

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 _{pn} | 50 to 4000 A |
| Rated secondary current I _{sn} | 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 _{pn} |
| Short-time thermal current | 80 I _{pn} |
| Dynamic current I _{dyn} | 2.5 I _{th} |
| 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 |

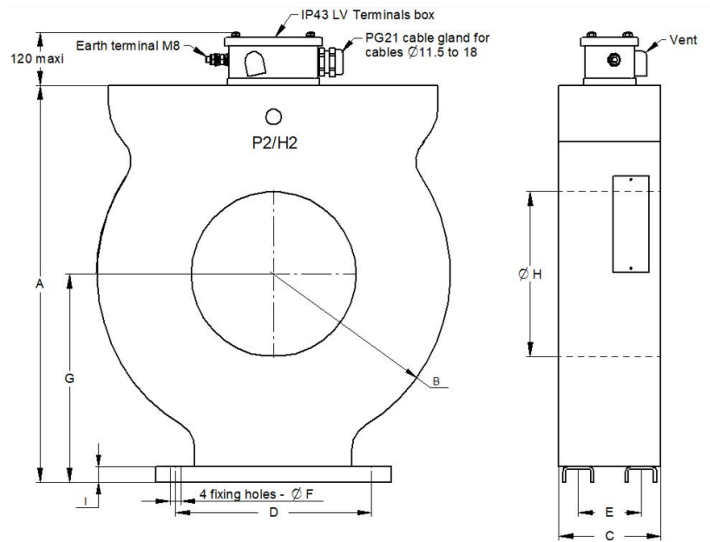
Accessories / Options

| | |
|---|---|
| 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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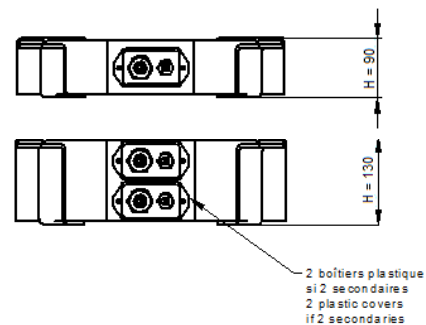
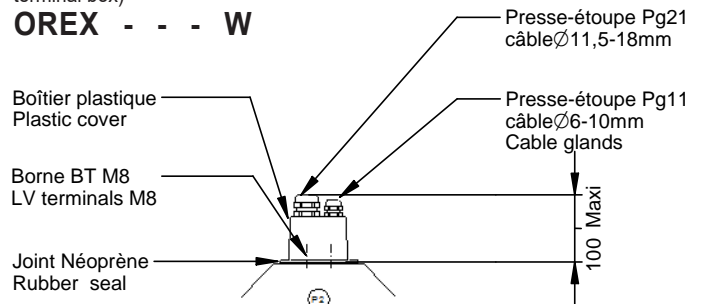
Dimensions

| 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.