

HDCU - Hiltron De-ice Control Unit

GENERAL OVERVIEW

Hiltron offers antenna deice control solutions for small (1.8m) to large size antennas (13m) based on the HCS4 modular system controller in conjunction with the Hiltron Deice Control Unit (HDCU) module. We can control both electric surface heating elements and hot air blowers. Hiltron uses surface heating elements as standard on new designs or refurbishments of older systems. As the surface heating pads are fixed and sealed to the rear side of the reflector with adhesive tapes the reflector has to be dry and above at least 5°C during installation.

In addition to the main reflector heaters the deice control unit provides additional control circuits for Sub-Reflector and Feed Heaters as well as Rain Blowers.

Control signals for switching of the connected heaters and accessories are derived from one or more environmental sensors for rain, snow and temperature or from an external signal from a M&C system.

HCS4 BASED CONTROLLER

The antenna heating controller is a small form factor DIN rail mountable modular chassis housing up to eight cards. The HCS4.MINI chassis can be powered either by a single PSU or a dual redundant PSU depending on customer request. An integrated webserver allows monitoring and control of the HCS4.MINI controller and the connected heater circuits including current monitoring using a standard web-browser. SNMP allows remote M&C access.

The heating elements are connected to an external DIN rail mountable control module, the HCS4X-APS. It provides two independent switchable channels with current and voltage monitoring. A maximum current of 10A(AC) is permitted on one HCS4C-APS.

Communication with the HCS4.MINI is accomplished using a serial bus which permits daisy chaining up to eight modules. The interface card on the HCS4.MINI side is the HCS4.DCU card, which also interfaces the environmental sensors.

The HCS4 based solution offers the possibility to include the Hiltron Antenna Control Unit and the Antenna Heating Control into one device.



HDCU - Hiltron De-ice Control Unit

HDCU BASED CONTROLLER

The second solution offered by Hiltron is a dedicated device called HDCU which offers Antenna Heating Control only. The HDCU offers monitoring of the heating element current and voltage through current transformers. This permits the current monitoring of currents larger than the 10A of the HCS4 based solution. The HDCU controls a electric 24V contactor(s) to switch the heating element(s) and the current is measured on the contactor side of the installation.

The HDCU is a scalable antenna heating controller. The number of controlled and monitored circuits can be extended by connecting up to 10 external 3phase AC HDCU.PWR modules

The HDCU also offers a built-in webserver permitting monitoring and control through standard web browsers or using an M&C system with SNMP. Similar to the HCS4.MINI controller antenna heating is controlled with respect to environmental sensor and/or a remote global deice signal.

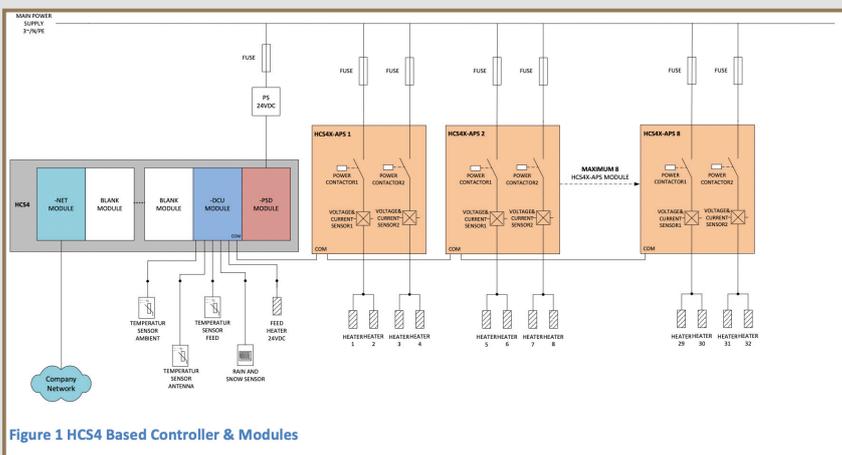


Figure 1 HCS4 Based Controller & Modules

REMOTE CONTROL PANEL

Depending on our customer's needs we offer remote control panels for both heating controller solutions.

These remote control panels are designed and manufactured to customer specifications and needs.

Similar to the HCS4.MINI controller antenna heating is controlled with respect to environmental sensor and/or a remote global deice signal.

