

# Type CMF Current Transformer

600 Volt, 10 kV BIL, Indoor or Outdoor  
Product Bulletin 1VAP428181-DB



**ABB**

## Product Features

- 600 Volt Indoor or Outdoor
- 10 kV BIL
- 25 through 60 Hertz
- Primary Amperes 50-1200
- Window and Bar Types Available

## Application

The CMF transformer is used with watt-hour meters, with or without thermal demand attachments. Applicable to single or polyphase low voltage circuits, both single and dual ratio units are available. Many ratings feature high rating factors of 3.0 or 4.0 for broad band metering. A wide range of ratings and accessories (single and dual ratings, high rating factors, primary bar assemblies, and high base) reduce inventory cost and increase application flexibility.

## Core and Coils

The ring-type core and fully distributed winding are assembled to a glass-filled polypropylene window liner. This assembly and an aluminum base support saddle are injection molded in thermoplastic rubber.

## Insulation

Thermoplastic rubber insulating material is permanently molded to the core and coil assembly, resulting in a compact unit with excellent mechanical, thermal, and dielectric characteristics.

## Secondary Terminals and Cover

Large compression-type secondary terminals are supplied with a short circuit device and a clear rectangular snap-on cover, suitable for locking with a meter seal. This clear plastic cover allows a visual check of connections and is keyed to a short circuit device to ensure proper installation. Terminals can also serve as a post-type connector by looping wire under the screw head.

## Base

The base is constructed of corrosion-resistant aluminum and secured to the encapsulated base support by four symmetrically located screws.

## Primary

The CMF has a round primary opening suited for circuits requiring more than one cable lead. The large opening can accommodate the conductors required for full current capacity, even at high rating factors. The 200 ampere unit will accommodate two 500 MCM insulated cables. For all other ratings, the opening is large enough for either four 500 MCM or three 750 MCM insulated cables. A removable primary bar can be supplied with either a slot-hole or 4-hole NEMA pattern.

## Broad Band Metering

Ratings of 100:5 through 500:5 meet broad band metering requirements of high rating factors and large window openings. This permits using a single transformer rating for a wide range of load.

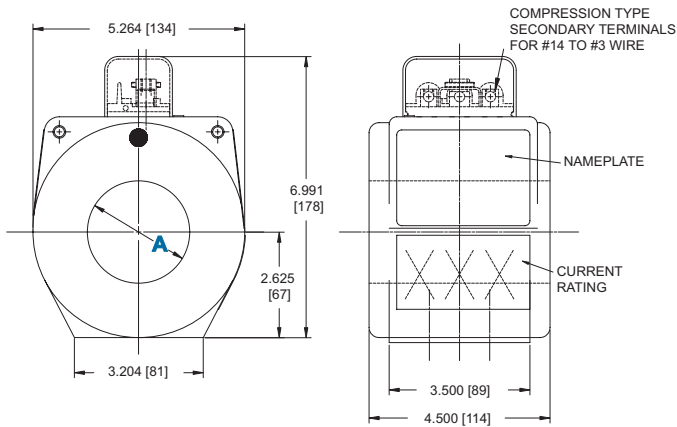
## Test Reports

IEEE test reports are stored electronically and can be e-mailed in various formats at the time of shipment.

## Standards

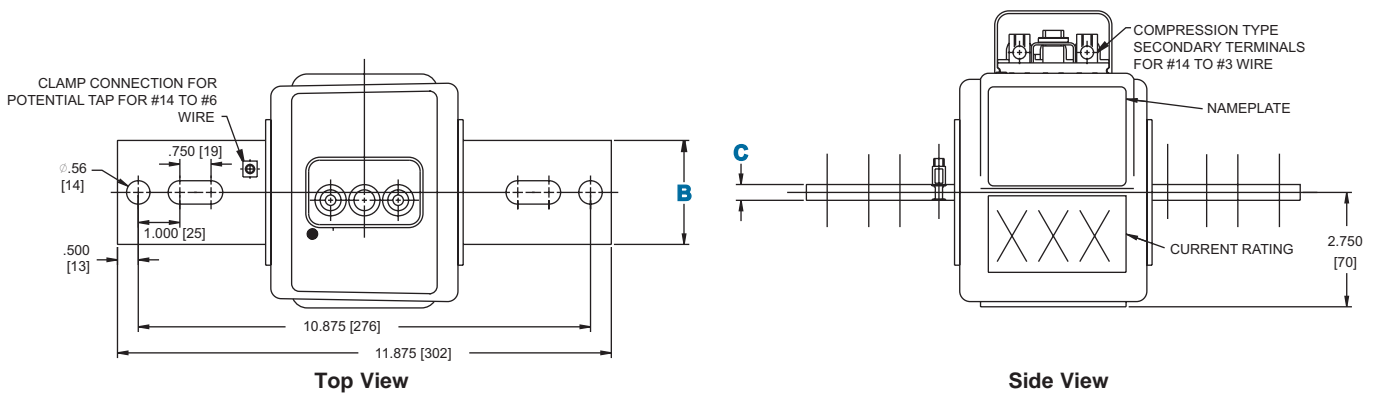
This unit meets all applicable IEEE and NEMA standards.

## Window-Type

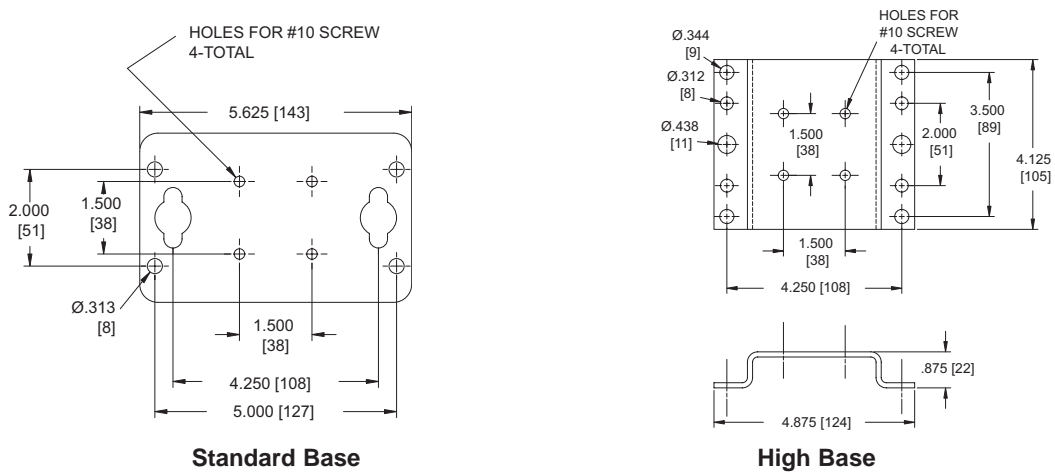


| Primary Ampere Rating | Window and Bar Dimensions |    |                         |    |                       |    | Weight (lbs) |          |
|-----------------------|---------------------------|----|-------------------------|----|-----------------------|----|--------------|----------|
|                       | A<br>I.D.<br>(in) (mm)    |    | B<br>Width<br>(in) (mm) |    | C<br>Thk<br>(in) (mm) |    | Window Type  | Bar Type |
| 100 & 200             | 2.50                      | 64 | 2.0                     | 51 | 0.250                 | 6  | 12.3         | 14.3     |
| 400                   | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 8.5          | 12.5     |
| 500                   | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 8.5          | 12.5     |
| 600                   | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 8.5          | 12.5     |
| 800                   | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 8.3          | 12.5     |
| 1200                  | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 8.3          | 12.5     |
| 200/400               | 2.50                      | 64 | 2.0                     | 51 | 0.250                 | 6  | 12.4         | 14.4     |
| 300/600               | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 9.7          | 13.7     |
| 400/800               | 3.06                      | 78 | 2.5                     | 64 | 0.375                 | 10 | 8.7          | 12.7     |

## Bar-Type



## Baseplate Dimensions



Note: Metric dimensions are displayed in [mm].

## Selection Guide

| Primary Ampere Rating | Rating Factor |         | IEEE Metering Accuracy | IEEE Relaying Accuracy | Style Number |            |
|-----------------------|---------------|---------|------------------------|------------------------|--------------|------------|
|                       | 30° C         | 55° C   |                        |                        | Flat Base    | High Base  |
| <b>Window-Type</b>    |               |         |                        |                        |              |            |
| 50                    | 4.0           | 3.0     | 1.2B-0.1               | -                      | 4460A30G25   | 4460A30G26 |
| 100                   | 4.0           | 3.0     | 0.3B-0.1               | C10                    | 4460A30G23   | 4460A30G24 |
| 200                   | 4.0           | 3.0     | 0.3B-0.5               | C30                    | 4460A30G01   | 4460A30G02 |
| 300                   | 3.0           | 2.2     | 0.3B-0.5               | C30                    | 4460A30G17   | 4460A30G18 |
| 400                   | 4.0           | 3.0     | 0.3B-0.5               | C30                    | 4460A30G03   | 4460A30G04 |
| 500                   | 3.0           | 2.2     | 0.3B-0.5               | C30                    | 4460A30G05   | 4460A30G06 |
| 600                   | 2.0           | 1.5     | 0.3B-0.5               | C30                    | 4460A30G07   | 4460A30G08 |
| 800                   | 2.0           | 1.5     | 0.3B-0.5               | C20                    | 4460A30G09   | 4460A30G10 |
| 1000                  | 2.0           | 1.5     | 0.3B-0.5               | C30                    | 4460A30G21   | 4460A30G22 |
| 1200                  | 1.5           | 1.2     | 0.3B-1.8               | C30                    | 4460A30G19   | 4460A30G20 |
| 200/400               | 4.0/2.0       | 3.0/1.5 | 0.3B-0.5<br>0.3B-0.5   | C30/C50                | 4460A30G11   | 4460A30G12 |
| 300/600               | 3.0/2.0       | 2.2/1.5 | 0.3B-0.5<br>0.3B-0.5   | C20/C50                | 4460A30G13   | 4460A30G14 |
| 400/800               | 2.0/2.0       | 1.5/1.5 | 0.3B-0.5<br>0.3B-0.5   | C20/C50                | 4460A30G15   | 4460A30G16 |
| <b>Bar-Type</b>       |               |         |                        |                        |              |            |
| 50                    | 4.0           | 3.0     | 0.3B-0.1               | -                      | 7525A01G29   | 7525A01G30 |
| 100                   | 4.0           | 3.0     | 0.3B-0.1               | C10                    | 7525A01G25   | 7525A01G26 |
| 200                   | 4.0           | 3.0     | 0.3B-0.5               | C30                    | 7525A01G01   | 7525A01G02 |
| 300                   | 3.0           | 2.2     | 0.3B-0.5               | C30                    | 7525A01G17   | 7525A01G18 |
| 400                   | 4.0           | 3.0     | 0.3B-0.5               | C30                    | 7525A01G03   | 7525A01G04 |
| 500                   | 3.0           | 2.2     | 0.3B-0.5               | C30                    | 7525A01G05   | 7525A01G06 |
| 600                   | 2.0           | 1.5     | 0.3B-0.5               | C30                    | 7525A01G07   | 7525A01G08 |
| 800                   | 2.0           | 1.5     | 0.3B-0.5               | C20                    | 7525A01G09   | 7525A01G10 |
| 1000                  | 2.0           | 1.5     | 0.3B-0.5               | C30                    | 7525A01G23   | 7525A01G24 |
| 1200                  | 1.5           | 1.2     | 0.3B-1.8               | C30                    | 7525A01G19   | 7525A01G20 |
| 200/400               | 4.0/2.0       | 3.0/1.5 | 0.3B-0.5<br>0.3B-0.5   | C30/C50                | 7525A01G11   | 7525A01G12 |
| 300/600               | 3.0/2.0       | 2.2/1.5 | 0.3B-0.5<br>0.3B-0.5   | C20/C50                | 7525A01G13   | 7525A01G14 |
| 400/800               | 2.0/2.0       | 1.5/1.5 | 0.3B-0.5<br>0.3B-0.5   | C20/C50                | 7525A01G15   | 7525A01G16 |

Additional styles available upon request. Contact your ABB Sales Representative or call +1-252-827-3212 for more information.

### Optional Accessories

- |                  |            |                          |            |
|------------------|------------|--------------------------|------------|
| • Terminal Cover | 9628A05G11 | • Primary Bar Assemblies |            |
| • Shorting Bar   | 4462A01H01 | 2.50" dia (standard)     | 2916C06G05 |
| • Shorting Nut   | 4462A02H02 | 3.06" dia (standard)     | 2916C06G03 |
| • Flat Base      | 9628A05G12 | 3.06" dia (NEMA 4-hole)  | 2916C06G06 |
| • High Base      | 9628A05G13 |                          |            |



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