VT593 / Spot leak sensor

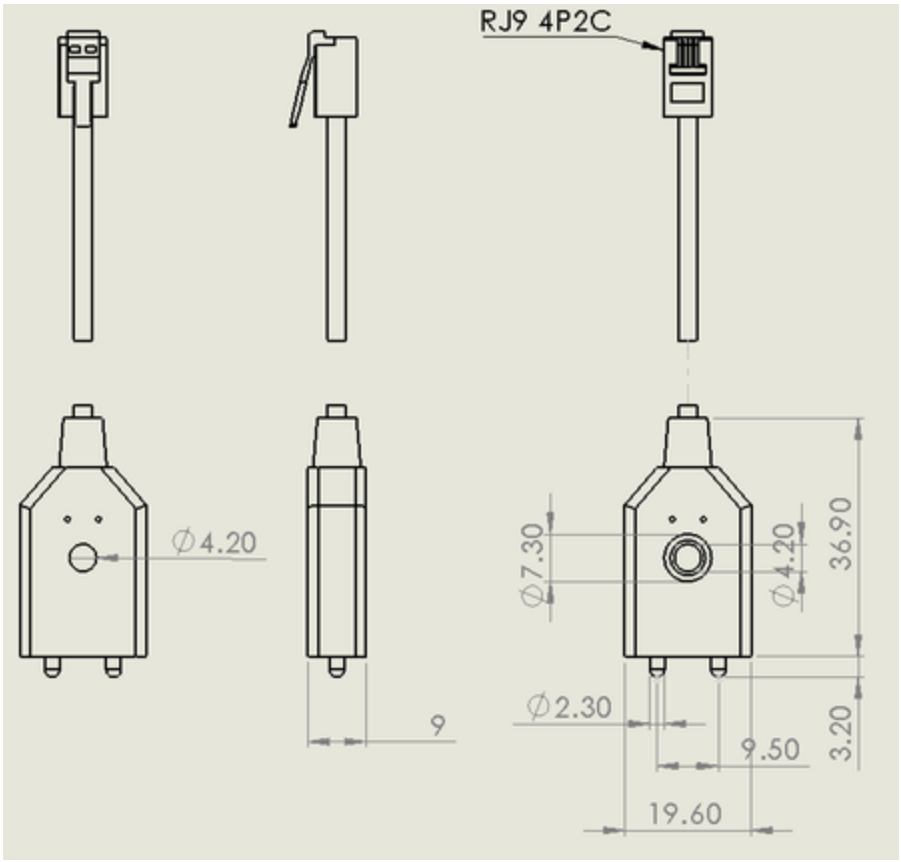
This page is under development. The information below may be incorrect or copied from another product for development purposes.

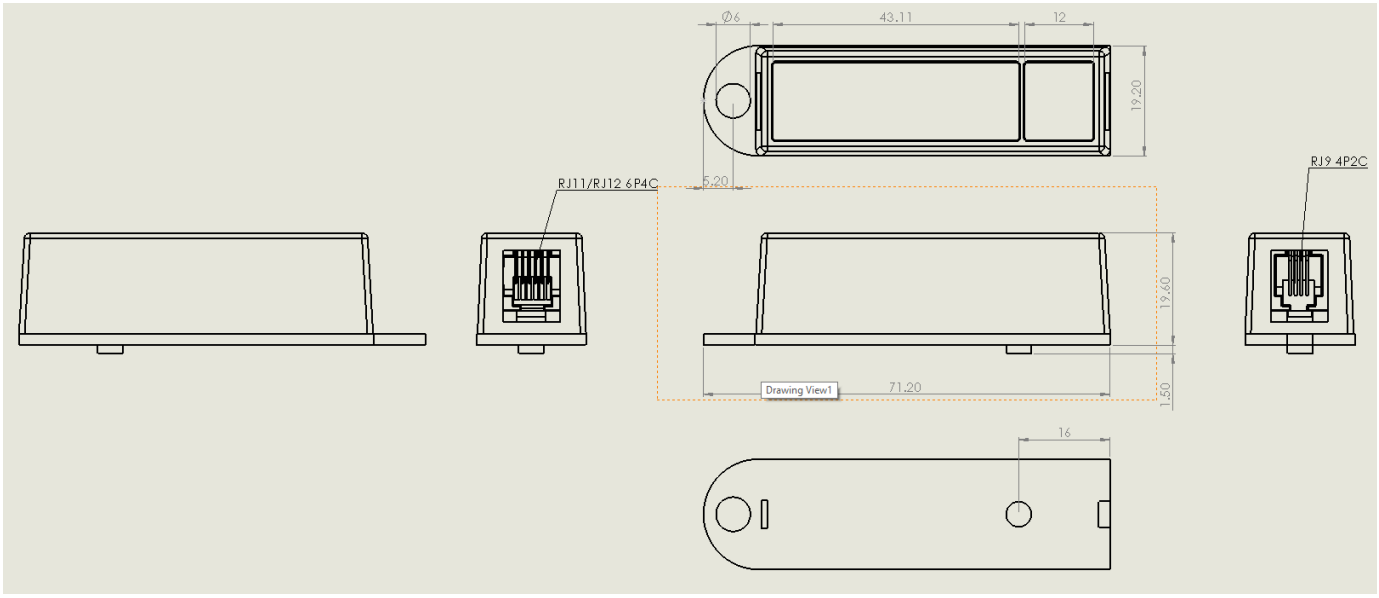
Function and purpose

The sensor/detector is used for leak and level monitoring of conductive liquids in containers, pits, cellars, etc. The sensor has two stainless steel poles. The detector is encapsulated in plastic housing for conductive liquids. Can be placed near plumbing, trays, raised floors, under equipment, sinks, aquariums, sump pumps, refrigerators, dishwashers, toilets, basements, washing machines, water heaters, and garages.

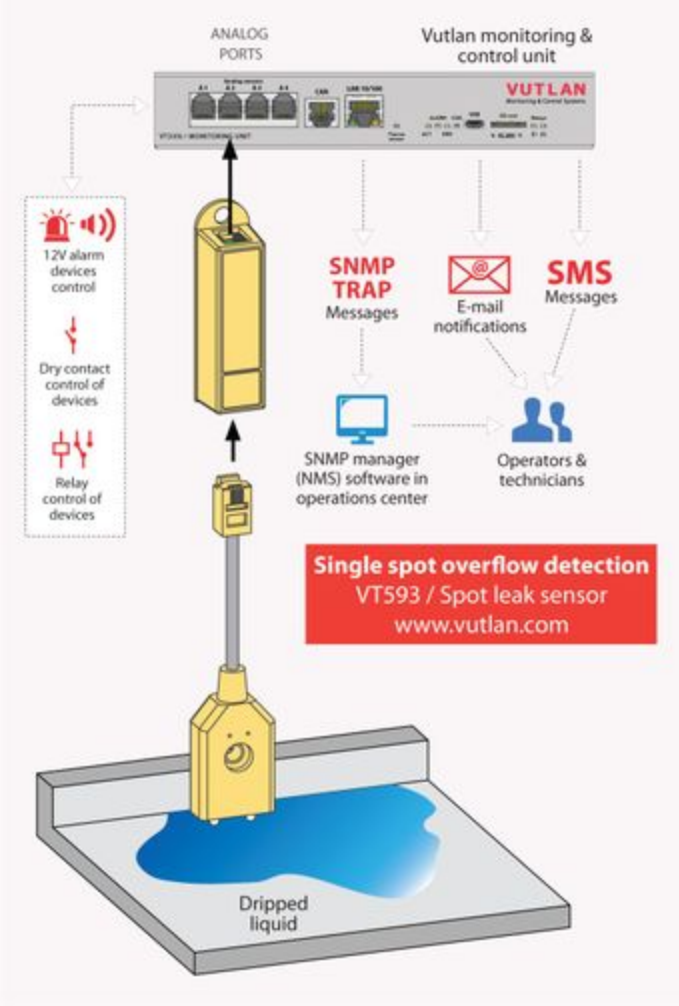
Product page: https://vutlan.com/analog-sensors/169-vt593-spot-leak-sensor.html

Dimensions



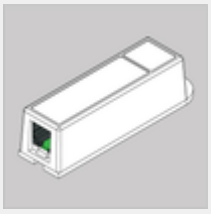


Usage example

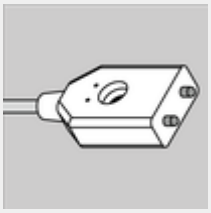


Other installation examples of similiar sensors for leak detection can be found in our articles "Water leakage detection using cable sensor and spot sensor" and "Leak detection under raised floors in data centers".

Technical specifications

	VT593 / Spot leak sensor specifications
Description	The sensor has two RJ connectors. RJ 6P4C connects to the analog port of Vutlan monitoring system. RJ 4P2C connects the leak detector with two poles.
Dimensions	60×18×18 mm
Weight	60 g
Input	2 wire (WDC cable)
Output	RJ11 / RJ12 (6p4c)
Operating temperature	-10 °C to +80 °C
Operating humidity	5% to 95% (Non-Condensing)
Mounting	Mounting bracket included.
Power consumption	60mW

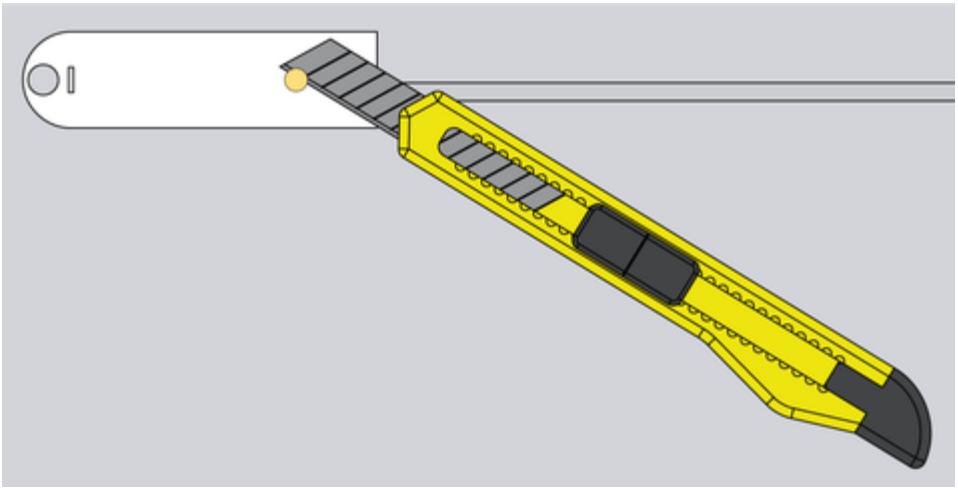
Max. distance m	100 m
HS Code	9025 80 400
Components	Manufactured in E.U.
Special features	Response time: 15 sec., Recovery time: Depends on how fast the sensor dries out

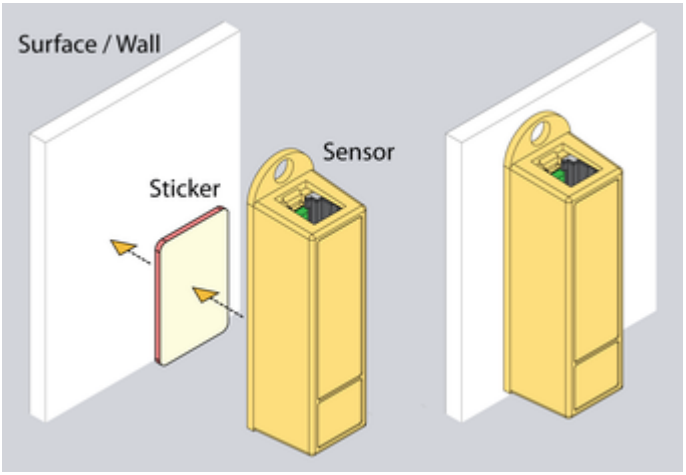
	**SLD / Spot leak detector specifications**
Description	The detector is used in combination with the "VT593 / Spot leak sensor" for level monitoring of conductive liquids in containers, pits, cellars, etc. The sensor has two stainless steel poles. The detector is encapsulated in plastic housing for conductive liquids. The sensor can be connected to dry contact inputs (e.g. an alarm system). Can be placed near plumbing, trays, raised floors, under equipment, sinks, aquariums, sump pumps, refrigerators, dishwashers, toilets, basements, washing machines, water heaters, and garages.
Detectable liquids	Clean, polluted & distilled water; acids; alkalis; alcohols, and other electrically conductive liquid
Dimensions	30x20x8 mm
Lengths	1-meter cable
Weight	21 g with cable
Operating humidity	20%RH100%
Working temperature	-1050
Outputs	Two wires, RJ 4P2C plug.
Output form	NO normally open
Special features	The measuring electrodes are resistant to chlorine and salt water (stainless steel AISI 316 / V4A)

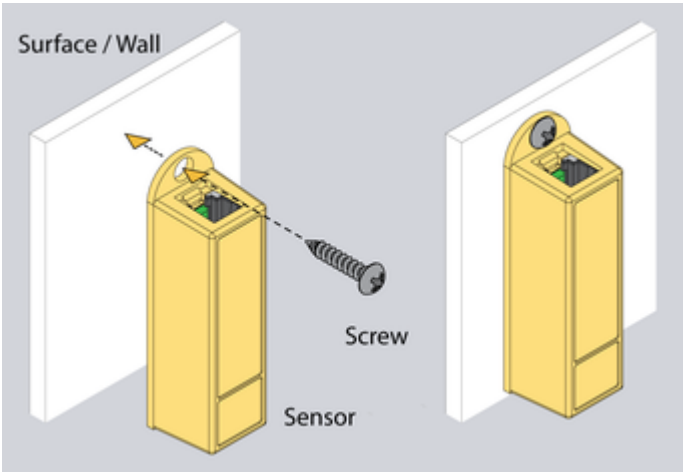
Package content

VT593 Water spot detector package content

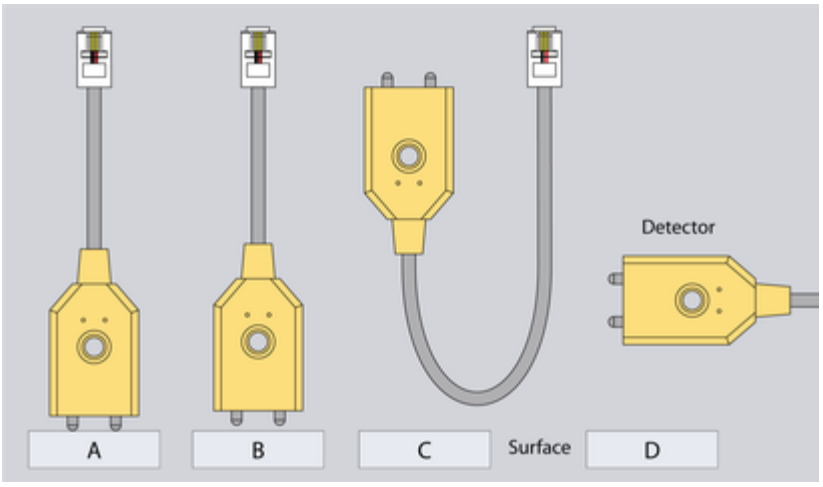
Installation

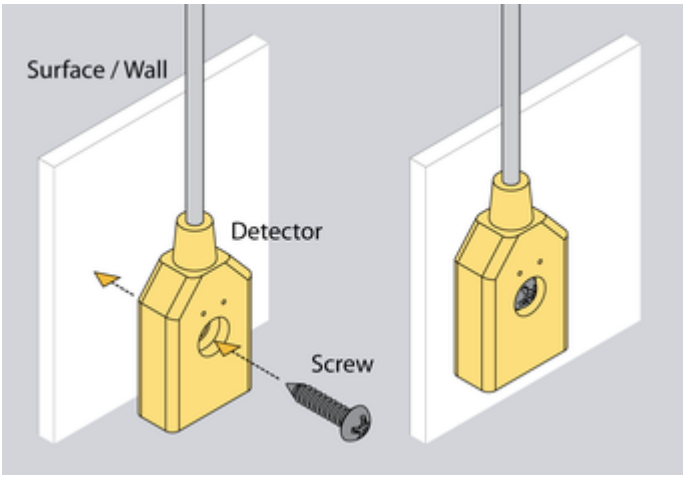
Installing the sensor case	**Steps**
	Cut off the ledge at the bottom of the case. The ledge at the bottom of the case is used for installation inside IT racks.

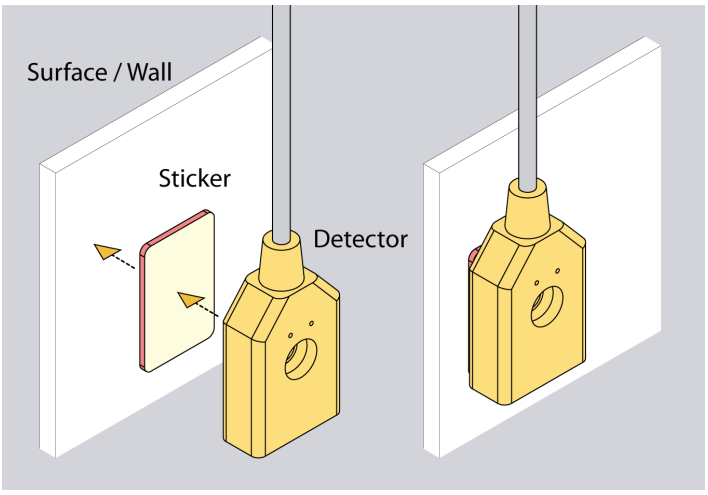




The sensor can be installed using a screw or a sticker

Installing the detector	Steps
	The detector can be installed differently depending on the end purpose and the the surface. See below options: A: For non-conductive surfaces. B: For conductive surfaces. C: For liquid level detection. D: For installing on to vertical surfaces for level detection.

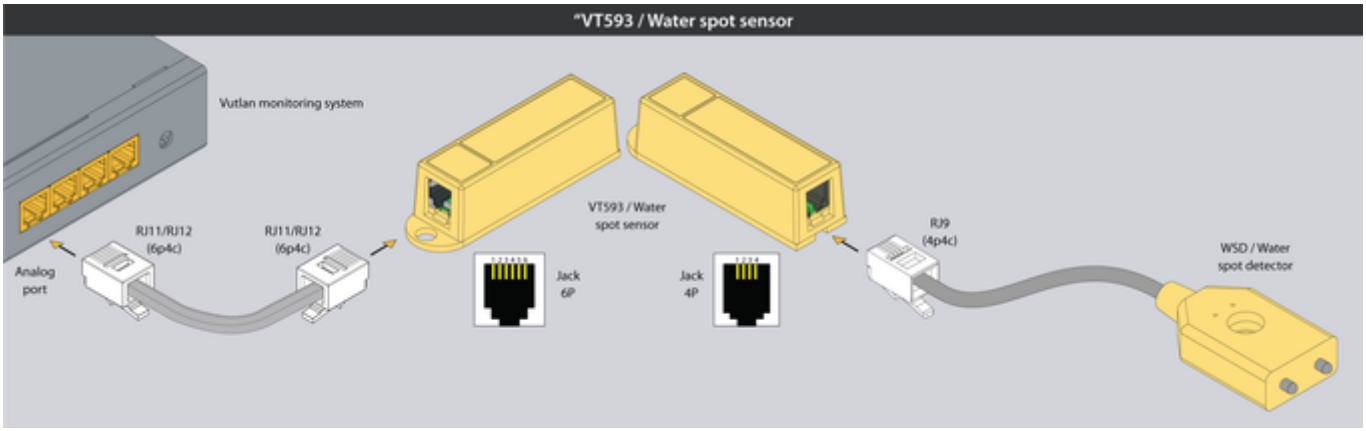




The detector can be installed onto a surface using a screw or a sticker.

The detector has a hole in the middle for a screw to fit it.

Connecting the sensor



The end poles of the sensor should not touch a conductive surface.

1. Connect the "VT593 / Spot leak sensor" to the monitoring unit into any available analog port. The connection is plug-an-play. Use RJ11/12 6p4c to RJ11/12 6p4c cable.
2. Connect the "SLD / Spot leak detector" to the "VT593 / Spot leak sensor".

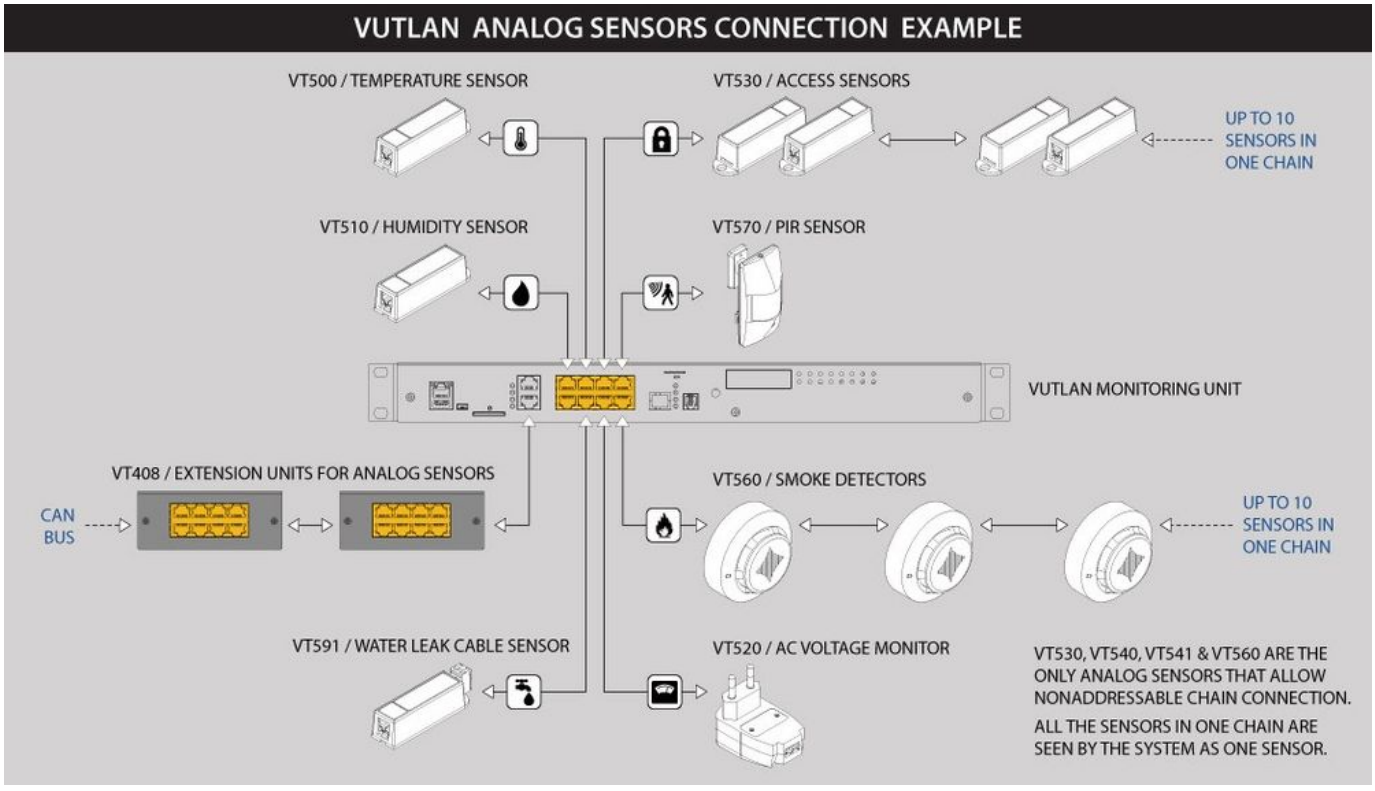
Analog sensor connection

This section includes child pages:

- Chain connection of analog sensors
- VT420 / Converter 4-20mA
- VT500 / Temperature sensor
- VT501 / Outdoor temperature sensor
- VT510 / Humidity sensor
- VT520 / AC voltage monitor
- VT520DIN / AC Voltage monitor (link)
- VT530 / Access sensor
- VT540 / Vibration sensor
- VT550 / Wind velocity meter
- VT560 / Smoke detector
- VT570 / PIR sensor
- VT590 / Spot Water Detector
- VT591 / Water leak rope sensor
- VT593 / Spot leak sensor

Connecting analog sensors

Connect the analog sensor by a supplied RJ-11 (6P4C) cable to any analog port "A1 .. A8" or "Sensor" port. The determination of the sensor type and connection will occur automatically.



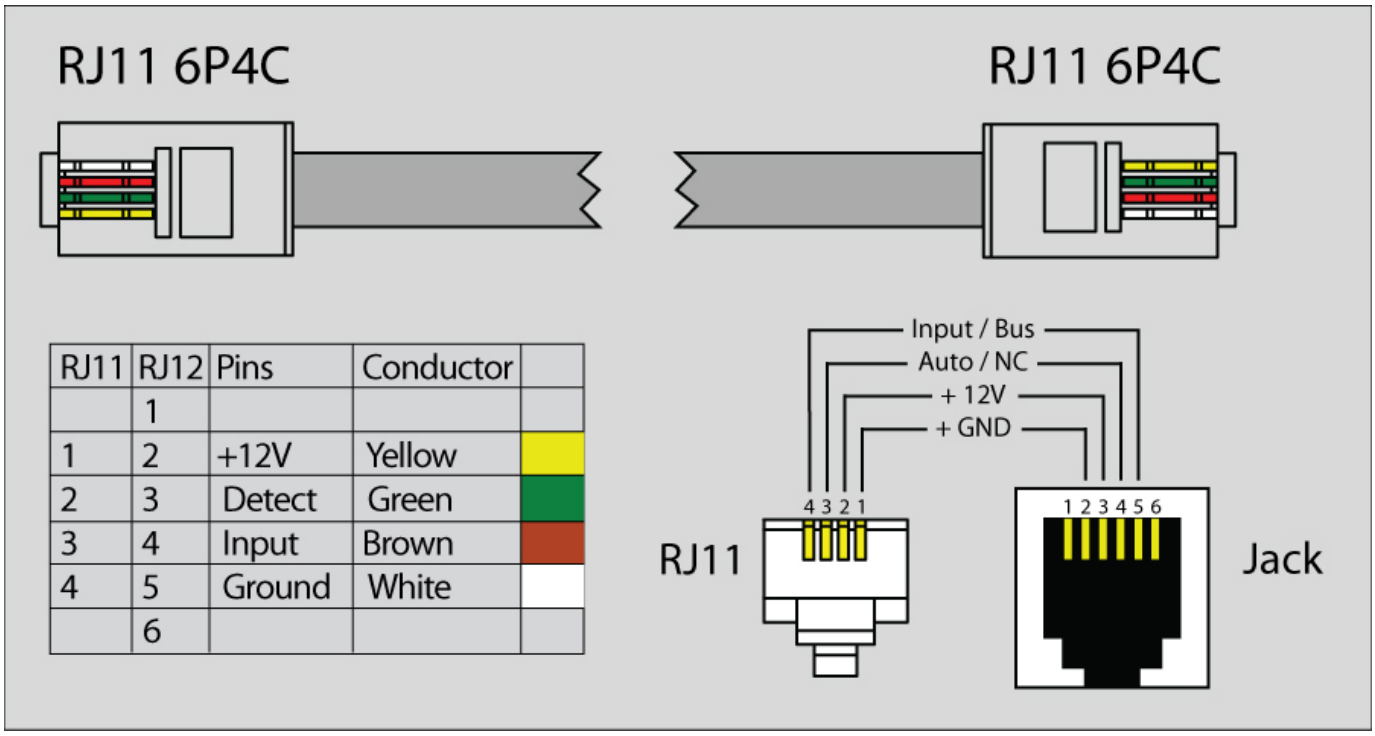
⚠ If strong electromagnetic interference is present, we recommend using a 3-pair cable CAN FTP for sensor connection!

6P4C RJ11 cable wiring/pinouts

1- Yellow, 2- Green, 3- Red, 4 - Black

Colors are true for this telephone cable. Both ends match the colors and pinouts (identical).

Please refer to the RJ connectors comparison table:



Daisy chain connection

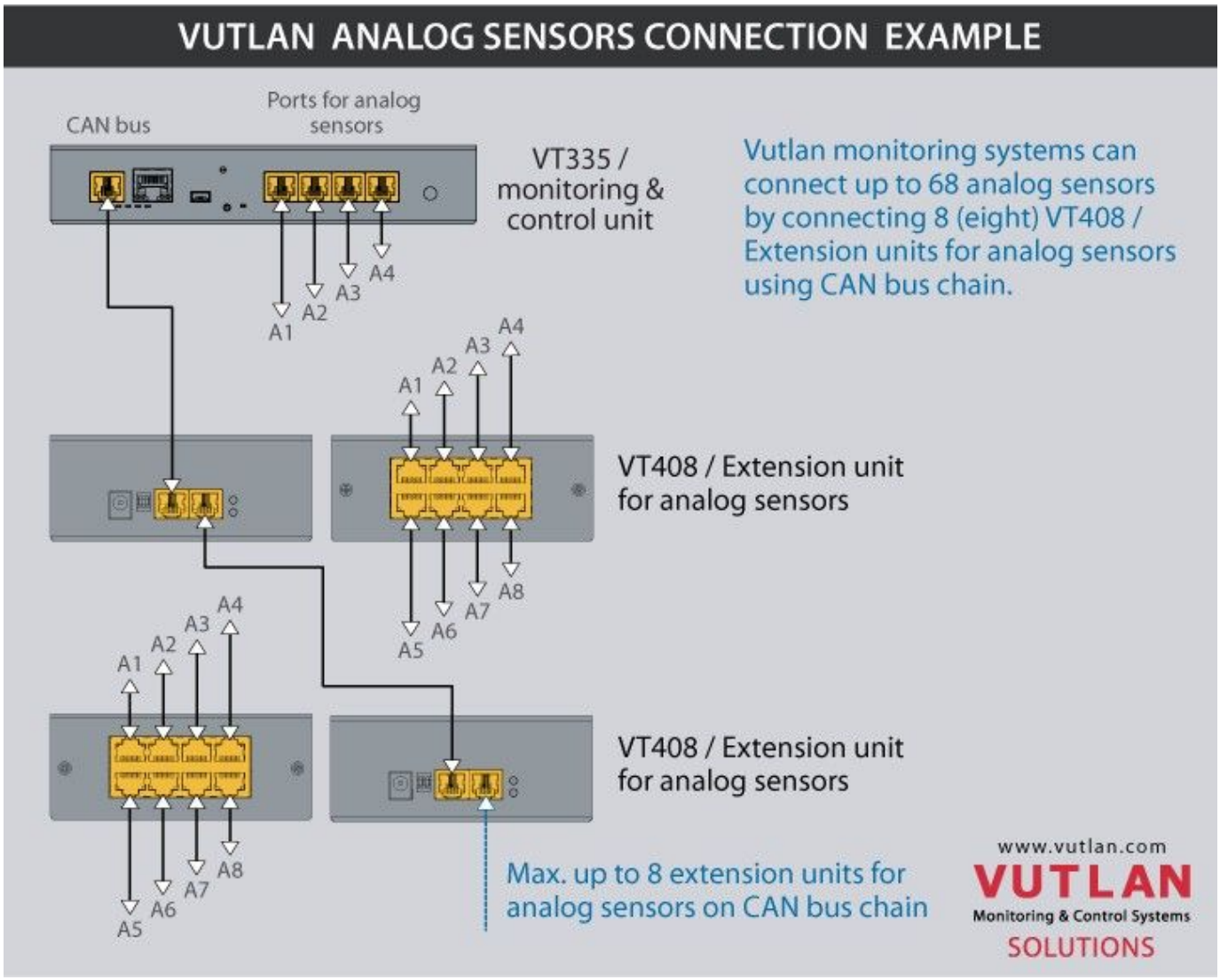
Some of the analog sensors can be connected in a daisy chain. Please refer to the article "Chain connection of analog sensors".

Maximum cable length test

Model		50m	100m	120m	150m	200m
VT407	AC current converter		ok			
VT410	DC voltage monitor					
VT420	Converter 4-20mA		ok			
VT500	Temperature sensor		ok			
VT501	Outdoor temperature sensor		ok			
VT510	Humidity sensor		x			
VT530	Access sensor		ok			
VT540	Vibration sensor		ok			
VT550	Wind velocity meter		x			
VT560	Smoke detector		ok			
VT570	PIR sensor		ok			
VT590	Spot water detector		ok			
VT591	Water leak sensor		ok			

Extending the number of analog sensors

Using CAN extension "VT408 / Sensor extension unit" it is possible to increase the number of analog sensors connected to the monitoring unit up to 80 sensors.



Cable pinouts

1. The sensor uses a standard Vutlan analog sensor cable (RJ11/RJ12 6P4C to RJ11/RJ12 6P4C) for connecting to the monitoring unit. You can find further instructions in the Analog sensors connection article
2. The detector uses two wires. It has black and red wire. Plus or minus is irrelevant.

Troubleshooting

The following table describes potential problems and their possible causes. It also describes checks you can perform or possible solutions for each. After referring to this table, if you cannot resolve the problem, contact your local Vutlan sales representative for assistance.

Potential Problem	Possible Cause	Possible Solution
The sensor does not appear in the Vutlan monitoring interface	Communication lines are improperly connected.	Check the 6P4C RJ11 communication cable.
	The communication cable is inserted into the wrong port.	6P4C RJ11 communication cable must be inserted into the analog port of the Vutlan monitoring system.

Frequently asked questions

Question	Answer
Can I connect “SLD / Spot leak detector” to a 3rd party alarm system without “VT593 / Water spot sensor?	Yes, you can. But it depends on the alarm inputs charachteruistics of a 3rd party device.
Can I connect “WSD / water spot detector” to an dry contact inputs of Vutlan monitoring systems?	No, you can not. The resistance is high and this results in highly unreliable operation.

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