 205       | 175   | 550  | 480  | 230  | 250  | 150  | 14   | 285  | 20   |
| 175-260-480 | 235       | 175   | 550  | 480  | 260  | 250  | 180  | 14   | 285  | 20   |
| 210-80-380  | 30        | 210   | 435  | 380  | 80   | 250  | 55   | 14   | 225  | 20   |
| 210-105-380 | 40        | 210   | 435  | 380  | 105  | 250  | 55   | 14   | 225  | 20   |
| 210-130-380 | 55        | 210   | 435  | 380  | 130  | 250  | 80   | 14   | 225  | 20   |
| 210-180-380 | 75        | 210   | 435  | 380  | 180  | 250  | 110  | 14   | 225  | 20   |
| 210-230-380 | 100       | 210   | 435  | 380  | 230  | 250  | 150  | 14   | 225  | 20   |
| 210-260-380 | 115       | 210   | 435  | 380  | 260  | 250  | 180  | 14   | 225  | 20   |
| 210-80-450  | 45        | 210   | 505  | 450  | 80   | 250  | 55   | 14   | 265  | 20   |
| 210-105-450 | 65        | 210   | 505  | 450  | 105  | 250  | 55   | 14   | 265  | 20   |
| 210-130-450 | 85        | 210   | 505  | 450  | 130  | 250  | 80   | 14   | 265  | 20   |
| 210-180-450 | 120       | 210   | 505  | 450  | 180  | 250  | 110  | 14   | 265  | 20   |
| 210-230-450 | 160       | 210   | 505  | 450  | 230  | 250  | 150  | 14   | 265  | 20   |
| 210-260-450 | 180       | 210   | 505  | 450  | 260  | 250  | 180  | 14   | 265  | 20   |
| 210-80-480  | 55        | 210   | 550  | 480  | 80   | 250  | 55   | 14   | 285  | 20   |
| 210-105-480 | 75        | 210   | 550  | 480  | 105  | 250  | 55   | 14   | 285  | 20   |
| 210-130-480 | 100       | 210   | 550  | 480  | 130  | 250  | 80   | 14   | 285  | 20   |
| 210-180-480 | 140       | 210   | 550  | 480  | 180  | 250  | 110  | 14   | 285  | 20   |
| 210-230-480 | 190       | 210   | 550  | 480  | 230  | 250  | 150  | 14   | 285  | 20   |
| 210-260-480 | 215       | 210   | 550  | 480  | 260  | 250  | 180  | 14   | 285  | 20   |
| 250-80-450  | 40        | 250   | 505  | 450  | 80   | 250  | 55   | 14   | 265  | 20   |
| 250-105-450 | 55        | 250   | 505  | 450  | 105  | 250  | 55   | 14   | 265  | 20   |
| 250-130-450 | 70        | 250   | 505  | 450  | 130  | 250  | 80   | 14   | 265  | 20   |
| 250-180-450 | 100       | 250   | 505  | 450  | 180  | 250  | 110  | 14   | 265  | 20   |
| 250-230-450 | 135       | 250   | 505  | 450  | 230  | 250  | 150  | 14   | 265  | 20   |
| 250-260-450 | 155       | 250   | 505  | 450  | 260  | 250  | 180  | 14   | 265  | 20   |
| 250-80-480  | 45        | 250   | 550  | 480  | 80   | 250  | 55   | 14   | 285  | 20   |
| 250-105-480 | 65        | 250   | 550  | 480  | 105  | 250  | 55   | 14   | 285  | 20   |
| 250-130-480 | 85        | 250   | 550  | 480  | 130  | 250  | 80   | 14   | 285  | 20   |
| 250-180-480 | 125       | 250   | 550  | 480  | 180  | 250  | 110  | 14   | 285  | 20   |
| 250-230-480 | 165       | 250   | 550  | 480  | 230  | 250  | 150  | 14   | 285  | 20   |
| 250-260-480 | 190       | 250   | 550  | 480  | 260  | 250  | 180  | 14   | 285  | 20   |



Option «Watertight plastic cover» (mounted instead of the watertight terminal box)

### OREX - - - W



Detailed drawings available on request:

- terminal box
- overall dimensions
- name plate
- wiring diagram

### Installation

- These current transformers are designed to fit over :
  - LV bare conductors
  - LV, HV, EHV insulated cables
- Cantilever installation of current transformers may require additional fixing supports on the existing equipment.
- Tightening torque for secondary terminals M8 : 7 Nm.

• **Caution !** Never leave the secondary circuit open while the primary conductor is energized. High voltages might surge at secondary terminals, which might be hazardous for people and destroy the current transformer.