nVent SCHROFF Guardian Environmental Sensors

	Read user manual!
	The SCHROFF environmental sensors are intended to be installed and maintained by qualified and trained personnel in compliance with local and national electrical codes and safety regulations. Before initial operation, read user manual. You can find the manual at: https://go.nvent.com/en-guardian-management-gateway.html

	Caution!
	The SCHROFF environmental sensors can only be connected to sensor ports of devices based on the nVent SCHROFF Smart Gateway Platform (SGP) like the Guardian Management Gateway. Use only 1:1 patch cables min. CAT 6 to connect the sensor modules.

Sensor Overview

SCHROFF environmental sensors enable advanced monitoring of environmental conditions in data centers from rack level to facility level. The sensors are located in a 149.5 x 52.0 x 33.8 mm housing with 2 RJ45 connectors and a 6-pin connector at the side for digital I/O.

The 2 RJ45 sockets are routing the sensor signals, RX/TX signals from and to connected Modbus devices and 12 VDC supply for the sensor electronics.
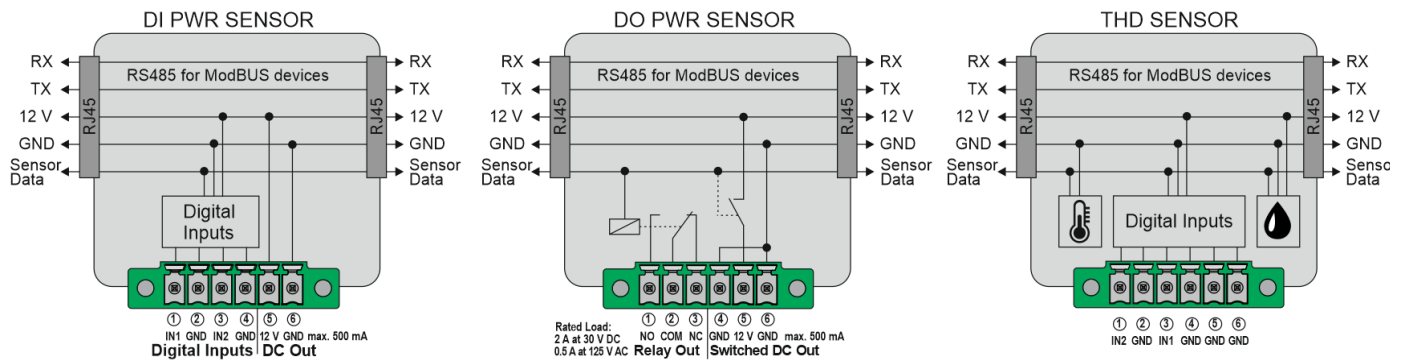
The 2 digital inputs can used for contact closure detection as example for door contacts or to connect 3rd party sensors (smoke).

The sensors are hot-pluggable, that means, they can be connected and disconnected at runtime, without restart or reboot.

Sensor (Example DO/Power Sensor)
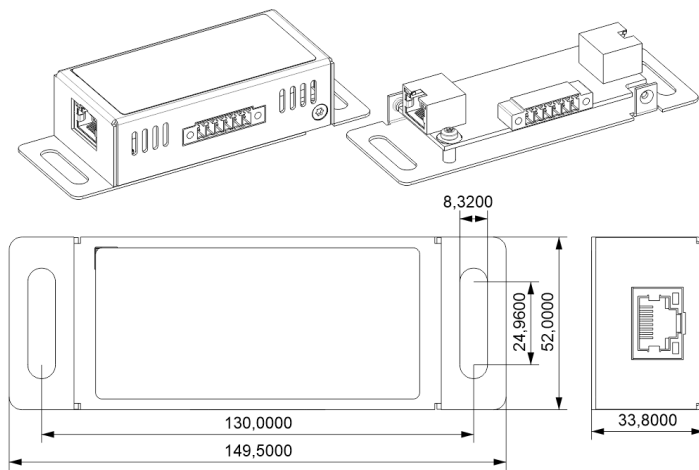

Sensor Block Diagrams

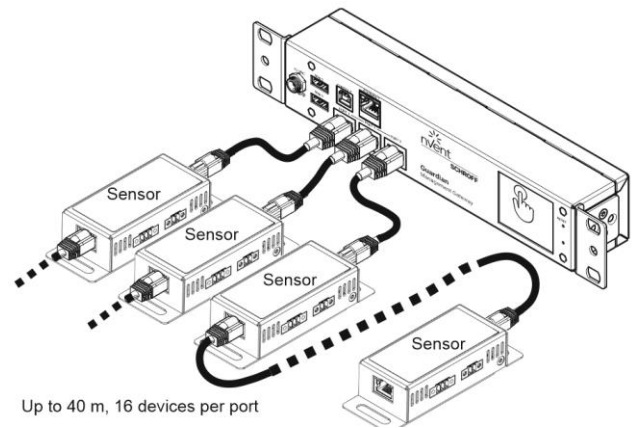Currently available are the following sensors :

- (THD)   Multi Sensor (Temperature/Humidity/2x Digital Input)
- (DI PWR)   Digital Sensor (2x Digital Input + 12 VDC Output)
- (DO PWR)   Digital Sensor (Relay Input + switched 12 VDC Output)

With 1:1 CAT 6 patch cables, up to 16 sensors can be linked together and connected to SCHROFF environmental monitoring devices.

Sensor Dimensions

Sensor Routing

Up to 40 m, 16 devices per port

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Sensor Type	Order No.	Measurement range	Accuracy
THD (Temperature, Humidity, 2x Digital Inputs)	21070-120	-40 °C to +80 °C 0 % RH to 100 % RH	±0.5 °C Accuracy from -10 °C to +80 °C ±2,5 % RH @23 °C (20 % to 60 % RH)
DO PWR (1x Relay Output, 12 VDC/0.5 A Output)	21070-124		
DI PWR (2x Digital Input, 12 VDC/0.5 A Output)	21070-125		

Technical data	
Height/Width/Depth	33.8 x 149.5 x 52.0 mm
Weight	approx. 100 g
Ambient Temperature Operation	5 °C to +70 °C
Ambient Temperature Storage	-40 °C to +80 °C
Humidity	5 - 90% RH, non condensing
Power	Power is provided by the SCHROFF Smart Gateway Platform