

USask Master Specification Directions: The master specifications are intended to be incorporated into the Consultant's final, project specific specification package. The project specific specifications are expected to include any and all sections or portions of sections (Part 1, Part 2, Part 3) that are required to create a fully executable project specification. USask Master Specs only provide information that USask **requires** be a part of the final specification package. Components or sections not included in the Master USask Specifications may still be required for a complete, well-designed project. **It is the consultant's responsibility to ensure all specifications match USask requirements. Any deviations or revisions to any section included in the master specifications requires written consent from the USask Engineering department. The consultant is liable for any omissions, errors, or incorrect equipment or components supplied to site.**

The Master Specifications shall be used in conjunction with USask's Design Guidelines. Any conflicts shall be brought to the attention of USask Engineering staff for clarification.

Part 1 General

Part 2 Products

.1 Infrared Viewing Assembly

- .1 The viewing windows shall be supplied by the equipment manufacturer.
- .2 The assembly shall be easy to install in the 600 volt metal front panels
- .3 The window shall include a frame of non-conductive all metal construction. Plastic is not acceptable.
- .4 A twist off removable locking security cover incorporating a magnetic panel retaining mechanism shall security cover shall be included.
- .5 The assembly shall have a minimum continuous operating temperature capability of 438 degrees F and shall be arc flash tested equivalent of over 70 cal/cm²
- .6 All components shall be low smoke and fume compliant.
- .7 The assemblies shall be suitable for both indoor and outdoor use.

.2 Infrared Viewing Window

- .1 The windows shall provide proper viewing of internal bus and cable connections. The viewing diameter shall be a minimum of a 3 inch diameter.
- .2 The windows shall be made from fixed fluoride crystal (plastic is not acceptable) and shall provide universal thermal imaging for all types of infrared cameras.
- .3 The viewing ports shall be free from visual defects and porosity
- .4 The crystal shall have very low water solubility, shall be resistant to ultraviolet sensitivity, and shall provide long and reliable life
- .5 Crystal thickness shall be minimum 4mm
- .6 The windows shall sustain 1160 psi minimum pressure retention with cover installed, and 101 psi minimum pressure without the cover installed at electrical operating temperatures.

Part 3 Execution

.1 Installation

- .1 The viewing windows shall be installed:
 - .1 On the front and rear of the Utility cable entrance enclosure panel covers to permit inspection of the cable to bus connections (quantity of 2).
 - .2 On the Main Breaker enclosure front or side panel to permit inspection of the breaker bus associated with the line and load side stab connections (quantity of 2).
 - .3 On the Utility current/potential transformer cabinet front cover to permit inspection of the connections at the Utility metering transformers (quantity of 1).
 - .4 On the Owner's cable exit panel cover to permit inspection of the cable to bus connections (quantity of 1).
- .2 The viewing windows shall be installed by the manufacturer's service representative.

.2 Field Control

- .1 Verify operation of each infra-red inspection window after installation.

END OF SECTION