

IEC 63171-1 Connector Standard progresses to FDIS

IEEE 802.3cg Task Force

August 2019 interim

Related to MDI Connector Clauses 146.8.1 and 147.9.1 ballot comments

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Voting Result on 48B/2721/CDV

Circulation Date: 2019-03-15

Closing Date: 2019-06-07

IEC 63171-1 ED1: CONNECTORS FOR ELECTRICAL AND ELECTRONIC COMPONENTS – PRODUCT REQUIREMENTS – Part 1: Detail specification for 2-way, shielded or unshielded, free and fixed connectors: mechanical mating information, pin assignment and additional requirements for TYPE 1 / Copper LC Style

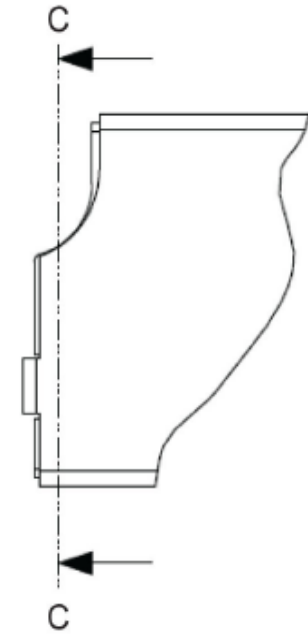
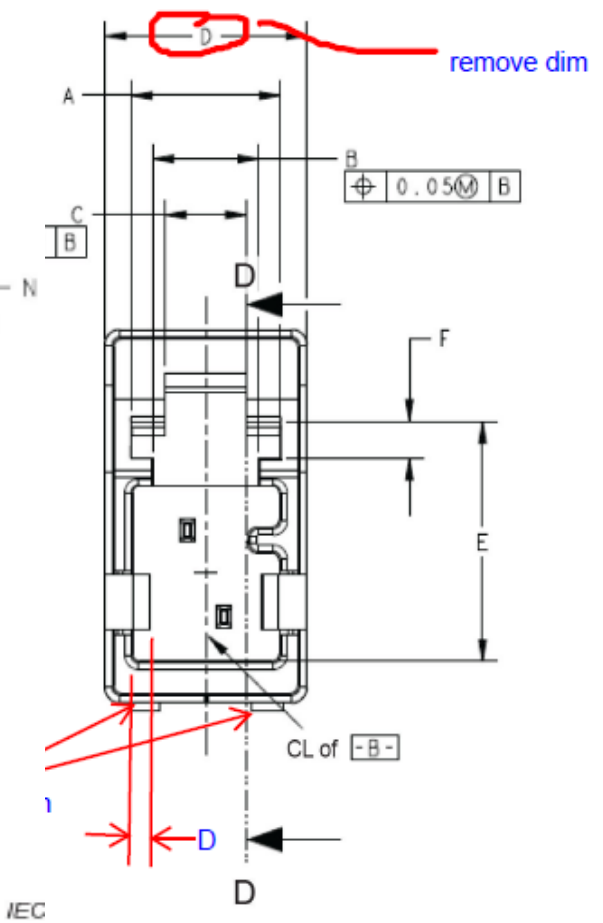
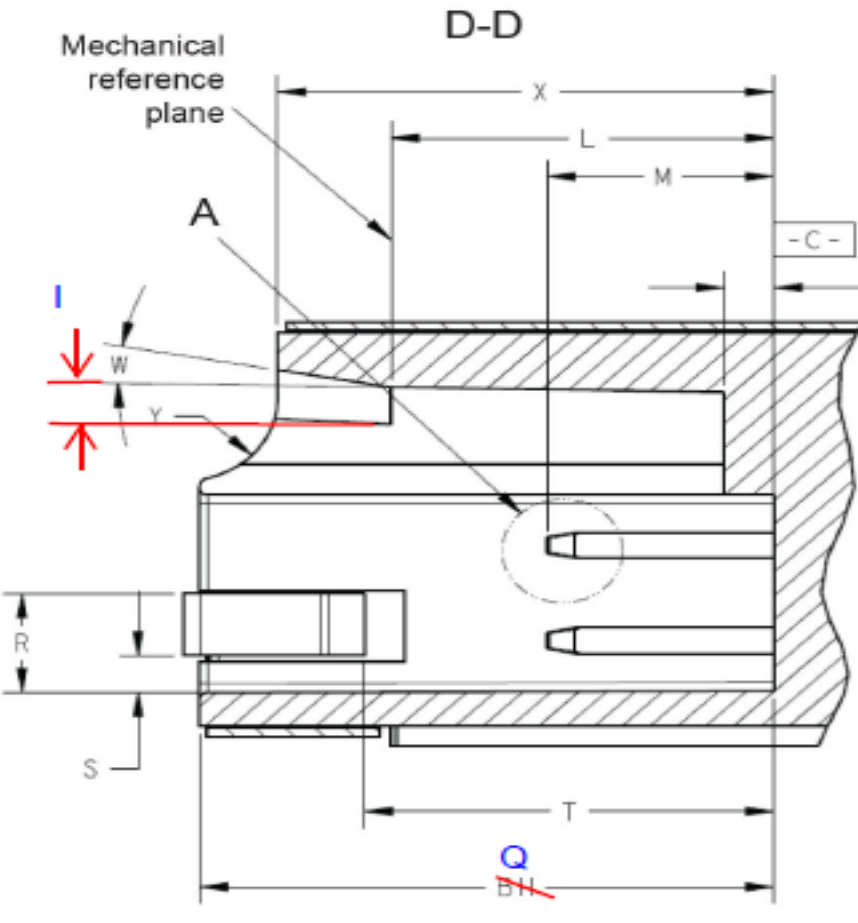
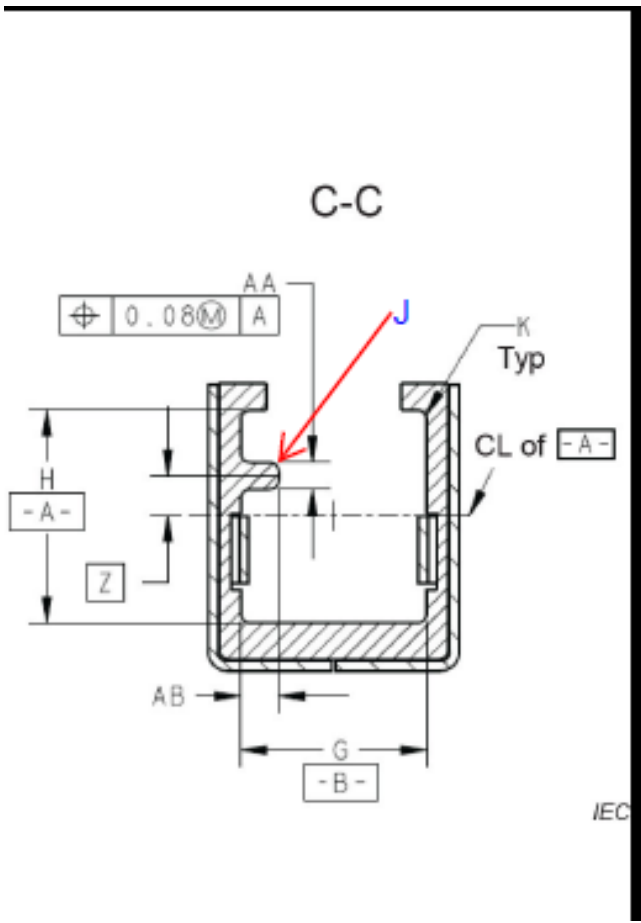
| Country | Status | Vote | Comments | Received |
|--------------------------|--------|------|----------|------------|
| Austria | P | Y | - | 2019-05-02 |
| Belgium | P | Y | - | 2019-06-07 |
| Brazil | O | Y | - | 2019-06-07 |
| Bulgaria | O | - | | |
| China | P | Y | - | 2019-05-27 |
| Czech Republic | P | Y | - | 2019-06-06 |
| Denmark | P | N | Y | 2019-06-04 |
| Finland | P | A | - | 2019-06-06 |
| France | P | Y | - | 2019-03-28 |
| Germany | P | Y | Y | 2019-05-28 |
| Greece | - | - | - | 2019-06-06 |
| Hungary | O | - | | |
| India | O | - | | |
| Ireland | P | A | - | 2019-06-07 |
| Israel | O | - | | |
| Italy | P | N | Y | 2019-06-04 |
| Japan | P | Y | Y | 2019-05-29 |
| Netherlands | P | Y | - | 2019-06-03 |
| Norway | O | - | | |
| Pakistan | P | - | | |
| Poland | O | Y | - | 2019-06-03 |
| Portugal | - | - | - | 2019-06-07 |
| Romania | O | Y | - | 2019-06-07 |
| Russian Federation | P | Y | - | 2019-06-07 |
| Serbia | O | - | | |
| Spain | P | - | | |
| Sweden | O | - | | |
| Switzerland | P | N | Y | 2019-04-12 |
| Ukraine | O | - | | |
| United Kingdom | P | Y | - | 2019-05-14 |
| United States of America | P | Y | Y | 2019-05-16 |

| | | Approval Criteria | Result |
|---------------------------------|--------------------------|-------------------|----------|
| P-Members voting: 14 | | | |
| P-Members in favour: 11 = 78.6% | | >=66.7% | APPROVED |
| Total votes cast: 17 | Total against: 3 = 17.6% | <=25% | APPROVED |
| Final Decision: | | | APPROVED |

Significant Changes to draft since March CDV (possible impact to IEEE 802.3cg in parenthesis (YES/NO))

- Unnecessary legacy dimensions eliminated to allow design innovation and some dimensions adjusted for completion/consistency/accuracy (NO)
- Current capacity increased from 1.4 A per contact to 2.0 A per contact at 60 C (YES)
- Align temperature de-rating of current capacity accordingly, anchoring at 3.5 A at 0 degrees C (YES)
- Unshielded connector transmission specifications removed since the focus and mechanical specifications are for shielded connectors supporting both STP and UTP cables (??)
- PSANEXT and PSAFEXT relaxed to $100 - 20 \log(f)$ from 0.1 to 600 MHz to allow realistic configurations (5 x 1) and meaningful measurements above the noise floor (NO)
- Text added to allow large conductor diameters (e.g. 18 AWG) “Wiring of these connectors shall take into account the wire and cable diameter of the cables defined in the IEC 61156 series as applicable by manufacturer’s specification.” (YES)

Examples of dimension changes



Summary and next steps

- IEC 63171-1 CDV ballot passed (78.6 % approving votes vs. the criteria of 66.7%) and will be circulated as an FDIS (Final Draft International Standard)
- Changes on slide 3 relevant to IEEE 802.3cg have been incorporated into the draft IEC 63171-1 FDIS (2 A current capacity, large conductor diameter cable termination)
- The FDIS draft has been submitted and will be circulated after the next IEC SC48B meeting the week of September 3, 2019 in Arlington, VA
- IEEE 802.3cg considerations are well understood and accommodated by IEC SC48B so using the IEC 63171-1 connector will allow compatibility testing, improve interoperability in many use cases, leading to better market adoption and growth for IEEE 10BASE-T1L and 10BASE-T1S