

## Design verification as per IEC/EN 61439

|                                                                                                                        |                |    |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------|----------------|----|----------------------------------------------------------------------------------------------------------------------------------|
| Technical data for design verification                                                                                 |                |    |                                                                                                                                  |
| Heat dissipation, at an ambient temperature of 35°C, delta T: 20 degrees, calculated as per IEC 60890                  |                |    |                                                                                                                                  |
| Individual enclosure for wall mounting                                                                                 | P <sub>V</sub> | CO | 66                                                                                                                               |
| Starting enclosure for wall mounting                                                                                   | P <sub>V</sub> | CO | 63                                                                                                                               |
| Middle enclosure for wall mounting                                                                                     | P <sub>V</sub> | CO | 61                                                                                                                               |
| Heat dissipation, at an ambient temperature of 35°C, delta T: 35 degrees, calculated as per IEC 60890                  |                |    |                                                                                                                                  |
| Individual enclosure for wall mounting                                                                                 | P <sub>V</sub> | CO | 133                                                                                                                              |
| Starting enclosure for wall mounting                                                                                   | P <sub>V</sub> | CO | 127                                                                                                                              |
| Middle enclosure for wall mounting                                                                                     | P <sub>V</sub> | CO | 122                                                                                                                              |
| IEC/EN 61439 design verification                                                                                       |                |    |                                                                                                                                  |
| 10.2 Strength of materials and parts                                                                                   |                |    |                                                                                                                                  |
| 10.2.2 Corrosion resistance                                                                                            |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Meets the product standard's requirements.                                                                                       |
| 10.2.3.1 Verification of thermal stability of enclosures                                                               |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Meets the product standard's requirements.                                                                                       |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat                                             |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Meets the product standard's requirements.                                                                                       |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Meets the product standard's requirements.                                                                                       |
| 10.2.4 Resistance to ultra-violet (UV) radiation                                                                       |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Not relevant to indoor installations.                                                                                            |
| 10.2.5 Lifting                                                                                                         |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Does not apply to enclosures without lifting aids.                                                                               |
| 10.2.6 Mechanical impact                                                                                               |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | IK08                                                                                                                             |
| 10.2.7 Inscriptions                                                                                                    |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Meets the product standard's requirements.                                                                                       |
| 10.3 Degree of protection of ASSEMBLIES                                                                                |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | IP30                                                                                                                             |
| 10.4 Clearances and creepage distances                                                                                 |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Is the panel builder's responsibility.                                                                                           |
| 10.5 Protection against electric shock                                                                                 |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | < 0.1 Ω; meets the product standard's requirements.                                                                              |
| 10.6 Incorporation of switching devices and components                                                                 |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Is the panel builder's responsibility.                                                                                           |
| 10.7 Internal electrical circuits and connections                                                                      |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Is the panel builder's responsibility.                                                                                           |
| 10.8 Connections for external conductors                                                                               |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Is the panel builder's responsibility.                                                                                           |
| 10.9 Insulation properties                                                                                             |                |    |                                                                                                                                  |
| 10.9.2 Power-frequency electric strength                                                                               |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | U <sub>i</sub> = 400 V AC                                                                                                        |
| 10.9.3 Impulse withstand voltage                                                                                       |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | 2.5 kV                                                                                                                           |
| 10.9.4 Testing of enclosures made of insulating material                                                               |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Does not apply to metal enclosures.                                                                                              |
| 10.10 Temperature rise                                                                                                 |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating                                                                                             |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Is the panel builder's responsibility.                                                                                           |
| 10.12 Electromagnetic compatibility                                                                                    |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Is the panel builder's responsibility.                                                                                           |
| 10.13 Mechanical function                                                                                              |                |    |                                                                                                                                  |
|                                                                                                                        |                |    | Meets the product standard's requirements.                                                                                       |