

**3/611/RVC****RESULT OF VOTING ON CDV**

Project number: IEC 60617 f2 Ed.1	Reference number of the CDV <b>3/587/CDV</b>
IEC/TC or SC 3	Date of circulation 2002-07-15
Title of the TC or SC concerned Information structures, documentation and graphical symbols	

<b>Title of the committee draft:</b> IEC 60617 Graphical symbols for diagrams - Change request C00026: Technically new symbols S01391, S01392, S01393, S01396, S01397, S01398, S01399 and S01400
The above-mentioned document was distributed to National Committees with a request that voting take place for approval for circulation as an FDIS (or publication as a Technical Specification or Report)
<b>Voting results</b>  see printout attached
<b>Comments received</b> – see annex A
<b>In the case that the approval criteria for acceptance have been met,</b> <b>a</b> <input checked="" type="checkbox"/> The committee draft for vote (CDV) will be registered as an FDIS by (date) 2002-07-15 <b>b</b> <input type="checkbox"/> The draft technical report (DTR) will be published as a Technical Report <input type="checkbox"/> The draft technical specification (DTS) will be published as a Technical Specification by (date) ..... <b>DECISION OF THE CHAIRMAN</b> (in cooperation with the secretariat), in the case that the approval criteria for acceptance have not been met <b>c</b> <input type="checkbox"/> A revised committee draft for vote (CDV) will be distributed by (date) ..... <b>d</b> <input type="checkbox"/> A revised committee draft (CD) will be distributed by (date) ..... NOTE In the case of a proposal <i>c</i> or <i>d</i> made by the chairman, P-members objecting to such a proposal shall inform the Central Office with copy to the secretary in writing within 2 months of the circulation of this compilation (see ISO/IEC Directives, Part 1, 2.6.5). <b>X</b> Some of the comments will be discussed at the next meeting of the TC3 on (date) 2002-10-16.

Name or signature of the Secretary  <i>Per-Åke Svensson</i>	Name or signature of the Chairman  <i>Hans Brückner</i>
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**Project: IEC 60617 f2 Ed.1**

IEC 60617: Graphical symbols for diagrams - Change request C00026: Technically new symbols S01391, S01392, S01393, S01396, S01397, S01398, S01399 and S01400

**Circulation Date: 2001-10-19**

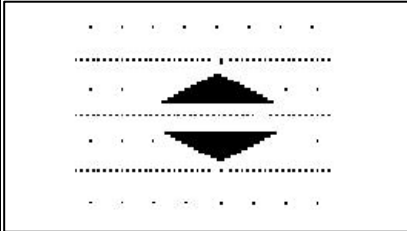
**Closing Date: 2002-03-22**

Country	Status	Sent	Received	Vote	Comments
Australia	P	2002-01-03	2002-01-03	Y	-
Belgium	O	2002-01-31	2002-01-31	A	-
China	P	2002-03-12	2002-03-12	Y	-
Czech Republic	P	2002-03-18	2002-03-18	A	-
Denmark	P	2002-03-20	2002-03-20	Y	-
Finland	P	2002-03-18	2002-03-18	Y	Y
France	P	2002-03-18	2002-03-18	Y	-
Germany	P	2002-03-13	2002-03-13	Y	Y
Hungary	P	2002-03-21	2002-03-21	A	-
Italy	P	2002-03-15	2002-03-15	Y	-
Japan	P	2002-03-22	2002-03-22	N	Y
Netherlands	P	2002-03-22	2002-03-22	Y	-
Norway	P	2002-03-22	2002-03-22	Y	-
Portugal	P	2002-03-19	2002-03-19	A	-
Slovenia	O	2002-03-22	2002-03-22	Y	-
Spain	P	2002-03-21	2002-03-21	Y	-
Sweden	P	2002-03-21	2002-03-21	Y	-
Switzerland	P	2002-03-20	2002-03-20	Y	-
United Kingdom	P	2002-03-22	2002-03-22	Y	-


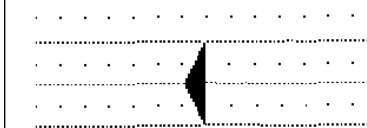
		Approval Criteria	Result
<b>P-members voting: 14</b>			
<b>P-members in favour: 13 = 93 %</b>		<b>&gt;= 67%</b>	<b>APPROVED</b>
<b>Total votes cast: 15</b>	<b>Total against: 1 = 7 %</b>	<b>&lt;= 25%</b>	<b>APPROVED</b>
<b>Final Decision:</b>			<b>APPROVED</b>

Annex A

National Committee	Clause/ Sub clause	Paragraph Figure/ Table	Type of comment (General/ Technical/ Editorial)	COMMENTS	Propos change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
FI-01				Add for all symbols into Application class also: location diagrams		"Location diagram" is not defined as a specific document kind, e.g. it is missing in IEC 61355. Not accepted.
JP-02	A00262			"NO" (modification). User may seek mechanical symbols in the symbols group wasting time, though these can be find out in ISO graphical symbol standards.	Add sentence, "mechanical items' symbols are usable in ISO's graphical library, such as SF6 pressure gauge." And refer standard number.	Dotted lines are used to indicate the context of the symbol defined by the name. In the actual case the context happens to be mechanical, but that is not the general rule. A00262 applies (and will apply) in many other cases.  The reference to mechanical items in the relevant parts of ISO 14617 can be added as a separate application note, This standard will be checked if there are any relevant items available.
JP-01	C00026	Common to all symbols	General & Technical	"NO" (modification). The dotted line may not be proper to show actual conductor(s) lines instead of solid lines.  (Although "application note A00262" states certain note, but user may see each symbol first instead "application note".	Symbol: Is it better to show conductor as solid line not as dotted line?	The name decides what is symbol and what is context.  The actual symbols depict primarily mechanical items, and therefore the electrical parts become context.  No change.

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JP-07	No symbol in Change request C00026 (Group of S01393 and S01399)		Technical	<p>New proposal.</p> <p>-- Name: For support conductors inside of enclosure, there must be another type of "gas insulated enclosure –"gas through spacer" in addition to S01393.</p> <p>This type is SF6 gas passes through the spacer intend not to isolate space in contrast to symbol S01393.</p>	<p>--Symbol and name: Add "Gas insulated enclosure – gas through spacer" (Similar to S01393)</p> 	<p>This proposal might be dealt with as a separate change request, when the present one has been processed. (Then this symbol will belong to an existing "family" and can be processed with the normal database procedure.)</p> <p>Note, however, that symbol S01399 seem to have a similar function.</p>
JP-03	S01391	"Gas insulated enclosure with internal conductor"	Technical	"Yes" except top comment of this table.	-	Noted.

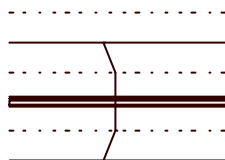
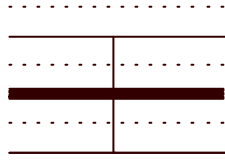
National Committee	Clause/ Sub clause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Propos change	OBSERVATIONS OF THE SECRETARIAT on each comment submitted
JP-04	S01392	"Gas insulated enclosure – sealing partition"	Technical	"No" (modification). The symbol is to be considered as end of enclosure with insulator support of conductor (bus).	--Name: To modify "Name" from "Gas insulated enclosure – sealing partition" to " Gas insulated enclosure – (gas) sealing end". (Reason: To clarify its purpose by clear naming.)  --Symbol: "Yes", JP agrees with it.	The term "partition" is defined in IEC60517 as follows: A part of a gas insulated metal-enclosed switchgear separating one compartment from another compartment.  A "compartment" is: A part of a gas-insulated metal-enclosed switchgear totally enclosed except for openings necessary for interconnection and control.  This means that the term "partition" is better used for S01393, than for S01392.  Based on that, the JP comment is accepted and the name changed to: Gas insulated enclosure – gas-sealing end of compartment

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JP-05	S01393 (Group of S01393 and S01399)		Technical	<p>"No" (modification).</p> <p>--Name: "gas insulated enclosure – boundary" is not proper to mean its function.</p> <p>-- Symbol: According to above mentioned, it is necessary to add new symbols.</p>	<p>-- Name: To modify name, from "Gas insulated enclosure – boundary" to " Gas insulated enclosure – gas tight spacer". (Reason: "boundary" may be unclear.</p> <p>"Spacer" is consisting from insulator.</p> <p>"Gas tight," means that SF6 gas isolated at this point (closed).</p> <p>-- Symbol: To add triangle (insulated) spacer in addition to rhombus shape proposed as selection. (Reason: JPN estimate some manufactures use rhombus</p> <div data-bbox="1189 914 1599 1235"> <p>Original:</p>  <p>Proposed additional Graphic:</p>  </div> <p>Otherwise, to get information's from manufactures practiced symbols of NC's and to select majority symbol. (JP considers single expression may not actual solution even in standardization.)</p>	Based on the definitions shown in JP-04 the name is modified to: Gas insulated enclosure – partition between two compartments

<b>National Committee</b>	<b>Clause/ Sub clause</b>	<b>Paragraph Figure/ Table</b>	<b>Type of comment (General/ Technical/ Editorial)</b>	<b>COMMENTS</b>	<b>Propos change</b>	<b>OBSERVATIONS OF THE SECRETARIAT on each comment submitted</b>
JP-08	S01396 (Group of S01396, S01397, and S01398)		Technical	<p>“NO”(modification).</p> <p>-- Name: Name of “air insulated conductor” may be weak to show necessity of “air bushing” at this end of enclosure. It is necessary to say clearly “air insulation bushing for outgoing”.</p>	<p>-- Name: To modify Name from “Gas insulated conductor - boundary with air insulated conductor” to “ Gas insulated enclosure – air entrance bushing”.</p> <p>-- Symbol: “Yes”</p>	<p>IEC 60517 defines “bushing” as: A structure carrying one or more conductors through an enclosure and insulating it there-from, including the means of attachment.</p> <p>The comment is accepted and the name modified to: Gas insulated conductor – boundary with air insulation bushing</p>
JP-09	S01397 (Group of S01396, S01397, and S01398)		Technical	“Yes”	--	

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JP-10	S01398 (relating in S01396, S01397, and S01398)	"Gas insulated conductor-boundary with transformer or reactor bushing"	Technical	<p>"No" (modification).</p> <p>It is not sufficient to show 3 types of connection to transformer or reactor in the S01398 in the diagram.</p>	<p>S01398 is not sufficient, but following 3 items and symbols should be specified;</p> <p>Name and symbol: Delete it and generate 3 symbols because 3 types of connections are considered.</p> <p>-1 "Gas" to "oil(Transformer )" direct connection (Direct connection)</p> <p>-2 "Gas" to "air bushing", then connect to "air bushings"(transformer). ( wires or cables are used between to "air bushing" and "air bushings"(transformer))</p> <p>-3 "Gas" to "oil" direct connection (using gas-to-oil bushing)</p> <p>JP would like to Secretary to collect symbols used in worldwide manufactures of NC's, then select proper graphicals.</p>	<p>The symbol is not specific with regard to the kind of bushing used for connection to the transformer, as that would depend of the kind of insulation used in the transformer.</p> <p>The kind of insulation used in a transformer is normally not indicated in a diagram.</p> <p>Therefore the shown symbol would be satisfactory for use in diagrams in most cases.</p> <p>If more details are to be provided, mechanical design drawings are to be used.</p> <p>Not accepted.</p>



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DE-01	S01399		Technical	<p>Symbol S01399 “ Conductor support insulator without gas boundary” should be split in two different symbols, one to indicate that this is a pure inside module and one to show that there are external parts too. Therefore we suggest:</p> <p>Symbol S01399 to be changed:</p> <p>New Symbol S0xxxxx</p>	<p>S01399: Support insulator; inside module</p>  <p>S0xxxx: Support insulator; extern module</p> 	<p>Compare JP-06.</p> <p>The question whether or not features of this kind are to be included in electrotechnical diagrams will be included as an item in the report to the plenary meeting in Prague, and can therefore be discussed at that meeting.</p> <p>If found appropriate, this proposal together with the comments JP-06, DE-02 and JP-11, will be dealt with as a separate change request, when the present one has been processed. (Then the proposed symbols will belong to an existing “family” and can be processed with the normal database procedure.)</p>

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JP-06	S01399 (Group of S01393 and S01399)	"Conductor support insulator without gas boundary"	Technical	<p>"No" (modification).</p> <p>This purpose may show locations of gas isolations (fabrication use) in physical construction aspect (unnecessary on diagram).</p> <p>If we show this item(s) in the diagram, we cannot control numbers and locations in the diagram in engineering stage.</p>	<p>--Name: We recommend "Post spacer" in replace of "Conductor support insulator without gas boundary".</p> <p>-- Symbol: To delete this symbol or add clarification.</p>	Comment partly accepted. Symbol S01399 will not be included in the FDIS.
DE-02	S01400		Technical	The graphic of symbol S01400 "Straight flange" should be changed to match our suggestion in the comment to 3A/390/NP in 1995.		<p>The referenced symbol (in 3A/408/RVN) shows a straight line across the conductor.</p> <p>Compare JP-11.</p> <p>The question whether or not features of this kind are to be included in electrotechnical diagrams will be included as an item in the report to the plenary meeting in Prague, and can therefore be discussed at that meeting.</p> <p>If found appropriate, this proposal together with the comments JP-06, DE-01 and JP-11, will be dealt with as a separate change request, when the present one has been processed. (Then the proposed symbols will belong to an existing "family" and can be processed with the normal database procedure.)</p>
JP-11	S01400 (solely)		Technical	<p>"No"</p> <p>This symbol's purpose may be to show locations of flanges in (fabrication use) physical construction aspect (unnecessary on the diagram).</p>	To delete this symbol.	Comment partly accepted. Symbol S01400 will not be included in the FDIS. Compare DE-02.

