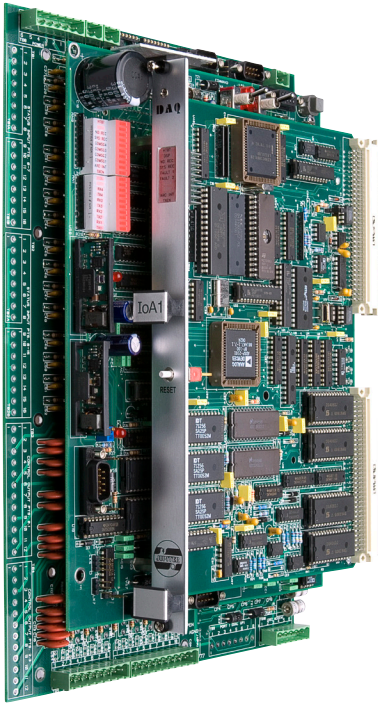


## CSC

## Callisto Switch Controller

## DIRECT INTERFACE WITH DISTRIBUTION LINE SWITCHES



*The Elara III remote forms the core of the DAQ switch control solution, providing advanced SCADA functionality and flexibility*

The DAQ Callisto™ Switch Controller (CSC) has been designed to interface with distribution line switches that operate using a stored energy operator. Currently compatible with S&C Electric automated Omni-Ruptor switches and G&W pole top RP switches, the CSC interfaces directly with the cabling supplied by the switch manufacturers.

At the heart of the CSC is the Callisto Elara III remote, which enables the unit to monitor and control all aspects of the switch, communicate with the SCADA front end or other switch controllers in a peer to peer arrangement, monitor all power system measurements from PTs, CTs, or any line post sensors, and perform customized logic functions via the PILOT software tool.

The CSC is equipped with a local control panel, providing both control and indication of the position of the switch, local/remote modes of operation, an auto/manual mode for enabling and disabling auto-sectionalizing schemes, and a hot line tag function.

## KEY FEATURES

- Application-specific configurations
- Stand-alone cabinets furnished for S&C and G&W style switches, with customized assemblies available
- Input/output capacity
  - 9 analog inputs (AC or DC)
  - 8 command relay outputs, configurable as 4 on/off pairs with select-before-operate protection
  - 16 status/alarm inputs
  - 4 communications ports
- User-configurable automation applications, including programmable logic, file archiving, and SOE recording
- Extensive protocol library for master station and IED communication
- AC powered with 8-hour battery back-up
- Battery test function provides indication of condition prior to failures

## MEASUREMENTS / COMMANDS

### Inputs

- 16 digital inputs, individually configured to monitor status, alarm, or Form A/C accumulator inputs
- Opto-isolation: >1.5kV input to input and input to ground
- Surge withstand: 5kV ANSI/IEEE C37.90.1989 SWC using termination module

### Outputs

- 8 command outputs, configurable as 4 on/off pairs with select-before-operate or 8 direct operate commands
- 2.2kV AC isolation: coil to contact and contact to contact (off-board relays): 1000V RMS contact to coil (on-board relays)
- Surge withstand: 5kV ANSI/IEEE C37.90.1989 SWC (off-board relays)

### Analog Calculations

- Average and RMS volts and amps
- Neutral current
- Single and three phase watts, VARS, VA, PF
- Positive, negative, and zero sequence voltages
- 0 through 15th harmonic and THD for voltage and current
- Single and three phase watt hours, VAR hours, and VA hours

## ADDITIONAL SPECIFICATIONS

### Power

- 24VDC, 48VDC, 120VDC
- 110VAC

### Isolation

- Electrical interference
  - Insulation/isolation: IEC 255-5
  - High frequency disturbance: IEC 255-22-1
  - Fast transient/burst: IEC 801-4
  - Electrostatic discharge: IEC 801-2

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## COMMUNICATIONS

### Serial Input/Output

- 4 independent serial communications ports, individually configurable as RS232 or RS485
- Up to 19.2 kbps, individually configurable per port
- Byte or bit-oriented, synchronous or asynchronous protocols
- On-board Bell 202 and CCITT V231200 baud modem for private circuit operation
- Support for external modems over leased line and/or PSTN circuits
- Fiber, radio, trunked radio, and packet radio media also supported
- Modem isolation: 2w/4w 500V transformer isolation with 300V gas tubes in primary

### Local Area Network

- DAQ Voyager protocol operating on Callisto standard ArcNET LAN at speeds up to 2.5 megabits per second

### Configuration

- Via CallistoView software package from any Callisto host node

## PROTOCOL SUPPORT

### Master Station and IED

- Conitel
- DNP 3.0
- Modicon MODBus
- PMS-91
- QUICS IV
- SES-92
- Landis & Gyr 8979

### Master Station

- CDC Type I and Type II
- Harris 5000/6000
- IEC 870-5 Profile 103
- PG&E 2179

### IED

- Cooper 2179
- Eaton Incom
- IEC 870-5 Profile 101 (Siemens)
- JEM 1
- PSE Quad 4 Meter
- Quantum Qdip
- Schweitzer Relay Protocol (221/251/351)
- SPABUS
- Transdata Mark V Meter

In addition to the protocols listed, DAQ can also accommodate special user requirements

### Environmental

- Operating range: -20 to +70°C
- Storage range: -20 to +70°C
- Relative humidity: 5 to 95% non-condensing
- Vibration: 5 to 65Hz

### Dimensions

- Standard 4-layer Double EuroCard PCBs
- 7 7/8" x 10 3/8" (200mm x 265mm)



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