Distributed Temperature Sensing Technical Datasheet

Astra[™] DTS System

The Astra[™] DTS system family are single-laser multi-mode interrogators that provide unrivalled performance for a variety of ranges up to 15 km, available as both rackmount and portable instruments. With integral processor and solid state hard drive, the wide selection of data and alarm protocols provide for easy integration with third party systems.



Astra ™ DTS system rackmount model

Astra™ DTS System Specifications					
	AST-05			A OT 45	
	XE	Standard	AS1-10	A51-15	
Performance					
Maximum Nominal Range	5 km	5 km	10 km	15 km	
Spatial Resolution	1 m	1 m	1 m	2 m	
Sampling Resolution	0.5 m	0.5 m	0.5 m	0.5 m	
Accuracy	±1°C *	±1°C	±1°C	±2°C	
Temperature Resolution	See Performance Curves				
Measurement Speed	Down to 10 seconds (see Performance Curves)				
Hardware					
Operating Temperature	-20 to +60°C	0 to +40°C	0 to +40°C	0 to +40°C	
Storage Temperature	-20 to +60°C	-20 to +60°C	0 to +40°C	0 to +40°C	
Data Storage	120 Gb solid state hard drive				
Fiber Compatibility	50 µm graded index multimode fiber				
Optical Channels	1, 2, 4, 8, 12, or 16 with E2000/APC connectors				
Laser Safety	Class 1M to IEC60825-1:2007				
Certification	IEC 60825-1, IEC 61010-1, CE marked				
Packaging	Rackmount or Portable 19-in. (w) x 17-in. (d) x 2U (h)				
Power (AC or DC options)	Extra 3W Rackmount: 110-240 VAC: 40 W Peak, 37 W Typical / 18-36 VDC: 50 W Peak, 43 W Typical Portable: 110-240 VAC: 64 W Peak, 61 W Typical / 18-36 VDC: 71 W Peak, 64 W Typical				
Weights & Dimensions	Rackmount: 8 kg 48 (w) x 44 (d) x 9 cm (h) Portable: 19 kg 56 (w) x 52 (d) x 16 cm (h)				
Software & Communications					
Software	Embedded OS (WES 7), DTS Commander™, AssetViewer™ or DTS FiberView™				
Communication Ports	Ethernet x 2 , USB x 2, DB9 x 1, VGA x 1				
Data Protocols	Standard: Modbus (TCP/IP), Modbus (RS232), DNP3 (TCP/IP), DNP3 (RS232) Optional: OPC (TCP/IP)				
Data Zones & Alarms	Multiple zoning with individual alarms per zone				
Relays (optional)	16 integral SPDT relays				
Remote Access	Full operator remote control and data access capabilities				
Diagnostics	Real-time diagnostics for remote support, system health alarms				

*AST-XE-05 model accuracy outside of operating temperature range 0 to +40°C is $\pm 2^{\circ}\text{C}$



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NOTE: Representative temperature resolution data taken on GI MM fiber with measured
optical attenuation of 2.30dB/km @ 850nm and 0.50dB/km @1300nm.

naming convention AST-(XE DE)-AA-BB-C-DD-EE Example: AST-DE-10-08-R-16-AC (XE) Extreme Operating Temp AST-05 model only AST-05 model only (DE) **Double-Ended option** AST-10 & AST-15 are DE as standard 05 = 5 kmMaximum Nominal AA 10 = 10 km Range 15 = 15 kmBB Number of Channels 01, 02, 04, 08, 12 or 16 R = Rackmount C Packaging P = Portable 00 = No relays DD Integral SPST relays 16 = 16 relays EE Voltage AC or DC

Astra[™] DTS system model

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Specifications are subject to change without notice.

For more information on Astra[™] DTS Systems, contact your local Halliburton representative or email pinnacle@halliburton.com.

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