

The NetMeter empowers untrained personnel to certify, diagnose and troubleshoot DeviceNet quickly and easily, without risk. Completely passive on the network, the DeviceNet Meter analyzes the signal and power lines on your DeviceNet network. In seconds, both network-wide and device-specific traffic, signal voltage and power quality information is captured and displayed on a familiar user interface.

The NetMeter features two modes of operation:

AutoSearch Mode: For the DeviceNet novice, and for rapid fault detection, AutoSearch locates any problems for you. Simply connecting the NetMeter to a live network and moving the selector to the AutoSearch position rapidly analyzes all pertinent network voltages, traffic, errors, and more. What's more, AutoSearch tells you if anything is wrong with intuitive icons:

- ☺ No faults found
- ☹ One or more measurements is close to limits (warning)
- ☹ One or more measurements exceeds limits (fault)



If all nodes are active and NetMeter finds no problems – you can be confident that your network will continue to operate problem-free.

Expert Mode: For the more experienced DeviceNet user, the DeviceNet Meter allows you to examine 677 key DeviceNet measurements and assist your troubleshooting efforts. Advanced features include:

	Present Value	Maximum	Minimum	Per Node
Error Rate (per second)	✓	✓	✓	✓
Error Counter (cumulative)	✓			✓
% Bandwidth Used	✓	✓	✓	✓
Message Rate (per second)	✓	✓	✓	✓
Bus Power Voltage, DC	✓	✓	✓	
Bus Power Voltage, AC	✓	✓	✓	
Shield Voltage	✓	✓	✓	
Common Mode Voltage		✓		
CANH/L differential	✓	✓	✓	
CANH voltage	✓	✓	✓	
CANL voltage	✓	✓	✓	

Applications

- Certifying new DeviceNet installations
- Speed DeviceNet maintenance and repair time
- Preventing network downtime by predicting faults caused by marginal operating characteristics

Specifications

Power supply.....	Network 7 – 30Vdc, <60mA
.....	Battery 2XAA Alkaline
.....	~6 hrs battery life when operating exclusively from battery power (zero network load)
.....	Over 1 year battery backup of “locked” measurements
Environment	0 – 40°C
Connectors	DeviceNet Standard “Sealed Micro” male connector on the Meter
.....	DeviceNet Standard “Sealed Micro” (female micro to male micro) extension cable included
.....	DeviceNet Standard “Sealed Mini” (female micro to male mini) adapter cable included
Physical layer interface	ISO 11898 compliant, passive receive only
Baud Rates Supported.....	125K, 250K, 500K (continuous auto-detect)
Analog Digital Converter Characteristics	4 synchronous, 10-bit, 1 megasample per second A-D converters
Analog Resolution	Bus Power & Shield voltage 0.1V
.....	Bus Signal 0.02V
Analog Accuracy	Bus Power & Shield voltage $\pm 0.5\% \pm 1$ count
.....	Bus Signal $\pm 0.5\% \pm 20\text{mV} \pm 2$ counts
Analog Range.....	Bus Power 0 to 26V with reverse polarity and over range indication
.....	Shield voltage –13V to +1V with over/under range indication
.....	Bus Signal –5.32 to 9.98V with over/under range indication
Analog to Digital Converter Sample Rate	Bus Power & Shield Voltage - 1K samples/second
.....	Ideal CAN signal sample point $\pm 250\text{nS}$, sampled in each network frame
Signal Error Thresholds	Per ISO11898 specification for CAN bus signals (adjusted for $\pm 5\text{V}$ common mode)
.....	Per DeviceNet Specification for network power
Bus Load Measurement*	Detects bus idle condition in real-time
Bus Message Rate Measurement*	Detects 100% of individual CAN frames in real-time
Error Rate Measurement*	Detects 100% of individual error frames in real time

* Proprietary circuitry processes the CAN bit-stream in real-time detecting error frames and bus idle conditions with extremely high accuracy

Ordering Information

DN-MTR	NetMeter for DeviceNet
DND22A-M010	“Sealed Micro” extension cable (included with DN-MTR)
DND21A-M010	“Sealed Mini” adapter cable (included with DN-MTR)
715-0016.....	NetMeter user Guide (Included with DN-MTR)
DN-MTR-BAG	NetMeter carrying case

Contact your local SST or Brad Harrison distributor or visit

www.DeviceNetAlert.com