

Plugs and Socket-Outlets in Brazil

Mandatory Certification
Brazilian power cords

Brazilian Certification

- Certification according to system n° 05 of ISO/CASCO:
 - Plant Evaluation
 - Certification Type Tests
 - Surveillance Factory Inspection and Partial Tests every 6 months
- Standards:
 - NBR 6147:2000: is being replaced by the Mercosul standard ABNT NBR NM 60884-1:2004
 - Both based on IEC 60884-1:1994
 - INMETRO ordinances (The Government National Institute of Metrology, Standardization and Industrial Quality)
 - CONMETRO resolution (The Government National Institute of Metrology, Standardization and Industrial Quality **Council**)

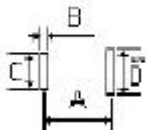
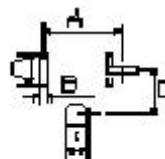
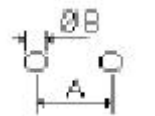
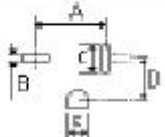
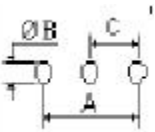

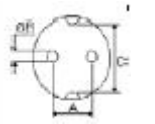
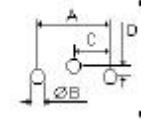
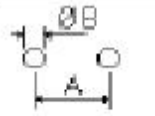
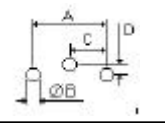
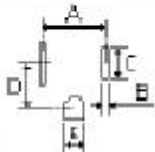
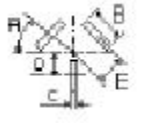
INMETRO Ordinances

- N° 136 from October 2001: mandatory certification for plugs and socket-outlets
- N° 85 from April 2006: Requirements for the certification of plugs and socket-outlets

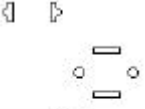
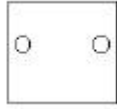
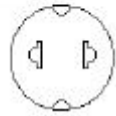


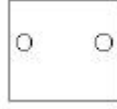
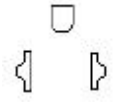
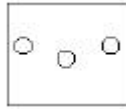
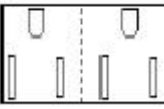
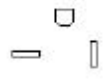
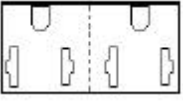

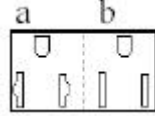

CONMETRO Resolution

- N° 11 from December 2006: implementation dates for the new standard sheet according to NBR 14136/02

Plugs according to INMETRO Ordinance n° 85 from April 2006

	<u>Plug Description</u>	<u>Standard Sheet</u>		<u>Plug Description</u>	<u>Standard Sheet</u>
1	 2P 15A 250V~	IEC 60906-2/97 NEMA WD1/74 (A1-15) IEC 60083/75 (A1-15)	7	 2P+T 20A 125V~	NEMA WD1/74 (5-20) IEC 60083/75 (A5-20)
2	 2P 10A 250V~ 2P 2.5A 250V~	NBR 14136/02 EN 50075/90	8	 2P+T 20A 250V~	NEMA WD1/74 (6-15) IEC 60083/75 (A6-15)
3	 2P+T 10A 250V~	CEI 23-16 (S11)	9	 2P+N 20A 250V~	NEMA WD1/74 (10-20) IEC 60083/75 (A10-20)
4	 2P+T 16A 250V~	IEC 60083/75 (c2b)	10	 2P+T 10A 250V~	NBR 14136/02
5	 2P 16A 250V~ 2P 20A 250V~	IEC 60083/75 (c1b) NBR 14136/02	11	 2P+T 20A 250V~	NBR 14136/02
6	 2P+T 15A 250V~	NEMA WD1/74 (5-15) IEC 60083/75 (A5-15)	12	 2P+T 20A 250V~	

Socket-Outlets according to INMETRO Ordinance n° 85 from April 2006

	<u>Outlet Description</u>	<u>Conectable Plugs</u>		<u>Outlet Description</u>	<u>Conectable Plugs</u>
1	 2PU 10/15A 125/250V~	1 and 2	8	 2P 10A 250V~	2
2	 2PU+T 16A 250V~	1, 2, 4 and 5	9	 2P+T 10A 250V~	2 and 10
3	 2P+T 16A 250V~	2, 3, 4 and 5	10	 2P 20A 250V~	2 and 5
4	 2PU+T 10/15A 125/250V~	1, 2, and 6	11	 2P+T 20A 250V~	2, 5, 10 and 11
5	 2x2P+T 15A 125V~	1 and 6	12	 2P+T 20A 125V~	7
6	 2x2PU+T 10/15A 125/250V~	1, 2 and 6	13	 2P+T 20A 250V~	8
7	 a) 2PU+T 10/15A 125/250V~ b) 2P+T 15A 125V~	1, 2 and 6 1 and 6	14	 2P+T 20A 125/250V~ 2P+N 20A 125/250V~	9 and 12

New Standard Sheet NBR 14136/02

CONMETRO RESOLUTION N° 11 FROM DECEMBER 20th 2006

- Art. 1° – Declare that the manufacturers and import companies of plugs and socket-outlets attendance to the ABNT NBR 14136/02 standard requirements is established in this Resolution and in the INMETRO Ordinance regarding the mandatory certification of plugs and socket-outlets.
- Art. 2° – Establish a new period for the manufacturers and import companies of plugs and socket-outlets according to INMETRO regulation as follow:
- I – The manufacturers and import companies of **rewirable plugs with 2 poles without earthing contact** that are not according to NBR 14136/02 shall trade such products until **August 1st 2007**
 - II – The manufacturers and import companies of **non-rewirable plugs with 2 poles without earthing contact** that are not according to NBR 14136/02 shall trade such products until **January 1st 2008**
 - III – The manufacturers and import companies of **rewirable or non-rewirable plugs with 2 poles with earthing contact** that are not according to NBR 14136/02 shall trade such products until **January 1st 2009**
 - IV – The manufacturers and import companies of **portable rewirable or non-rewirable socket-outlets with 2 poles without earthing contact** that are not according to NBR 14136/02 shall trade such products until **January 1st 2008**
 - V – The manufacturers and import companies of **fixed socket-outlets with 2 poles without earthing contact** that are not according to NBR 14136/02 shall trade such products until **January 1st 2009**
 - VI – The manufacturers and import companies of **fixed or portable socket-outlets with 2 poles with earthing contact** that are not according to NBR 14136/02 shall trade such products until **January 1st 2009**
 - VII – The manufacturers and import companies of electric, electronic and electric/electronic equipments shall trade the embedded powercords and extension cords (2 poles with or without earthing contact) that are not according to NBR 14136/02 until **January 1st 2010**.
- Art. 3° – To determine that INMETRO develops a new Requirement for the Certification of Plugs and Socket-outlets Adaptors as a mandatory certification until August 1st 2007.
- UCIEE Comments: This is a new requirement from CONMETRO to the certification process of adaptors. Here in Brazil we have a national standard NBR 14936/06 for the requirements of this product. Now we are able to certify this product with the UC mark and we will be able to have the INMETRO mark after the publication of the INMETRO Requirements.*
- Art. 4° – The verification of the implementation of this resolution in all national territory will be an activity performed by INMETRO and all the related public entities.
- Paragraph: The products manufactured before the dates established in Art. 2° that are in the market will not be verified by INMETRO
- Art. 5° – To determine that INMETRO provides, during the year 2007, a national campaign for the clarification of the new plugs, socket-outlets and adaptors standards and the importance of the citizen and electrical installation safety.
- Art. 6° – This resolution will be valid after the publication in the Official National Information Journal

New Standard Sheet NBR 14136/02

Plugs – Pin Diameter:
10A – 4mm
20A – 4.8mm



Socket-Outlets: Single pole insertion not possible

