

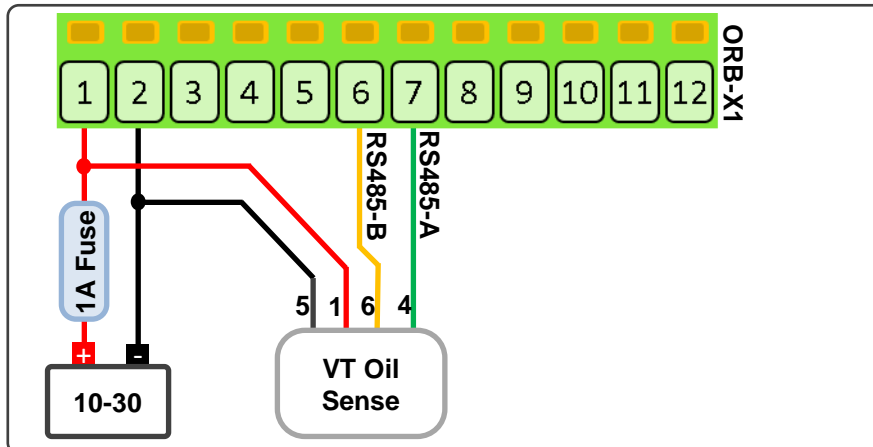
TT011: MODBUS Oil Contamination Sensor

This technical tip shows how to connect a multi-parameter oil wear and contamination sensor to the ORB-X1. The sensor allows any type of oil to be monitored, real-time, in-line, across all temperature and pressure ranges.

Extensions: Power the sensor from an ORB current source to receive an alert when the sensor is drawing no current due to faulty wiring,

Sensor Parameters

Part Number	VT Oil Sense
Type	Capacitance and Conductance
Supply	9-30V DC, 100mA max
Output Type	RS485 MODBUS
Output Parameters	Oil Temperature, Oil Condition
Compatibility	Any Oil Type
Thread	½"BSPP, ½" NPT, 1/8" UNF, M18
Supplied by	Vehicle Technologies (www.vehicletech.co.nz)



Setting (Serial 1)	Value	Comment
Name	Dozer 6	A meaningful name for the sensor data
Interval	1	1 means the sensor is sampled on every base interval
Type	RS485	The sensor uses MODBUS over RS485
Termination Resistor	Disabled	May need to be enabled for if the sensor is a long way from the ORB
Mode	Modbus	The oil-sensor is a MODBUS sensor
Baud Rate	9600	From the datasheet, 9600 bits per second
Settings	8N1	From the datasheet
Modbus 1 / 2 Name	Temperature / Condition	Modbus reading 1 will be configured for oil temperature and 2 for condition
Function 1 / 2	4: Read Input 4: Read Input	Temperature is a 16 bit value that is to be read from a holding register Condition is a 16 bit value that will be read from a holding register
Slave Address 1 / 2	1 / 1	Address of oil sensor default is 1; this can be changed if required
Register Address 1 / 2	0 / 2	Register 0 holds temperature and 2 holds condition
Calibration Low In / Out	0 / 0	
Calibration High In / Out	100 / 1	All values are scaled by 100 according to the datasheet
Calibration Unit 1 / 2	Deg C / %	Temperature in degrees C and oil condition in loss factor %
Warnings / Alarms		Can be enabled as desired