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Australian/New Zealand Standard[®]

Graphic symbols for use on medical electrical equipment

[BS title: Graphical symbols for electrical equipment in medical
practice]

AS/NZS 4334:1995

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee HT/15 on Medical Electrical Equipment—General Safety Aspects. It is issued as a Joint Standard under the terms of the Active Cooperation Agreement between Standards Australia and Standards New Zealand with the objective of reducing technical barriers between the two nations.

It is identical with and has been reproduced from BS 7139:1989 *Guide to graphical symbols for use on medical electrical equipment*, which in turn is identical with IEC 878 (1988) *Graphical symbols for electrical equipment in medical practice*, but omits the intermingled French text.

BS 7139 and IEC 878 represent the most comprehensive compilation of medical graphical symbols available and is published by Committee HT/15 for that reason.

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<i>Reference to International Standard</i>		<i>Australian/New Zealand Standard</i>
BS		AS/NZS
7139	Guide to graphical symbols for use on medical electrical equipment	—
IEC		
417	Graphical symbols for use on equipment. Index, survey and compilation of the single sheets	—
ISO		
7000	Graphical symbols for use on equipment—Index and synopsis	—

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AUSTRALIAN/NEW ZEALAND STANDARD

Graphic symbols for use on medical electrical equipment

INTRODUCTION

This IEC Publication 878, “Graphical symbols for electrical equipment in medical practice”, is divided into five sections, as follows:

- Section One: General symbols.
- Section Two: Symbols to identify the classification of equipment
- Section Three: Safety symbols.
- Section Four: Specialized symbols for ionizing radiation equipment.
- Section Five: Specialized symbols for display, communication and recording.

Other introductory remarks will be found in Clause 2.

1. Scope and object

This report provides a list, for easy reference, of graphical symbols for medical electrical equipment.

2. General

This report identifies those symbols already published in IEC Publication 417 or in ISO Standard 7000. A reference to the relevant symbol number is given.

Some symbols essential for compliance with the standards issued by IEC Technical Committee No. 62 or its Sub-Committees are also listed.

Many of the symbols listed in this report have already been used for several years on equipment and will be familiar to experts in that particular field; the meaning of others will become clear when viewed in context on the equipment itself, but it must be appreciated that it is impossible to make self-evident the meaning of all symbols on complex equipment.

However, it is to be noted that the meaning of all symbols used on equipment shall be explained in the accompanying documents to the equipment.

The symbols listed in this report are intended to be displayed on equipment used in medical practice. They are not necessarily associated with graphical symbols used on drawings.

For symbol requirements not met by this report, refer in the first instance to published IEC or ISO symbols. Note that, where necessary, two or more symbols or symbol elements may be grouped together to convey a particular meaning and, provided that the essential communicative characteristics of the basic symbol are maintained, some latitude in graphic design is permissible.

The symbols are grouped in sections for ease of reference (see Introduction).

The safety symbols in Section Three may be used to form safety signs according to local regulations, for example in a yellow triangle.

SECTION ONE — GENERAL SYMBOLS

3. Alphabetical index

Key words	Symbol No.	Key words	Symbol No.
A. Alternating current	01-14	Movement in one direction	01-51
Automatic control (closed loop)	01-46	Movement to and from the operator	01-53
B. Bell	01-41	N. Noiseless (clean) earth (ground)	01-22
Both direct and alternating current	01-19	Normal run	01-60
C. Calibration	01-29	Normal run from a limit	01-62
Clock; time switch; timer	01-40	Normal run to a limit	01-64
Close (a container)	01-67	O. Off (power)	01-02
Connection point for the neutral conductor on per- manently installed equipment	01-16	“OFF” only for a part of equipment	01-08
D. Decreasing temperature	01-34	On (power)	01-01
Direct current	01-18	On/off (push button)	01-04
Disengaging (mechanical deactivation)	01-48	On/off (push-push)	01-03
E. Earth (ground)	01-21	“ON” only for a part of equipment	01-07
Engaging (mechanical activation)	01-47	Open (a container)	01-68
Equipotentiality	01-24	“OUT”-position of a bistable push control	01-13
F. Fan (general)	01-66	Output	01-37
Fast run	01-61	P. Pause; interruption	01-11
Fast run from a limit	01-63	Plus; positive polarity	01-27
Fast run to a limit	01-65	Protective earth (ground)	01-20
Foot switch	01-71	R. Rectilinear repeated positioning	01-55
Frame or chassis	01-23	Remote control	01-38
H. Hand-held switch	01-44	Rotation in two directions	01-58
I. Increasing temperature	01-35	S. Setting to central position	01-43
Indirect lighting	01-31	Slow run	01-59
“IN”-position of a bistable push control	01-12	Stand-by	01-05
Input	01-36	Stand-by or preparatory state for a part of equip- ment	01-06
Iris diaphragm: closed	01-70	Start (of action)	01-09
Iris diaphragm: open	01-69	Stop (of action)	01-10
L. Lamp; lighting; illumination	01-30	T. Temperature	01-33
Limited rectilinear motion	01-54	Three phase alternating current	01-15
Local control	01-39	Three phase alternating current with neutral con- ductor	01-17
Lock or tighten	01-49	U. U-turn of movement (from a pre-set position)	01-57
Low intensity lighting	01-32	Unlock, unclamp	01-50
M. Manual control	01-45	V. Variability	01-25
Minus; negative polarity	01-28	Variability in steps	01-26
Movement in both directions	01-52	Z. Zero point adjustment	01-42
Movement in direction of arrow from a pre-set position	01-56		

4. Numerical index

01-01	On (power)	01-36	Input
01-02	Off (power)	01-37	Output
01-03	On/off (push-push)	01-38	Remote control
01-04	On/off (push button)	01-39	Local control
01-05	Stand-by	01-40	Clock; time switch; timer
01-06	Stand-by or preparatory state for a part of equipment	01-41	Bell
01-07	"ON" only for a part of equipment	01-42	Zero point adjustment
01-08	"OFF" only for a part of equipment	01-43	Setting to central position
01-09	Start (of action)	01-44	Hand-held switch
01-10	Stop (of action)	01-45	Manual control
01-11	Pause; interruption	01-46	Automatic control (closed loop)
01-12	"IN"-position of a bistable push control	01-47	Engaging (mechanical activation)
01-13	"OUT"-position of a bistable push control	01-48	Disengaging (mechanical deactivation)
01-14	Alternating current	01-49	Lock or tighten
01-15	Three phase alternating current	01-50	Unlock, unclamp
01-16	Connection point for the neutral conductor on permanently installed equipment	01-51	Movement in one direction
01-17	Three phase alternating current with neutral conductor	01-52	Movement in both directions
01-18	Direct current	01-53	Movement to and from the operator
01-19	Both direct and alternating current	01-54	Limited rectilinear motion
01-20	Protective earth (ground)	01-55	Rectilinear repeated positioning
01-21	Earth (ground)	01-56	Movement in direction of arrow from a pre-set position
01-22	Noiseless (clean) earth (ground)	01-57	U-turn of movement (from a pre-set position)
01-23	Frame or chassis	01-58	Rotation in two directions
01-24	Equipotentiality	01-59	Slow run
01-25	Variability	01-60	Normal run
01-26	Variability in steps	01-61	Fast run
01-27	Plus; positive polarity	01-62	Normal run from a limit
01-28	Minus; negative polarity	01-63	Fast run from a limit
01-29	Calibration	01-64	Normal run to a limit
01-30	Lamp; lighting; illumination	01-65	Fast run to a limit
01-31	Indirect lighting	01-66	Fan (general)
01-32	Low intensity lighting	01-67	Close (a container)
01-33	Temperature	01-68	Open (a container)
01-34	Decreasing temperature	01-69	Iris diaphragm: open
01-35	Increasing temperature	01-70	Iris diaphragm: closed
		01-71	Foot switch

SECTION ONE –
GENERAL SYMBOLS

01-01 	01-02 	01-03 	01-04 	01-05 	01-06 	01-07 	01-08 
01-09 	01-10 	01-11 	01-12 	01-13 	01-14 	01-15 	01-16 
01-17 	01-18 	01-19 	01-20 	01-21 	01-22 	01-23 	01-24 
01-25 	01-26 	01-27 	01-28 	01-29 	01-30 	01-31 	01-32 
01-33 	01-34 	01-35 	01-36 	01-37 	01-38 	01-39 	01-40 
01-41 	01-42 	01-43 	01-44 	01-45 	01-46 	01-47 	01-48 
01-49 	01-50 	01-51 	01-52 	01-53 	01-54 	01-55 	01-56 
01-57 	01-58 	01-59 	01-60 	01-61 	01-62 	01-63 	01-64 
01-65 	01-66 	01-67 	01-68 	01-69 	01-70 	01-71 	

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5. Compilation of Section One – General symbols

No.	Symbol	Title	Reference
01-01		On (power)	417-IEC 5007
01-02		Off (power)	417-IEC 5008
01-03		On/off (push-push)	417-IEC 5010
01-04		On/off (push button)	417-IEC 5011
01-05		Stand-by	417-IEC 5009
01-06		Stand-by or preparatory state for a part of equipment	417-IEC 5266
01-07		“ON” only for a part of equipment	417-IEC 5264

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No.	Symbol	Title	Reference
01-08		"OFF" only for a part of equipment	417-IEC 5265
01-09		Start (of action)	417-IEC 5104
01-10		Stop (of action)	417-IEC 5110
01-11		Pause; interruption	417-IEC 5111
01-12		"IN"-position of a bistable push control	417-IEC 5268
01-13		"OUT"-position of a bistable push control	417-IEC 5269
01-14		Alternating current	417-IEC 5032

No.	Symbol	Title	Reference
01-15	3 ~	Three phase alternating current	IEC 601-1
01-16	N	Connection point for the neutral conductor on permanently installed equipment	IEC 601-1
01-17	3N ~	Three phase alternating current with neutral conductor	IEC 601-1
01-18	≡	Direct current	417-IEC 5031
01-19	≡ ~	Both direct and alternating current	417-IEC 5033
01-20	⊥	Protective earth (ground)	417-IEC 5019
01-21	⊥	Earth (ground)	417-IEC 5017

No.	Symbol	Title	Reference
01-22		Noiseless (clean) earth (ground)	417-IEC 5018
01-23		Frame or chassis	417-IEC 5020
01-24		Equipotentiality	417-IEC 5021
01-25		Variability	417-IEC 5004
01-26		Variability in steps	417-IEC 5181
01-27		Plus; positive polarity	417-IEC 5005
01-28		Minus; negative polarity	417-IEC 5006

No.	Symbol	Title	Reference
01-29		Calibration	ISO 7000-0160
01-30		Lamp; lighting; illumination	417-IEC 5012
01-31		Indirect lighting	417-IEC 5320
01-32		Low intensity lighting	417-IEC 5321
01-33		Temperature	ISO 7000-0034
01-34		Decreasing temperature	ISO 7000-0036
01-35		Increasing temperature	ISO 7000-0035

No.	Symbol	Title	Reference
01-36		Input	417-IEC 5034
01-37		Output	417-IEC 5035
01-38		Remote control	—
01-39		Local control	—
01-40		Clock; time switch; timer	417-IEC 5184
01-41		Bell	417-IEC 5013
01-42		Zero point adjustment	ISO 7000- DAD.1 0540

No.	Symbol	Title	Reference
01-43		Setting to central position	ISO/7000-DAD.1 0514
01-44		Hand-held switch	417-IEC 5322
01-45		Manual control	ISO 7000-0096
01-46		Automatic control (closed loop)	ISO 7000-0017
01-47		Engaging (mechanical activation)	ISO 7000-0022
01-48		Disengaging (mechanical deactivation)	ISO 7000-0023
01-49		Lock or tighten	ISO 7000-0018