

SMARTSENSORS™

MONITOR YOUR DATA CENTER WITH PLUG-AND-PLAY SENSORS

Engineered to furnish accurate data and insight into your operation, Legrand® SmartSensors' advanced features allow easy deployment, clear identification of hot spots, and airflow management. Available models monitor temperature, humidity, airflow, differential air pressure, water/leaks, dust/particles, contact closures, proximity detection, vibration, and more.

EASY COMPLIANCE WITH ENVIRONMENTAL STANDARDS

SmartSensors are a valuable tool to accurately report critical environmental conditions affecting IT equipment and help you follow ASHRAE guidelines. They facilitate the collection of crucial environment data and provide a more efficient management experience by routing collected data through the Xerus™ Technology Platform embedded in select Legrand rack power management devices.

**IMPROVE UPTIME
EASILY OBTAIN CRITICAL DATA
SIMPLE DEPLOYMENT**

BENEFITS

- Accurately monitor temperature, humidity, airflow, differential air pressure, water leaks, dust/particles, vibrations, and more
- Improve uptime and remediate critical risks by receiving real-time alerts of potential threats in your environment before they cause an issue
- Plug-and-play connection to a Xerus enabled power management device
- Save on cooling by confidently raising data center temperatures
- Check airflow and air pressure to and from racks to prevent hot spots and bypass recirculation
- Make smarter rack management decisions based on factual environmental insights
- Improve field response time to alerts with status LEDs
- Seamless integration to DCIM or other monitoring tools

POPULAR DATA CENTER SENSORS

TEMPERATURE AND HUMIDITY

String together three sensor packages to easily mount at the bottom, middle, and top of the cool air inlet side as per ASHRAE² guidelines.

VIBRATION

Detect shock and vibrations over a range of frequencies.

WATER/LEAK

Detect the presence of water and identify the specific location of a leak.

TEMPERATURE

Place this sensor at the front or rear of the rack to monitor cool air entering and/or hot air being expelled to ensure proper containment.¹

PROXIMITY/MOTION

Detect motion around a cabinet or a specific location.

AIRFLOW

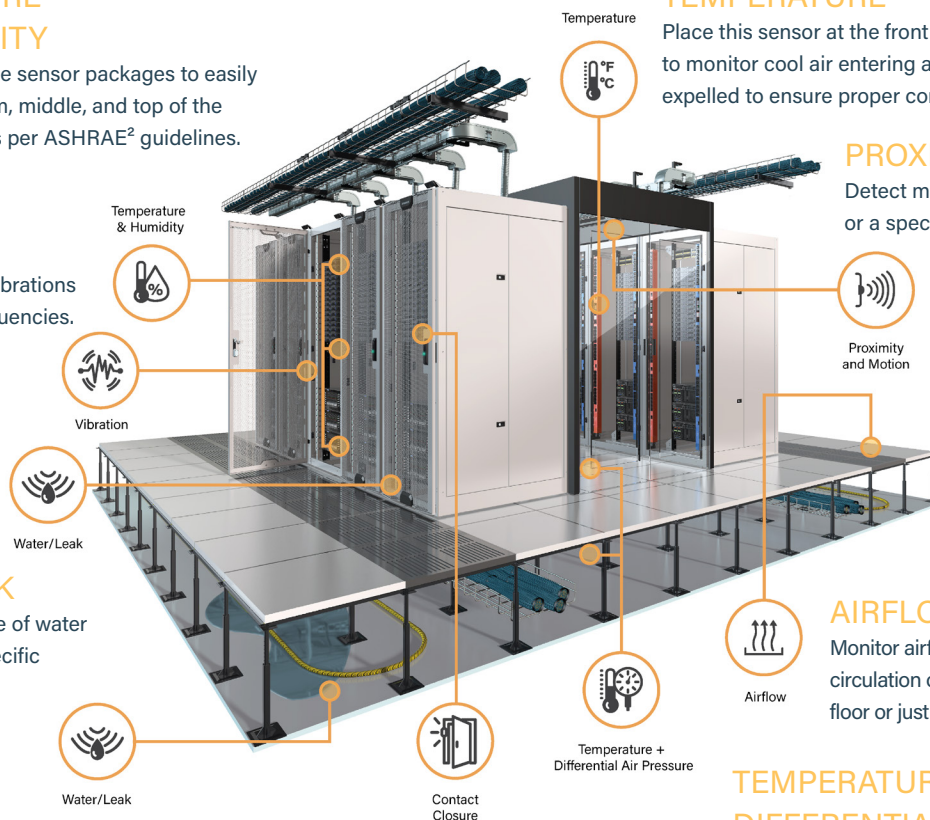
Monitor airflow in areas involved in the circulation of airflow such as under a raised floor or just above the perforated tiles.

TEMPERATURE AND DIFFERENTIAL AIR PRESSURE

Monitor differential air pressure above and below a raised floor, or between hot and cold aisles to prevent thermal leaks.

CONTACT CLOSURE

Detect the open-and-close and on/off status of connected third-party door position, door lock, and vibration detectors and switches.

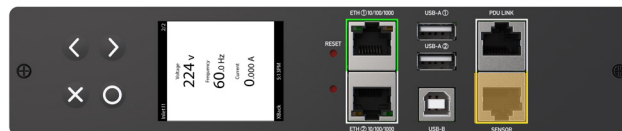


1 Additional temperature and humidity sensor options are available. | 2 ASHRAE suggests measuring the temperature entering IT equipment near the bottom, middle, and top of each IT rack and in at least one position at the back of the cabinet.

PLUG-AND-PLAY COMPATIBILITY

SmartSensors are designed for easy deployment with plug-and-play compatibility to an RJ45 Sensor port on the Controller of an intelligent Xerus-enabled rack power managing device, including:

- Server Technology® PRO3X & PRO4X Rack PDUs
- Raritan® PX3 & PX4 Rack PDUs
- Raritan SRC Smart Rack Controllers
- Raritan PX3 Inline Meters
- Raritan PX3TS Hybrid Rack Transfer Switches
- Raritan BCM2 Branch Circuit Monitors
- Raritan PXO Compact PDUs



RJ45 Sensor Port on a Controller of a Xerus-enabled Managing Device
(Controller designs vary by brand, model, and version)

INNOVATIVE FEATURES

SmartSensors meet the needs of data centers, labs, facilities, network/compute closets, or remote locations like colocation, point of presence (POP), edge, and telecommunication sites.



LED INDICATOR

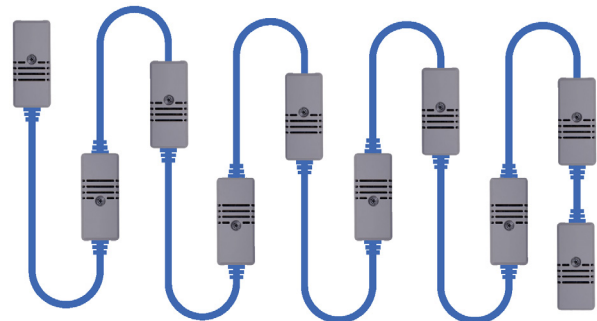
An LED light visually indicates when thresholds are exceeded, improving field response time when addressing critical risks.

DUAL RJ45 CONNECTORS

Dual RJ45 connectors simplifies the installation and servicing of sensor packages without rewiring the rack or daisy chain, saving on time and maintenance costs.

SINGLE BUS/STRING TECHNOLOGY

Ensure comprehensive measurement and monitoring by cascading different types of SmartSensors in a single bus/string structure. Now cascade up to 32 sensor functions or up to 12 sensor packages* with standard Cat5/6 cables to instrument entire data center rows.



SmartSensor packages support a cabling length of up to 30m (98ft), except for the DX2-PD2C5 which is up to 4m (13ft).

*A SmartSensor package may have multiple functions, such as the DX2-T1H1 which has 2 functions: 1 temperature and 1 humidity function. Similarly, the DX2-T1DP1 has 1 temperature and 1 differential air pressure function.

HIGH-ACCURACY AND HIGH-RELIABILITY MONITORING

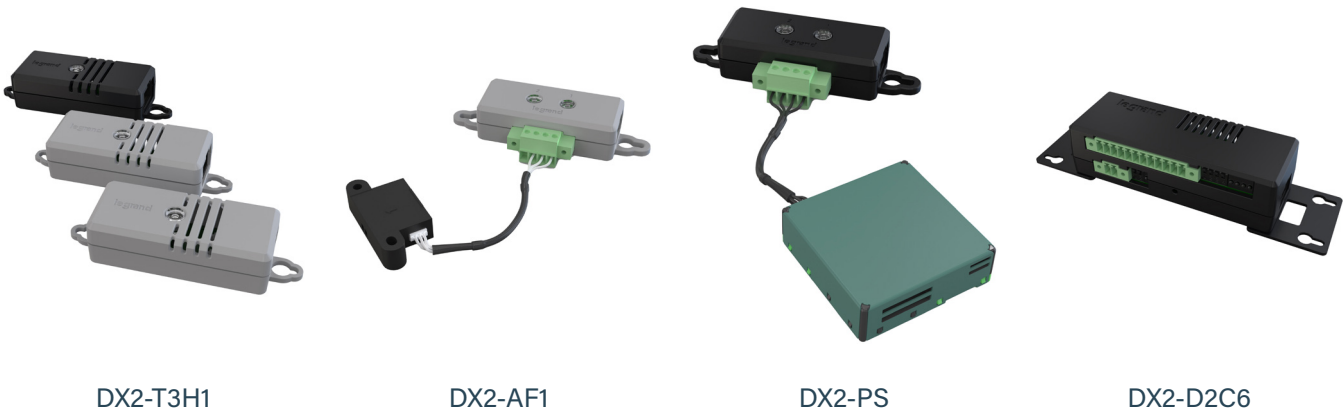
SmartSensors are designed with the latest, most advanced metering components to prolong their lifespan, improve reliability, and ensure it runs efficiently.

MANAGE SENSORS WITH DCIM

Environmental data collected by SmartSensors can be sent to DCIM or other monitoring software which allows you to confidently raise ambient temperatures and adjust the fan speed in computer room air handlers and conditioners to increase energy savings and get the most out of cooling systems. You can also compare the data collected from sensors to the environmental envelope of a psychrometric chart to ensure that adequate cooling and proper operating conditions are maintained.

Part Number	Type of Sensor	Description	Range	Accuracy
DX2-T1	Temperature	Single temperature sensor	0°C to 20°C 20°C to 70°C	± 2°C ± 1°C
DX2-T1H1	Temperature and Humidity	Single combination temperature and humidity sensor	0°C to 20°C 20°C to 70°C 0% RH to 100% RH	± 2°C* ± 1°C* ± 5% /RH**
DX2-T2H2	Temperature and Humidity	Dual sensor packages [(2) DX2-T1H1]		
DX2-T3H1	Temperature and Humidity	Three sensor packages [(1) DX2-T1H1 + (2) DX2-T1] (four sensors total in three sensor packages)		
DX2-AF1***	Airflow Management	Single airflow sensor	0 to 4 m/s	5% FS
DX2-T1DP1	Temperature and Differential Air Pressure	Single combination temperature and differential air pressure sensor	0°C to 20°C 20°C to 70°C -250 to 250 Pa	± 1°C ± 1.5% FS (at 20°C, 50% RH)
DX2-PS	Dust/Particle	Single dust/particle sensor + external sensor head, levels monitored are PM1.0, 2.5, 4.0, and 10	0-1000 µg/m ³	± 25 µg/m ³ at 0-100 µg/m ³ ± 25% at 100-1000 µg/m ³
DX2-CC2	Contact Closure	2 x contact closure sensors for connection and management of third-party sensors (smoke, sound, etc.)	N/R	N/R
DX2-D2	Dry Contact	2 x active dry contacts	N/R	N/R
DX2-D2C6	Dry Contact/Contact Closure	2 x dry contact + 5 x contact closure + 1 x magnetic contact	N/R	N/R
DX2-PD2***	Powered Dry Contact	2 x active dry contacts with switchable 12V output	N/R	N/R
DX2-PD2C5	Powered Dry Contact/Contact Closure	2 x powered dry contact with switchable 12V output + 5 x contact closure sensors	N/R	N/R
*when humidity is 20%–60% RH **when the temperature is at 25°C ***sensor type supported in Xerus 4.0.20 Firmware or later FS (Full Scale), g (Force), N/R (Not Rated), Pa (Pascals), RH (Relative Humidity), PM (Particulate Pollution), µg (microgram)				

Part Numbers are continued on the next page >



Part Number	Type of Sensor	Description	Range	Accuracy
DX2-WSF-35-KIT***	Water/Leak Floor	1 water sensor head + 3.5m floor water sensor	N/R	N/R
DX2-WSF-70-KIT***	Water/Leak Floor	1 water sensor head + 7.0m floor water sensor	N/R	N/R
DX2-WSF-100-KIT***	Water/Leak Floor	1 water sensor head + 10.0m floor water sensor	N/R	N/R
DX2-WSC-35-KIT***	Water/Leak Rope	1 water sensor head + 3.5m rope water sensor cable	0 to 3.5m	± 1m (at 27°C, 50% RH)
DX2-WSC-70-KIT***	Water/Leak Rope	1 water sensor head + 7.0m rope water sensor cable	0 to 7.0m	± 1m (at 27°C, 50% RH)
DX2-WSC-100-KIT***	Water/Leak Rope	1 water sensor head + 10.0m rope water sensor cable	0 to 10.0m	± 1m (at 27°C, 50% RH)
DX-VBR	Vibration	Single vibration sensor	0 to 13.85g	± 0.1g
DX2-PIR	Proximity/Motion and Tamper	1 x infrared motion detector + 1 x occupancy (proximity) sensor + 1 x tamper detector	0 to 5m	N/R
DX2-ENVHUB4	Sensor Hub	Four-port (1x4) hub to expand RJ45 sensor ports on applicable management devices	N/R	N/R
DX2-REMHUB4	Remote Hub	Four-port (1x4) hub to expand the length of RJ45 sensor ports on SRC-0800/SRC-0803 Raritan Smart Rack Controller models only. Also supports DX2-DH2C2 controller and up to 8 SmartLock™ handles.	N/R	N/R

*when humidity is 20%–60% RH **when the temperature is at 25°C ***sensor type supported in Xerus 4.0.20 Firmware or later
FS (Full Scale), g (Force), N/R (Not Rated), Pa (Pascals), RH (Relative Humidity), PM (Particulate Pollution), µg (microgram)



DX2-WSC-100-KIT



DX2-WSC-35-KIT



DX2-PIR



DX2-ENVHUB4

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