

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

Identification of units of measurement for computer-based processing

Identification des unités de mesure pour le traitement assisté par ordinateur

<https://standards.iteh.ai/catalog/standards/sis/9088324f-5c5e-4e49-b032-b2b2ac7d0a5b/iec-ts-62720-2013>



THIS PUBLICATION IS COPYRIGHT PROTECTED

Copyright © 2013 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester.

If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

Droits de reproduction réservés. Sauf indication contraire, aucune partie de cette publication ne peut être reproduite ni utilisée sous quelque forme que ce soit et par aucun procédé, électronique ou mécanique, y compris la photocopie et les microfilms, sans l'accord écrit de la CEI ou du Comité national de la CEI du pays du demandeur.

Si vous avez des questions sur le copyright de la CEI ou si vous désirez obtenir des droits supplémentaires sur cette publication, utilisez les coordonnées ci-après ou contactez le Comité national de la CEI de votre pays de résidence.

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

Useful links:

IEC publications search - www.iec.ch/searchpub

The advanced search enables you to find IEC publications by a variety of criteria (reference number, text, technical committee,...).

It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available on-line and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing more than 30 000 terms and definitions in English and French, with equivalent terms in additional languages. Also known as the International Electrotechnical Vocabulary (IEV) on-line.

Customer Service Centre - webstore.iec.ch/csc/iec-ts

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

A propos de la CEI

La Commission Electrotechnique Internationale (CEI) est la première organisation mondiale qui élabore et publie des Normes internationales pour tout ce qui a trait à l'électricité, à l'électronique et aux technologies apparentées.

A propos des publications CEI

Le contenu technique des publications de la CEI est constamment revu. Veuillez vous assurer que vous possédez l'édition la plus récente, un corrigendum ou amendement peut avoir été publié.

Liens utiles:

Recherche de publications CEI - www.iec.ch/searchpub

La recherche avancée vous permet de trouver des publications CEI en utilisant différents critères (numéro de référence, texte, comité d'études,...).

Elle donne aussi des informations sur les projets et les publications remplacées ou retirées.

Just Published CEI - webstore.iec.ch/justpublished

Restez informé sur les nouvelles publications de la CEI. Just Published détaille les nouvelles publications parues. Disponible en ligne et aussi une fois par mois par email.

Electropedia - www.electropedia.org

Le premier dictionnaire en ligne au monde de termes électriques et électroniques. Il contient plus de 30 000 termes et définitions en anglais et en français, ainsi que les termes équivalents dans les langues additionnelles. Egalement appelé Vocabulaire Electrotechnique International (VEI) en ligne.

Service Clients - webstore.iec.ch/csc

Si vous désirez nous donner des commentaires sur cette publication ou si vous avez des questions contactez-nous: csc@iec.ch.

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

Identification of units of measurement for computer-based processing

Identification des unités de mesure pour le traitement assisté par ordinateur

<https://standards.iteh.ai/catalog/standards/sis/9088324f-5c5e-4e49-b032-b2b2ac7d0a5b/iec-ts-62720-2013>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX
XH

ICS 01.060; 35.240.50

ISBN 978-2-83220-823-6

Warning! Make sure that you obtained this publication from an authorized distributor.

Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

CONTENTS

FOREWORD	12
INTRODUCTION	14
1 Scope	15
2 Normative references	15
3 Terms and definitions	15
4 Relations between quantities, units and their systems	21
4.1 General	21
4.2 The International System of Quantities and the International System of Units	21
4.3 Other systems of quantities and units	23
4.4 Context of units, quantities, and systems of units	23
5 SI prefixes and SI prefix symbols	24
5.1 General	24
5.2 Formation of multiples and factors to the base of 10	24
5.3 Formation of multiples to the base of 2	25
5.4 Usage of SI prefixes and SI prefix symbols	25
5.4.1 General	25
5.4.2 Combination of SI prefixes, SI prefix symbols, names of units and symbols for units	25
5.4.3 Use of power exponentials in conjunction with SI prefixes, SI prefix symbols, names of units or symbols for units	26
5.4.4 Restrictions on combining SI prefixes, SI prefix symbols, names of units and symbols for units	26
5.5 Selecting SI prefixes and SI prefix symbols	26
6 Data sources of units	26
7 Identification of units	27
Annex A (informative) Information about units	28
Annex B (normative) Identifiers for units and quantities that are derived from the SI system of units	29
Annex C (normative) Identifiers for units and quantities that are not derived from the SI system of units	127
Annex D (normative) Identifiers for unit systems	163
Annex E (informative) XML representation of units	164
Bibliography	260
 Figure 1 – Overview about the relationships between the tables contained in the annexes	23
Figure 2 – International registration data identifier (IRDI), Source: ISO 11179-6:2005	27
Figure B.1 – Structure of table headers	29
Figure C.1 – Structure of table headers	127
 Table 1 – Concepts for quantities	16
Table 2 – Base quantity and base unit	17
Table 3 – Base quantities	19
Table 4 – Base quantities and base units in the International System of Units	22
Table 5 – Representation of base quantities in the International System of Units [34]	22

Table 6 – Formation of multiples and factors of units to the base of 10	24
Table 7 – Formation of multiples of units to the base of 2	25
Table 8 – Units that are used without prefixes or prefix symbols	26
Table B.1 – Absorbed dose	29
Table B.2 – Absorbed dose rate	30
Table B.3 – Acceleration	30
Table B.4 – Active power	31
Table B.5 – Amount of substance	32
Table B.6 – Amount of substance concentration	32
Table B.7 – Angular acceleration	33
Table B.8 – Angular cross-section	33
Table B.9 – Angular momentum	33
Table B.10 – Angular velocity	34
Table B.11 – Angular wave number	34
Table B.12 – Apparent power	34
Table B.13 – Areic bit density	35
Table B.14 – Areic charge density	35
Table B.15 – Areic mass	36
Table B.16 – Avogadro constant	36
Table B.17 – Bandwidth distance product	36
Table B.18 – Battery capacity	37
Table B.19 – Bit rate	37
Table B.20 – Burst factor	37
Table B.21 – Byte rate	38
Table B.22 – Capacitance	38
Table B.23 – Catalytic activity	39
Table B.24 – Catalytic activity concentration	39
Table B.25 – Celsius temperature	40
Table B.26 – Compressibility	40
Table B.27 – Conductivity	40
Table B.28 – Cross-section	41
Table B.29 – Dataset of bits	41
Table B.30 – Dataset of bytes	42
Table B.31 – Density	42
Table B.32 – Density of states	43
Table B.33 – Diffusion constant, thermal diffusivity	43
Table B.34 – Digit rate	43
Table B.35 – Dose equivalent	44
Table B.36 – Dose equivalent rate	44
Table B.37 – Dynamic viscosity	45
Table B.38 – Einstein coefficients	45
Table B.39 – Electric charge	46
Table B.40 – Electrical conductance	46

Table B.41 – Electric current	47
Table B.42 – Electric current density	48
Table B.43 – Electric dipole moment	48
Table B.44 – Electric field strength	49
Table B.45 – Electric flux density	49
Table B.46 – Electric polarization	50
Table B.47 – Electric resistance	50
Table B.48 – Energy content	51
Table B.49 – Energy density	51
Table B.50 – Equilibrium constant based on concentration	52
Table B.51 – Equilibrium constant based on pressure	52
Table B.52 – Exposure rate	52
Table B.53 – Failure rate	53
Table B.54 – Faraday constant	53
Table B.55 – First radiation constant	53
Table B.56 – Force	54
Table B.57 – Force constant	54
Table B.58 – Frequency	55
Table B.59 – Gas leak rate	55
Table B.60 – Gradient	55
Table B.61 – Gravitational constant	56
Table B.62 – Hall coefficient	56
Table B.63 – I^2t -value, Joule integral	56
Table B.64 – Illumination	57
Table B.65 – Impulse	57
Table B.66 – Incidence	57
Table B.67 – Inductance	58
Table B.68 – Information content	58
Table B.69 – Ionic strength	59
Table B.70 – Irradiance	59
Table B.71 – Josephson constant	59
Table B.72 – Kinematic viscosity	60
Table B.73 – Kinetic energy	60
Table B.74 – Length	61
Table B.75 – Linear expansion coefficient	61
Table B.76 – Lineic bit density	61
Table B.77 – Lineic electric charge, linear electric charge density	62
Table B.78 – Lineic electric current, linear electric current density	62
Table B.79 – Lineic force	63
Table B.80 – Lineic logarithmic ratio, linear attenuation, linear loss	64
Table B.81 – Lineic mass	64
Table B.82 – Lineic power	65
Table B.83 – Lineic resistance	66

Table B.84 – Lineic torque	67
Table B.85 – Logarithmic frequency interval	67
Table B.86 – Logarithmic frequency interval to base 10	67
Table B.87 – Logarithmic ratio to base 10	68
Table B.88 – Logarithmic ratio to base e	68
Table B.89 – Lorenz coefficient.....	68
Table B.90 – Loudness	69
Table B.91 – Loudness level.....	69
Table B.92 – Luminance	69
Table B.93 – Luminous efficacy	70
Table B.94 – Luminous exitance	70
Table B.95 – Luminous exposure	70
Table B.96 – Luminous flux.....	71
Table B.97 – Luminous intensity	71
Table B.98 – Magnetic dipole moment	71
Table B.99 – Magnetic dipole moment of a molecule.....	72
Table B.100 – Magnetic field strength, magnetizing field strength.....	72
Table B.101 – Magnetic flux.....	73
Table B.102 – Magnetic flux density.....	73
Table B.103 – Magnetic moment.....	73
Table B.104 – Magnetic polarization	74
Table B.105 – Magnetic vector potential.....	74
Table B.106 – Mass	75
Table B.107 – Mass attenuation coefficient.....	75
Table B.108 – Mass density.....	76
Table B.109 – Mass flow rate.....	77
Table B.110 – Mass flux density	77
Table B.111 – Mass ratio	78
Table B.112 – Massic activity, specific activity	78
Table B.113 – Massic electric current	79
Table B.114 – Massic heat capacity, specific heat capacity.....	79
Table B.115 – Massic power, specific power.....	80
Table B.116 – Massic torque.....	80
Table B.117 – Mechanical impedance	80
Table B.118 – Median information flow, expressed as a binary logarithm	81
Table B.119 – Median information flow, expressed as a common logarithm	81
Table B.120 – Median information flow, expressed as a natural logarithm	81
Table B.121 – Mobility	81
Table B.122 – Molar attenuation coefficient	82
Table B.123 – Molar conductivity	82
Table B.124 – Molar flow rate	82
Table B.125 – Molar heat capacitiy	83
Table B.126 – Molar internal energy	83

Table B.127 – Molar mass	83
Table B.128 – Molar optical rotatory power	83
Table B.129 – Molar volume	84
Table B.130 – Moment of inertia	84
Table B.131 – Motor constant	84
Table B.132 – Mass stopping power, atomic stopping power.....	85
Table B.133 – Nuclear energy.....	85
Table B.134 – Particle current density	85
Table B.135 – Particle fluence	85
Table B.136 – Permeability	86
Table B.137 – Permeance.....	86
Table B.138 – Permittivity	87
Table B.139 – Photon intensity	87
Table B.140 – Photon luminance	87
Table B.141 – Planck's constant	88
Table B.142 – Plane angle.....	88
Table B.143 – Polarizability	88
Table B.144 – Pressure	89
Table B.145 – Pressure coefficient	89
Table B.146 – Pressure gradient.....	90
Table B.147 – Pressure in relation to volume flow rate.....	90
Table B.148 – Quantity	90
Table B.149 – Quantity of light.....	90
Table B.150 – Radiance, total radiance.....	91
Table B.151 – Radiant energy exposure	91
Table B.152 – Radiant exposure	91
Table B.153 – Radiant intensity	91
Table B.154 – Radioactive decay	92
Table B.155 – Rate of rise of voltage	92
Table B.156 – Ratio	93
Table B.157 – Reactive power	93
Table B.158 – Reciprocal energy	94
Table B.159 – Reciprocal mass.....	94
Table B.160 – Reciprocal voltage	95
Table B.161 – Reluctance	95
Table B.162 – Repetency.....	95
Table B.163 – Resistivity	96
Table B.164 – Richardson constant	96
Table B.165 – Rotary-translatory motion conversion	96
Table B.166 – Scalar magnetic potential	97
Table B.167 – Second moment of area (axial).....	97
Table B.168 – Second moment of area (polar).....	97
Table B.169 – Second radiation constant.....	98

Table B.170 – Section modulus.....	98
Table B.171 – Seebeck coefficient.....	98
Table B.172 – Slowing-down density.....	99
Table B.173 – Solid angle.....	99
Table B.174 – Sound exposure	99
Table B.175 – Specific (internal) energy	100
Table B.176 – Specific optical rotational ability	100
Table B.177 – Specific volume	101
Table B.178 – Spectral angular cross-section	101
Table B.179 – Spectral cross-section	101
Table B.180 – Spectral density of vibrational modes	102
Table B.181 – Spectral radiant energy density in terms of wavelength	102
Table B.182 – State density as expression of angular frequency.....	102
Table B.183 – Stefan-Boltzmann constant	103
Table B.184 – Surface	103
Table B.185 – Surface-related volume flow rate	103
Table B.186 – Surface tension	104
Table B.187 – Surge impedance of the medium	104
Table B.188 – Temperature change rate, rate of change of temperature	105
Table B.189 – Thermal capacitance	105
Table B.190 – Thermal coefficient of linear expansion	105
Table B.191 – Thermal conductance	106
Table B.192 – Thermal conductivity	106
Table B.193 —Thermal energy.....	106
Table B.194 – Thermal insulation.....	107
Table B.195 – Thermal resistance.....	107
Table B.196 – Thermal resistivity	107
Table B.197 – Thermal transmittance	107
Table B.198 – Thermodynamic temperature	108
Table B.199 – Time.....	108
Table B.200 – Time constant	109
Table B.201 – Time-related logarithmic ratio	109
Table B.202 – Torque	109
Table B.203 – Torque constant	110
Table B.204 – Torsional rigidity.....	110
Table B.205 – Total linear stopping power	110
Table B.206 – Total mass stopping power.....	110
Table B.207 – Traffic intensity	111
Table B.208 – Unbalance.....	111
Table B.209 – Variation (due to modified position)	111
Table B.210 – Variation (due to output load)	111
Table B.211 – Variation of density (due to pressure).....	112
Table B.212 – Variation of dynamic viscosity (due to pressure).....	112

Table B.213 – Variation of dynamic viscosity (due to temperature)	112
Table B.214 – Variation of electric current (due to pressure).....	112
Table B.215 – Variation of kinematic viscosity (due to pressure).....	113
Table B.216 – Variation of kinematic viscosity (due to temperature).....	113
Table B.217 – Variation of level (due to pressure).....	113
Table B.218 – Variation of level (due to temperature)	113
Table B.219 – Variation of mass (due to pressure).....	114
Table B.220 – Variation of mass (due to temperature)	114
Table B.221 – Variation of mass density (due to temperature)	115
Table B.222 – Variation of mass flow rate (due to pressure)	115
Table B.223 – Variation of mass flow rate (due to temperature)	116
Table B.224 – Variation of molality (due to pressure).....	116
Table B.225 – Variation of molality (due to temperature).....	116
Table B.226 – Variation of molar concentration (due to pressure)	116
Table B.227 – Variation of molar concentration (due to temperature)	117
Table B.228 – Variation of pressure (due to pressure)	117
Table B.229 – Variation of temperature (due to pressure)	117
Table B.230 – Variation of temperature (due to temperature)	117
Table B.231 – Variation of velocity (due to pressure)	117
Table B.232 – Variation of velocity (due to temperature)	118
Table B.233 – Variation of voltage (due to pressure).....	118
Table B.234 – Variation of volume (due to pressure).....	118
Table B.235 – Variation of volume (due to temperature)	118
Table B.236 – Variation of volume flow rate (due to pressure)	119
Table B.237 – Variation of volume flow rate (due to temperature)	119
Table B.238 – Velocity	120
Table B.239 – Voltage	121
Table B.240 – Volume	122
Table B.241 – Volume flow rate	123
Table B.242 – Volume fraction	124
Table B.243 – Volumic bit density	124
Table B.244 – Volumic electric charge, electric charge density	125
Table B.245 – Volumic output power.....	125
Table B.246 – Water vapour permeability.....	126
Table C.1 – Absolute typographic measurement	128
Table C.2 – Acceleration.....	128
Table C.3 – Active power.....	129
Table C.4 – Amount of substance	129
Table C.5 – Angular velocity	129
Table C.6 – Areic mass	130
Table C.7 – Amount of biologically active substance	130
Table C.8 – Catalytic activity.....	130
Table C.9 – Catalytic activity concentration.....	130

Table C.10 – Compressibility	130
Table C.11 – Density	130
Table C.12 – Diffusion constant	131
Table C.13 – Dose equivalent	131
Table C.14 – Dose equivalent rate	131
Table C.15 – Dots per inch	131
Table C.16 – Dynamic viscosity	132
Table C.17 – Earthquake magnitude	132
Table C.18 – Electric charge	132
Table C.19 – Electric current	132
Table C.20 – Electric field strength	133
Table C.21 – Electrical conductance	133
Table C.22 – Energy density	133
Table C.23 – Exposure rate	133
Table C.24 – Fahrenheit temperature	133
Table C.25 – Floating-point calculation capability	134
Table C.26 – Fluidity	134
Table C.27 – Force	134
Table C.28 – Gas leak rate	134
Table C.29 – Illuminance	135
Table C.30 – Impulse	135
Table C.31 – Ionic strength	135
Table C.32 – Irradiance	135
Table C.33 – Kinematic viscosity	135
Table C.34 – Kinetic energy	136
Table C.35 – Length	137
Table C.36 – Linear expansion coefficient	137
Table C.37 – Lineic electric current	137
Table C.38 – Lineic force	138
Table C.39 – Lineic mass	138
Table C.40 – Lineic torque	138
Table C.41 – Luminance	138
Table C.42 – Luminous exitance	138
Table C.43 – Luminous intensity	139
Table C.44 – Mach number	139
Table C.45 – Magnetic field strength, magnetizing field strength	139
Table C.46 – Magnetic flux	139
Table C.47 – Magnetic flux density	139
Table C.48 – Magnetic polarization	140
Table C.49 – Mass	140
Table C.50 – Mass density	141
Table C.51 – Mass flow rate	142
Table C.52 – Mass ratio	142

Table C.53 – Mass stopping power	142
Table C.54 – Massic activity	142
Table C.55 – Massic heat capacity	143
Table C.56 – Massic power	143
Table C.57 – Massic torque	143
Table C.58 – Molar flow rate	143
Table C.59 – Mechanical impedance	143
Table C.60 – Moment of inertia	143
Table C.61 – Particle fluence	144
Table C.62 – Picture element	144
Table C.63 – Plane angle	144
Table C.64 – Pressure	145
Table C.65 – Pressure coefficient	146
Table C.66 – Pressure gradient	146
Table C.67 – Pressure in relation to volume flow rate	146
Table C.68 – Radiant energy exposure	146
Table C.69 – Radiant exposure	147
Table C.70 – Radioactive decay	147
Table C.71 – Rankine temperature	147
Table C.72 – Ratio	147
Table C.73 – Reciprocal mass	148
Table C.74 – Repetency	148
Table C.75 – Rotary-translatory motion conversion	148
Table C.76 – Section modulus	149
Table C.77 – Second moment of area (axial)	150
Table C.78 – Specific (internal) energy	150
Table C.79 – Specific volume	150
Table C.80 – Spectral angular cross-section	150
Table C.81 – Spectral cross-section	150
Table C.82 – Spin quantum number	150
Table C.83 – Sun protection factor of a product	151
Table C.84 – Surface	151
Table C.85 – Surface-related volume flow rate	151
Table C.86 – Surface tension	151
Table C.87 – Surge impedance of the medium	151
Table C.88 – Temperature change rate	152
Table C.89 – Thermal capacitance	152
Table C.90 – Thermal conductivity	152
Table C.91 – Thermal energy	153
Table C.92 – Thermal insulation	153
Table C.93 – Thermal resistance	154
Table C.94 – Thermal resistivity	154
Table C.95 – Thermal transmittance	154

Table C.96 – Time	154
Table C.97 – Torque	155
Table C.98 – Torque constant	155
Table C.99 – Total linear stopping power	155
Table C.100 – Total mass stopping power	155
Table C.101 – Unbalance	155
Table C.102 – Variation of density (due to pressure)	155
Table C.103 – Variation of dynamic viscosity (due to pressure)	156
Table C.104 – Variation of dynamic viscosity (due to temperature)	156
Table C.105 – Variation of electric current (due to pressure)	156
Table C.106 – Variation of kinematic viscosity (due to pressure)	156
Table C.107 – Variation of kinematic viscosity (due to temperature)	156
Table C.108 – Variation of level (due to pressure)	156
Table C.109 – Variation of level (due to temperature)	157
Table C.110 – Variation of mass (due to pressure)	157
Table C.111 – Variation of mass (due to temperature)	157
Table C.112 – Variation of mass density (due to temperature)	157
Table C.113 – Variation of mass flow rate (due to pressure)	157
Table C.114 – Variation of mass flow rate (due to temperature)	158
Table C.115 – Variation of pressure (due to pressure)	158
Table C.116 – Variation of temperature (due to pressure)	158
Table C.117 – Variation of temperature (due to temperature)	158
Table C.118 – Variation of voltage (due to pressure)	158
Table C.119 – Variation of volume (due to pressure)	158
Table C.120 – Variation of volume (due to temperature)	159
Table C.121 – Variation of velocity (due to pressure)	159
Table C.122 – Variation of velocity (due to temperature)	159
Table C.123 – Velocity	159
Table C.124 – Volume flow rate	160
Table C.125 – Volume	162
Table C.126 – Water vapour permeability	162
Table D.1 – Unit systems	163
Table E.1 – XML – representation of unit symbols	164

INTERNATIONAL ELECTROTECHNICAL COMMISSION

IDENTIFICATION OF UNITS OF MEASUREMENT FOR COMPUTER-BASED PROCESSING

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

The main task of IEC technical committees is to prepare International Standards. In exceptional circumstances, a technical committee may propose the publication of a technical specification when

- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62720, which is a technical specification, has been prepared by subcommittee 3D, Product properties and classes and their identification, of IEC technical committee 3: Information structures, documentation and graphical symbols.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
3D/201/DTS	3D/209/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- transformed into an International Standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

