



☒ **CTL Provisional DECISION SHEET (PDSH)**
☐ **CTL DECISION SHEET (DSH)**

| Standard(s) (incl. year) | Subclause(s) | Tracking No. |
|---|---------------------------|---------------------|
| IEC 60335-2-40:2022 | Clause 22.116 | 2269 |
| Category | | |
| HOUS | | |
| Subject | Keywords | Developed by |
| Arcs and sparks from electric components. | Potential ignition source | ETF 1 |
| Question | | |
| <p>In IEC 60335-2-40:2018 (6th edition), Clause 3.145 included a definition accompanied by Note 1, which provides examples of components that may become potential ignition sources.</p> <p>One such example is brushed motors.</p> <p><i>(3.145 potential ignition source PIS</i> <i>hot surfaces, flames and current carrying devices which can be the source of arcing or sparking</i> <i>Note 1 to entry: Examples of potential ignition sources are UV lights, electric heaters, pilot flames, brushed motors and similar devices.)</i></p> <p>Following this definition, brushless motors were generally not considered potential ignition sources. However, it has been noted that the definition of "potential ignition source" was removed in IEC 60335-2-40:2022 (7th edition).</p> <p>Question: How shall a brushless motor be considered regarding clause 22.116 in the IEC 60335-2-40:2022 (7th edition).</p> <ul style="list-style-type: none"> • Can a brushless motor still be regarded as not being a potential ignition source, or • Can it only be considered as complying with 22.116 if any of the applicable options a) to f) in 22.116.1 is fulfilled? <div style="display: flex; justify-content: space-around;">   </div> | | |
| Decision | | |
| <p>The absence of brushes for electrical commutation only excludes one potential source of ignition in an electric motor. The exclusion of a brushless motor as a potential ignition source shall be based on an evaluation of the construction under consideration in compliance with Clause 22.116 per IEC 60335-2-40:2022 in any of the applicable options a) to f) from Clause 22.116.1 has to be fulfilled.</p> | | |
| Explanatory notes | | |

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| <u>Enquiry:</u> | |
| Date: | 2024 |
| <u>PDSH:</u> | |
| Year of publication: | 2025 |
| To be approved at CTL plenary: | 2026 |
| <u>DSH</u> | |
| Publication date: | |
| Note that the question concerns only to the classification of a brushless motor itself and not to any possible integrated electronic circuit. | |