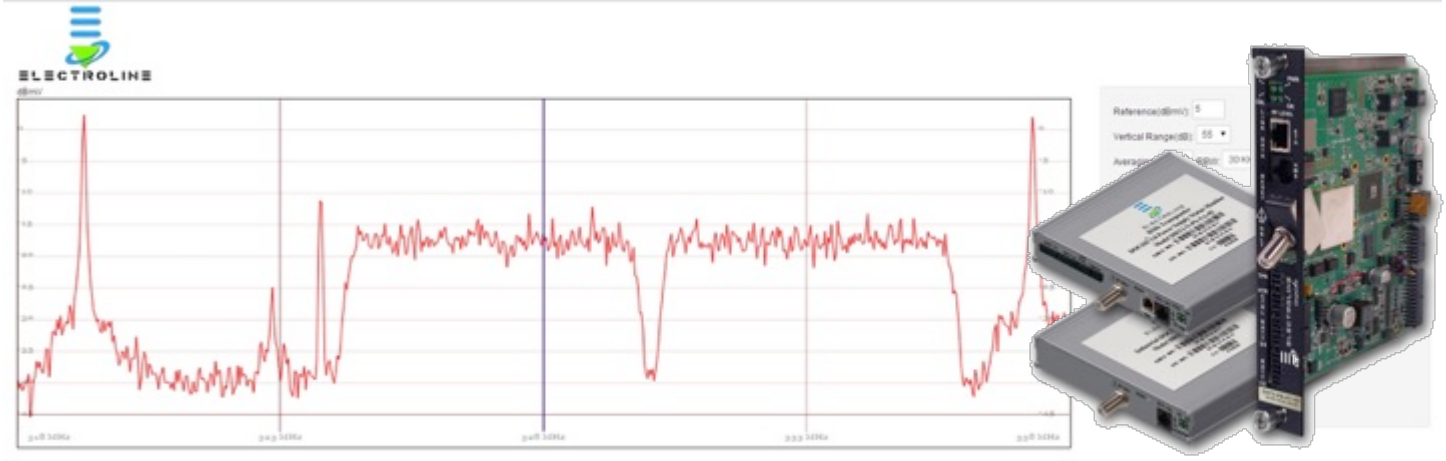
Transponder

DOCSIS 3.0 - HMS
Status Monitoring for HFC Power Supplies



Description

The DHT3 model series is the next generation of DOCSIS-HMS transponders and is the first DOCSIS 3.0 Transponder. Electroline takes advantage of the advanced of functionality built into the DOCSIS SoCs to provide added value no others can provide. A Spectrum Analyzer is built in to each transponder and therefore each power supply location becomes an "always on" test point for not only power supplies but also for the downstream broadband HFC network. For the price of a transponder you also get the Spectrum Analyzer. All models have an integrated web server that provide up to the minute display of all power supply metrics and states.

The Electroline Advantage

As pioneers in power supply status monitoring using HMS and DOCSIS® technology, Electroline knows the importance of what is inside its transponder and accessories. Electroline uses field-proven DOCSIS® and EuroDOCSIS integrated circuits and builds each unit with components rated for extreme temperatures, thus setting the industry standard for quality and performance. Forward-looking and innovative, Electroline is also leading the way in enhanced network monitoring that harnesses the power of DOCSIS®-based field units.

Features

- More than just a transponder –It's a Spectrum Analyzer
- DOCSIS 3.0 embedded modem
- Temperature Hardened
- Standby Power Metrics and Alarming
- Integrated Web server
- Embedded or External Applications
- For all popular brands of power supplies
- SCTE - HMS compliant

Technical Specifications

POWER SUPPLY MONITORING / CONTROL		note
Monitored Power supplies	Most major brands and models including Alpha, Myers, Multilink, Belden	3
Battery Monitoring	Up to 4 strings or either 3 or 4 batteries per string	
	Voltage of each battery	
	String Voltage	
	String Current	
	Temperature	
State Monitoring	Standby Status	
	Standby Event History	
	Tamper / cabinet door	
	Alarm State	
Power Supply Metrics	Output Voltage	
	Output Current	
	Output Power	
	Input Voltage	
Standby Control	Start / Stop Standby Test.	

EMBEDDED CABLE MODEM			note
	DOCSIS	EuroDOCSIS	
Temperature Hardened	-40 to +140 ºF		
Specification Compliance	DOCSIS 1.1, 2.0, 3.0	EuroDOCSIS 1.1, 2.0, 3.0	
Upstream Mode	QPSK, QAM, SCDAM	QPSK, QAM, SCDAM	
Max operating Level (1 channel)	QPSK: 58 dBmV 64 QAM: 54 dBmV 32 QAM: 54 dBmV	QPSK: 121 dBuV 64 QAM: 117 dBuV 32 QAM: 117 dBuV	
Receiver Range	-15 to + 15 dBmV	64 QAM 43 to +73 dBµV 256 QAM 47 to +77 dBµV	
Downstream Channel bandwidth	6 MHz.	8 MHz.	

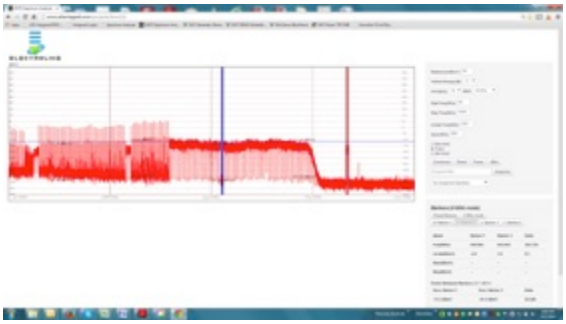
INTERFACE and I/O		note
ETHERNET	1Ghz, RJ45, Craft Mode or CPE mode, Provisional.	
Visual Modem State Indicators	4 LEDs	
Battery Connectors	Connects wiring harness to battery strings to derive power and monitor voltages.	
HMS standard extension port	RJ-45	
RF port	Female "F"	
Expansion Port	Use for added value and specialized applications	
Heater Control	Interface for Battery heaters	
Battery Tester	Charge manager and Conductance testing option available	
Generator Interface	Via HMS port. Monitors: On/off status, alarm state, gas hazard, battery voltage, fuel state, remote test control,	
WEB-UI	Power supply metrics, Cable modem metrics, network metrics, standby event log, trouble shooting event logs, generator metrics	

PROTOCOLS / STANDARDS /COMPLIANCE		note
DOCSIS	IP / TCP / UDP / ARP / ICMP / DHCP / TP / TFTP / SNMP / HTTP	
Firmware Remote Upgrade	Single image same a DOCSIS Modem	
SNMP	SNMPv1, SNMPv2c, SNMP v3	
MIBS	Electroline Added Value, Private, ANSI/ SCTE-38-4, DOCSIS 3.0	
Power Supply interface	ANSI/SCTE 25-3 2005	
Regulatory	FCC part 15 Class A; EN-50083-2-2006 EMP (where applicable); EN-62040-2-2006 category C2; IEEE 587 B3; RHOS directive2002/95/EC	

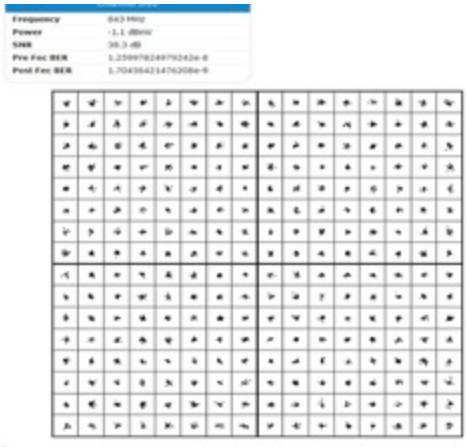
ENVIRONMENTAL		note
Operating Temperature	-40 to +140ºF; -40 to +60ºC	
Humidity	10 to 90% non-condensing	

Notes:

1) Specification Subject to change without notice; 2) Contact you Electroline Sales representative for ordering information specific to your make and model of power supply 3) Some features are power supply dependant



WEB-UI Spectrum Analyzer



WEB-UI QAM Channel Constellation

For more information on our products, please visit: www.electroline.com or call: 800-461-3344