

SEMINAR ON UNDERSTANDING & IMPLEMENTING APEC EE MRA – SINGAPUR

2009, MAY



**Asia – Pacific
Economic Cooperation**



MACHU PICCHU - PERU

Republic of Peru

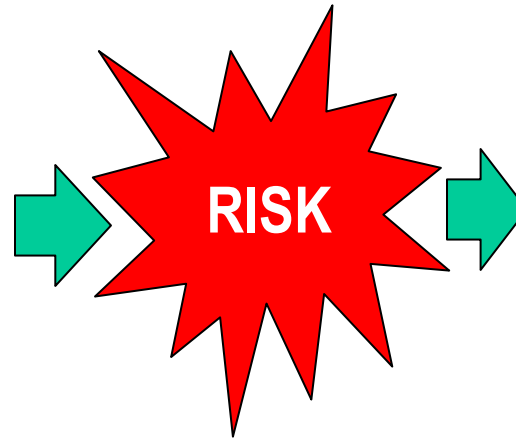


REGULATORY REGIMEN - PERU ELECTRIC PRODUCTS



ELECTRIC PRODUCTS:

- Electric wires and Cables
- Plugs and Socket-outlets
- Circuit breakers, Switches
- Electrical appliances
- Others



- Characteristic of the product
- Electric installation

Regulations

- Technical Regulations

- Electrical Code
- National Standards

REGULATION OF THE ELECTRIC PRODUCTS

GOVERNMENT INSTITUTIONS

**Technical
Regulations**

- **MINISTRY OF PRODUCTION**
(Responsible)

Electrical Code

- **MINISTRY OF ENERGY AND MINES**
Electricity General Directorate

NATIONAL STANDARD BODY

**Peruvian
Standards**



TECHNICAL REGULATIONS

PERU

Ministry
of Production

- To promote the Standardization and implementation of Standards among the manufacturing companies, in order to improve their competitiveness.
- To make, and approve the Technical Regulation in the manufacturing sector and to supervise its application.
- To evaluate and register Conformity Assessment Bodies in order to ensure comply with Technical Regulation.

Ministry of Economy and Finance is the one taken charge of promulgating the Technical Regulation.

Technical Regulations for different products

CODE & STANDARDS

PERU

**Ministry
of Energy and Mines**

In charge of approving the norms of electric facilities, with the purpose of safeguarding the security of people, the facilities and the other installations.

It approves the National Code of Electricity – Utilization and DGE's standards.

It regulates the aspects of security of the electric facilities and it mentions the Peruvian Standards.

**Thecnical Regulations related with the security
of the Electric Facilities**

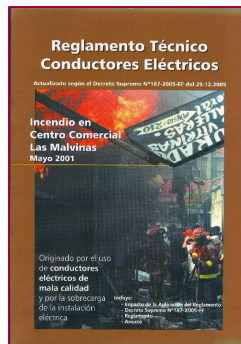
TECHNICAL REGULATIONS & STANDARDS

Peruvian Standards (NTPs)

It is approved by INDECOPI and it is of **voluntary use**.

Currently the Peruvian Standards becomes obligatory by means of a **Technical Regulation** or the **National Code of Electricity - Utilization**.

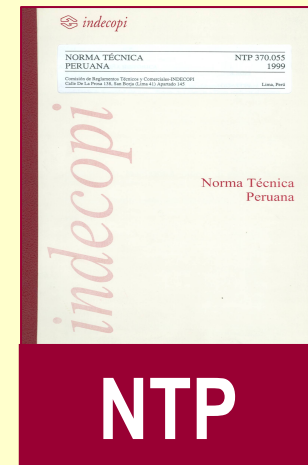
Technical Regulation



Electrical Code



OBLIGATORY



NTP

Peruvian Standards

TECHNICAL REGULATIONS

• TECHNICAL REGULATION OF ELECTRIC WIRES and CABLES

Art. 2°.- Obligatory Character

It establishes the requirements and minimum technical specifications that must fulfill the electrical wires and cable

Art. 5° Requirements of labeled Sampling

Of each batch

Determination of the batch

Acceptance of the batch

Art. 7° Conformity assessment

Certificate of conformity

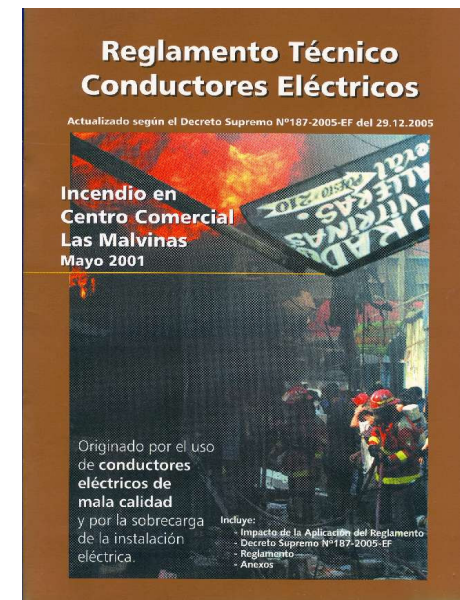
Stamp certificate or Mark of conformity

MINISTERIO DE LA PRODUCCION
PRODUCE

El Peruano **NORMAS LEGALES**

Aprueban Reglamento Técnico sobre Conductores y Cables Eléctricos de consumo masivo y uso general

DECRETO SUPREMO
N° 187-2005-EF



It come into effect on July 1st, 2006

PROYECTO DE TÉCNICAL REGULATIONS

- **PROYECTO DE TÉCNICAL REGULATION OF PLUGS AND SOCKET-OUTLETS FOR HOUSEHOLD AND GENERAL USE**



PROYECTO DE REGLAMENTO TÉCNICO PARA ENCHUFES Y TOMACORRIENTES DE USO DOMÉSTICO Y USO GENERAL

Objeto:

Establecer los : **requisitos técnicos y de rotulado,**

Enchufes y tomacorrientes fijos o portátiles

para corriente alterna, con o sin contacto a tierra, bajo tensión nominal mayor que 50 V pero no superior a 250 V y una corriente nominal no mayor a 16 A .

Objetivo legítimo: **la vida y seguridad de las personas e instalaciones**
armonizar la variedad de enchufes y tomacorrientes

CODE & STANDARDS

NATIONAL CODE OF ELECTRICITY - UTILIZATION



GENERAL ORDERS

020-024 Use of Approved Materials and Equipment

The materials and equipment used in electrical installations, must count with approval by the competent Authority, and to be of the kind, type and nominal value that correspond to the specific intention (purpose) for which it must be utilized.

020-026 Rejection of Materials and Equipment

Materials or equipment can be rejected by the competent Authority, if any of the following conditions are verified:

- (a) If the material or the equipment does not count with the approval by the competent Authority, or does not comply with the standards, in what concerns to the sample, over which the approval was granted; or
- (b) If the conditions of use indicate that the material or equipment is not the suitable (adequate) one; or

NATIONAL CODE OF ELECTRICITY - UTILIZATION

Section 080: Protection and Control

080-000 Scope

This Section covers the protection and control for circuits and electrical apparatuses.

Note 1: It must be complied with the corresponding Peruvian Standards:



NORMA TÉCNICA PERUANA	NTP-IEC 60898-1 2004
<small>Comisión de Reglamentos Técnicos y Comerciales - INDECOPI Calle de La Prosa 138, San Boja (Lima 41) Apartado 145 Lima, Perú</small>	
INTERRUPTORES AUTOMÁTICOS PARA PROTECCIÓN CONTRA SOBRECORRIENTES EN INSTALACIONES DOMÉSTICAS Y SIMILARES. Parte 1: Interruptores automáticos para operación con c.a.	
<small>CIRCUIT-BREAKERS FOR OVERCURRENT PROTECTION FOR HOUSEHOLD AND SIMILAR INSTALLATIONS. Part 1: Circuit-breakers for a.c. operation</small>	
<small>(EQV. IEC 60898-1:2002 ELECTRICAL ACCESSORIES. Circuit-breakers for overcurrent protection for household and similar installations. Part 1: Circuit-breakers for a.c. operation)</small>	
2004-12-07 1ª Edición	
<small>R 0132-2004/INDECOPI-CRT Publicada el 2005-01-13 Precio basado en 189 páginas T.C.S.: 91.140.99 ESTA NORMA ES RECOMENDABLE Descriptores: Interruptores automáticos, sobrecorrientes, instalaciones domésticas, requisitos</small>	

NORMA TÉCNICA PERUANA	NTP-IEC 60947-2 2005
<small>Comisión de Reglamentos Técnicos y Comerciales - INDECOPI Calle de La Prosa 138, San Boja (Lima 41) Apartado 145 Lima, Perú</small>	
APARATOS DE CONEXIÓN Y DE MANDO DE BAJA TENSIÓN (aparatación de baja tensión). Parte 2: Interruptores automáticos	
<small>LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR. Part 2: Circuit-breakers</small>	
<small>(EQV. IEC 60947-2:2003 Low-voltage switchgear and controlgear. Part 2: Circuit-breakers)</small>	
2005-09-22 1ª Edición	
<small>R.0078-2005/INDECOPI-CRT Publicada el 2005-10-15 Precio basado en 319 páginas T.C.S.: 91.140.99 ESTA NORMA ES RECOMENDABLE Descriptores: Interruptores automáticos, aparatos de conexión y mando de baja tensión.</small>	

NORMA TÉCNICA PERUANA	NTP 370.308 2005
<small>Comisión de Reglamentos Técnicos y Comerciales - INDECOPI Calle de La Prosa 138, San Boja (Lima 41) Apartado 145 Lima, Perú</small>	
INTERRUPTORES AUTOMÁTICOS EN CAJA MOLDEADA	
<small>MOLDED-CASE CIRCUIT BREAKERS</small>	
2005-01-21 1ª Edición	
<small>R.0007-2005/INDECOPI-CRT Publicada el 2005-02-04 Precio basado en 147 páginas T.C.S.: 91.140.99 ESTA NORMA ES RECOMENDABLE Descriptores: Interruptores, interruptores automáticos, caja moldeada</small>	

NORMA TÉCNICA PERUANA	NTP-IEC 61008-1 2005
<small>Comisión de Reglamentos Técnicos y Comerciales - INDECOPI Calle de La Prosa 138, San Boja (Lima 41) Apartado 145 Lima, Perú</small>	
Interruptores automáticos para actuar por corriente residual (interruptores diferenciales), sin dispositivo de protección contra sobrecorrientes, para uso doméstico y similares. Parte 1: Reglas generales	
<small>Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs). Part 1: General rules</small>	
<small>(EQV. IEC 61008-1:2002 Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) - Part 1: General Rules)</small>	
2005-11-17 1ª Edición	
<small>R 0108-2005/INDECOPI-CRT Publicada el 2005-12-09 Precio basado en 177 páginas T.C.S.: 91.140.99 ESTA NORMA ES RECOMENDABLE Descriptores: Interruptores automáticos, interruptores diferenciales, instalaciones eléctricas fijas domésticas, requisitos</small>	

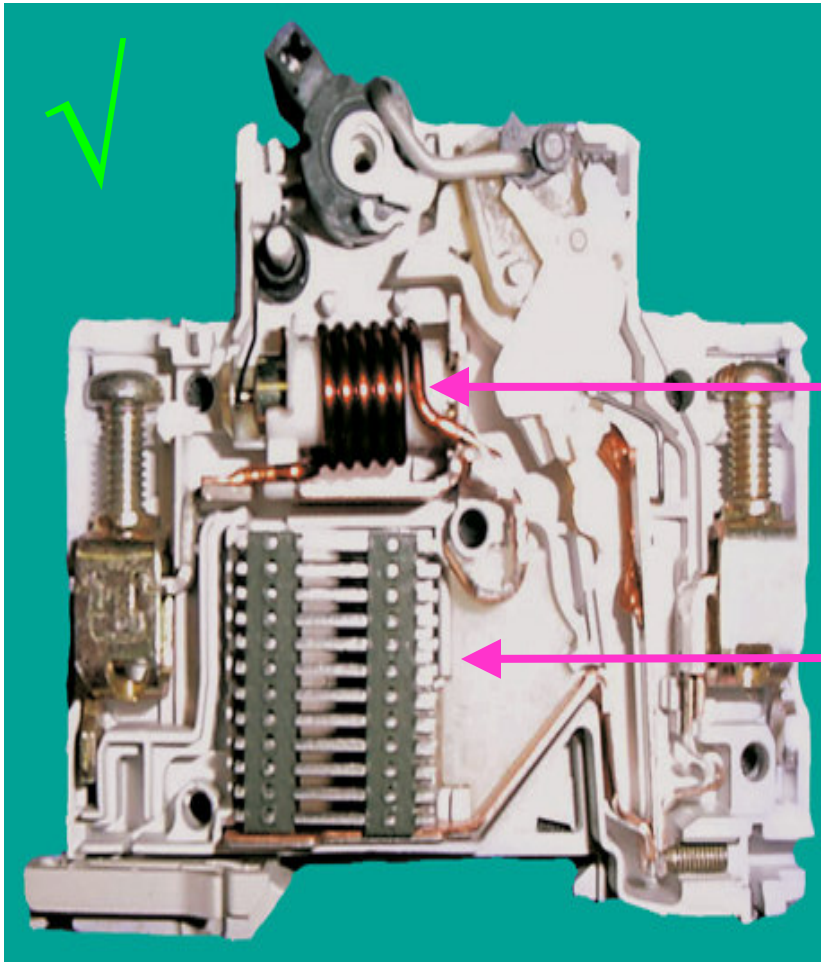
NTP-IEC 60898-1

NTP-IEC 60947-2

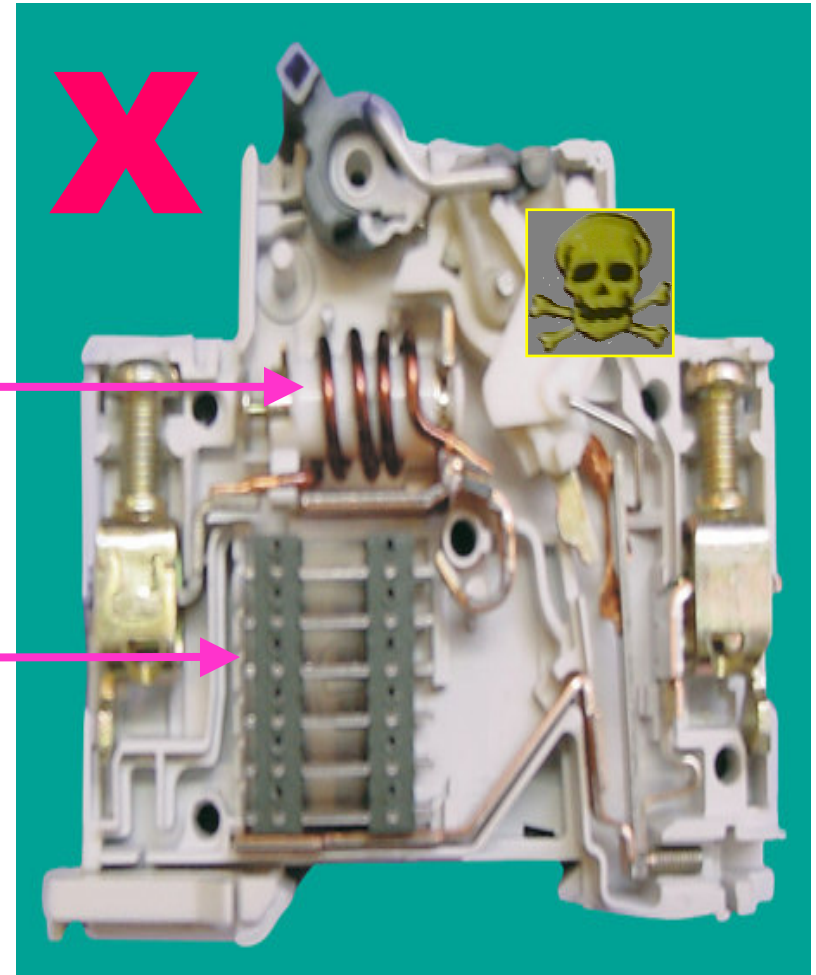
NTP 370.308

NTP-IEC 61008-1

EXAMPLE OF CIRCUIT BREAKER OF BAD QUALITY UNDER NOMINAL CONDITIONS OF SHORT CIRCUIT



Original

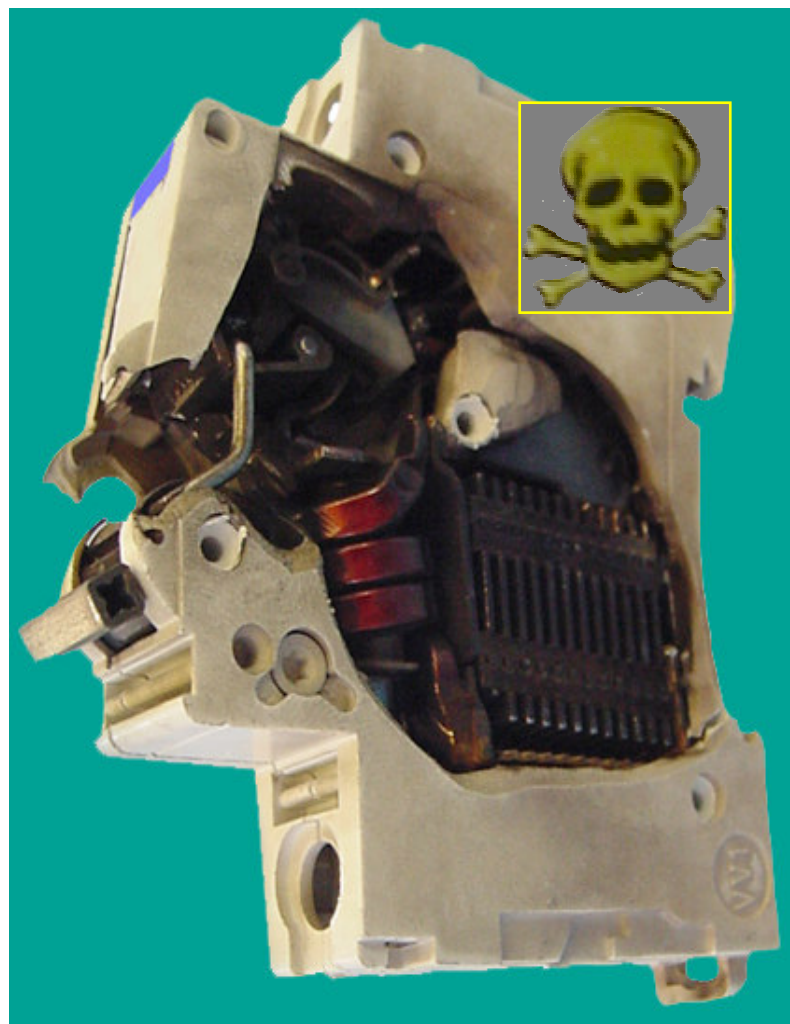
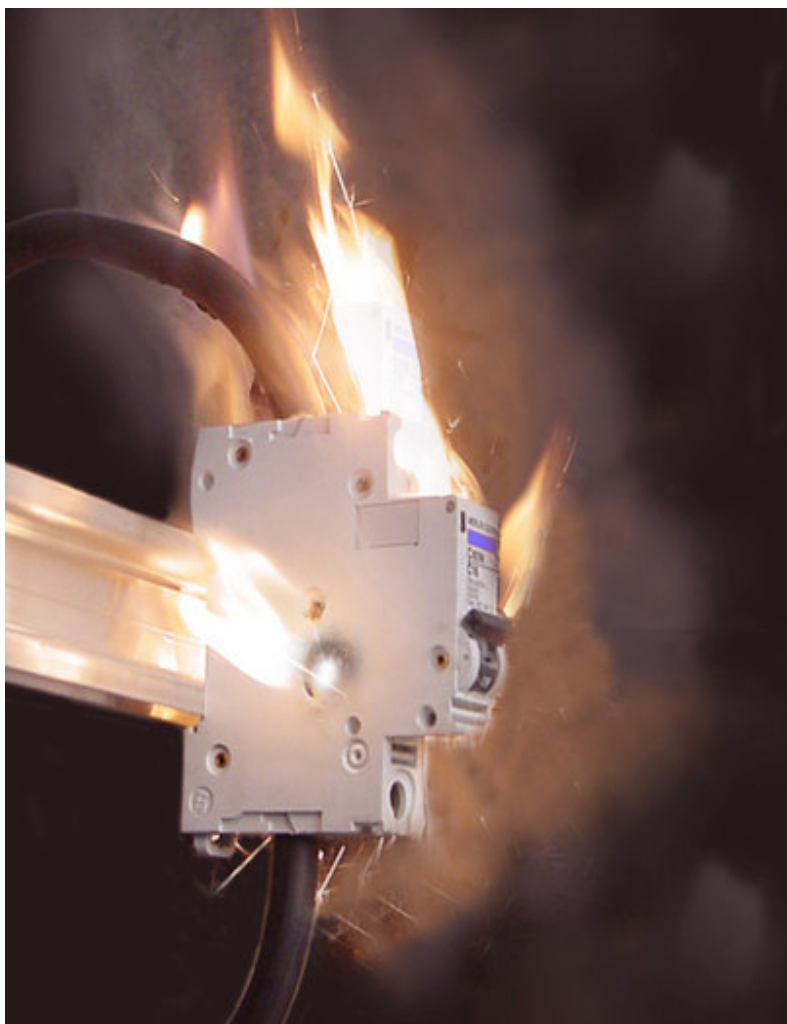


Copy / imitation

This represents a danger for the persons and facilities

**EXAMPLE OF CIRCUIT BREAKER OF BAD QUALITY
UNDER NOMINAL CONDITIONS OF SHORT CIRCUIT**

A copy explodes when it happens a short circuit



This represents a danger for the persons and facilities



TECHNICAL COMMITTEES AND TECHNICAL SUBCOMMITTEES

CTN025	ELECTRIC SAFETY
SCTN025.1	Devices of protección and switching
SCTN025.2	Certification of the electric facilities

CTN 046	ELECTRICAL WIRES
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CTN 011	ENERGY EFFICIENCY
SCTN011.1	Refrigeration
SCTN011.2	Illumination
SCTN011.3	Solar systems
SCTN011.4	Electric motors
SCTN011.5	Industrial boilers
SCTN011.6	Heaters of water

PERUVIAN STANDARDS OF CABLES AND ELECTRIC WIRES

Product type or grouping	Regulations	STANDARDS		
		Domestic Standards	Please tick box if mandatory	Relevant International Standards
Cables and electric wires of massive consumption and general use	D.S. N° 187-2005-EF (2005-12-29)	NTP-IEC 60669-1:2004	Considered in the National Electrical Code - Use	IEC 60227 2:2003 IEC 60811-1-1:1993 UNE-EN 60811-1-1:1996 IEC 60811-1-2: 1985 IEC 60811-1-2: 1996 1581: 2001 Reference Standard Electric Wires, Cables, and Flexible Cords

PERUVIAN STANDARDS OF DEVICES OF PROTECCIÓN AND SWITCHING

Product type or grouping	Regulations	Standards		
		Domestic Standard	Please tick box if mandatory	Relevant International Standards
SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS. Part 1. General requirements	(Partial regulation)	NTP-IEC 60669-1:2004	Considered in the National Electrical Code – Use	IEC 60669-1:2000
ELECTRICAL ACCESORIES. Circuit-breakers for overcurrent protection for household and similar installations. Part 1: Circuit-breakers for a.c. Operation	(Partial regulation)	NTP-IEC 60898-1:2004	Considered in the National Electrical Code – Use	IEC 60898-1:2002
LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR. Part 2: Circuit-breakers	(Partial regulation)	NTP-IEC 60947-2:2005	Considered in the National Electrical Code – Use	IEC 60947-2:2003
Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs). Part 1: General rules	(Partial regulation)	NTP-IEC 61008-1:2005	Considered in the National Electrical Code – Use	IEC 61008-1:2002

PERUVIAN STANDARDS OF DEVICES OF PROTECCIÓN AND SWITCHING

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SWITCHES FOR HOUSEHOLD AND SIMILAR FIXED ELECTRICAL INSTALLATIONS. Part 1. General requirements	(Partial regulation)	NTP-IEC 60669-1:2004	Considered in the National Electrical Code - Use	IEC 60669-1:2000
ELECTRICAL ACCESORIES. Circuit-breakers for overcurrent protection for household and similar installations. Part 1: Circuit-breakers for a.c. Operation	(Partial regulation)	NTP-IEC 60898-1:2004	Considered in the National Electrical Code - Use	IEC 60898-1:2002
LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR. Part 2: Circuit-breakers	(Partial regulation)	NTP-IEC 60947-2:2005	Considered in the National Electrical Code - Use	IEC 60947-2:2003
Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs). Part 1: General rules	(Partial regulation)	NTP-IEC 61008-1:2005	Considered in the National Electrical Code - Use	IEC 61008-1:2002

PERUVIAN STANDARDS ENERGY EFFICIENCY OF DOMESTIC REFRIGERATION

Product type or grouping	Regulations	Standards		
		Domestic Standard	Please tick box if mandatory	Relevant International Standards
Household refrigerating appliances - Refrigerators with or without low-temperature compartment - Characteristics and test methods	-	NTP ISO 7371:2002	-	ISO 7371:2002
Household frost-free refrigerating appliances -- Refrigerators, refrigerator-freezers, frozen food storage cabinets and food freezers cooled by internal forced air circulation -- Characteristics and test methods	-	NTP ISO 8561:2003	-	ISO 8561:2003
Household refrigerating appliances -- Frozen food storage cabinets and food freezers -- Characteristics and test methods	-	NTP ISO 5155:2007	-	ISO 5155:2007
Household refrigerating appliances -- Frozen food storage cabinets and food freezers – Energy efficiency	-	NTP 399.483 2007	-	-

PERUVIAN STANDARDS ENERGY EFFICIENCY OF AC MOTORS

Product type or grouping	Regulations	Standards		
		Domestic Standard	Please tick box if mandatory	Relevant International Standards
Rotating electrical machines - Part 2: Methods for determining losses and efficiency of rotating electrical machinery form tests	-	NTP IEC 60034-2 2001 NTP IEC 60034-2/A2	-	IEC 60034-2 IEC-60034-2/A2
Energy efficiency of general purpose induction AC three-phase motors, squirrel cage type, 0,746 kW to up 149,2 kW rated power. Energy labeling and MEPS	-	NTP 399.450:2008	-	-

PERUVIAN STANDARDS ENERGY EFFICIENCY OF LIGHTING - 1

Product type or grouping	Regulations	Standards		
		Domestic Standard	Please tick box if mandatory	Relevant International Standards
Lamp Controlgear, Part 1 : General and safety requirements	-	NTP IEC 61347-1.2006	-	IEC 61347-1
Lamp Controlgear – Part 2-1: Particular requirements for starting devices (other than glow starters)	-	NTP IEC 61347-2-1: 2008	-	IEC 61347-2-1
Lamp Controlgear – Part 2- 3: Particular requirements for a.c. supplied electronic ballasts for fluorescent lamps	-	NTP IEC 61347-2- 3.2007	-	IEC 61347-2-3
AC-supplied electronic ballasts for tubular fluorescent lamps – Performance requirements	-	NTP IEC 60929-2007	-	IEC 60929-2007

PERUVIAN TÉCNICAL STANDARDS OF APPLIANCES (under consideration)

Product type or grouping	Regulations	STANDARDS		
		Domestic Standards	Please tick box if mandatory	Relevant International Standards
Particular requirements for electric irons	-	IN STUDY	-	IEC 60335-2-16: (2005-07)
Particular requirements for dishwashers	-	IN STUDY	-	IEC 60335-2-21: (2004-11)
Particular requirements for stationary cooking ranges, hobs, ovens and similar appliances	-	IN STUDY	-	IEC 60335-2-23: (2005-06)
Particular requirements for washing machines	-	IN STUDY	-	IEC 60335-2-24: (2007-03)
Particular requirements for shavers, hair clippers and similar appliances	-	IN STUDY	-	IEC 60335-2-25: (2006-09)
Particular requirements for grills, toasters and similar portable cooking appliances	-	IN STUDY	-	IEC 60335-2-26: (2005-04)

Thank you very much !



CONTACTS:

www.produce.gob.pe

www.mincetur.gob.pe

www.minem.gob.pe

www.indecopi.gob.pe



República del Perú