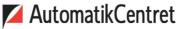


**HVAC** CONTROLS & POWER ELECTRIC

FLOOR HEATING FLOOR HEATING











## **ZONE CONTROL FOR VAV SYSTEMS**

#### OJ GREENZONE™ HVAC ZONE CONTROL

OJ GreenZone™ is an intelligent and highly efficient answer to modern HVAC zone control. A combination of master controls, modules and room panels gives you complete control of each individual room or zone in your building's VAV system – whether that system is based on AHUs fitted with controls from OJ Electronics or from another manufacturer. With an OJ GreenZone™ zone controlled VAV system you can create and maintain the exact air quality and temperature you want in up to 125 individual rooms or zones.

#### **CONTROL UP TO 125 VAV ZONES**

Each OJ GreenZone<sup>™</sup> Master is an electronic controller capable of controlling up to 25 VAV zones in a ventilation system by means of an OJ GreenZone<sup>™</sup> Module. And you can connect up to five Masters in a fully expanded system, bringing the total number of individual zones up to 125.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
EX SEX SEX SEX SEX SEX SEX SEX SEX SEX S	OJ-Zonemaster	<ul><li>OJ Green Zone Master, 125 zones</li><li>Up to 25 zones modules on each</li></ul>	5703502900117
Olimpia de la compania del compania de la compania del compania de la compania del la compania de la compania del la compania de la compania del la compania d	OJ-Zonemodul-A	OJ Green Zone Module, Analog 0-10VDC actuators	5703502900100
Olimpian and the second of the	OJ-Zonemodul-M	OJ Green Zone Module, Modbus actuators	5703502900094
Old Consider Module	OJ-Zonemodule-MP	OJ Green Zone Module, MP-Bus actuators	5703502903279
② 21.5° △ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	OJ-RPT-20T	OJ Green Zone room panel with touch screen	5703502903262
	ETFVP-998	Room temperature     PT-1000 sensor     Setpoint offset potentiometer	5703502551074

#### **OJ AIR PRESSURE**

The OJ Air Pressure range packs four decades of application know-how into smart, simple ventilation controllers and pressure transmitters to fit your specific application needs. This range has exactly what you need to monitor and control air flow and pressure. Anywhere at all. And with astounding accuracy.

#### **EXPANDED RANGE OF PRESSURE TRANSMITTERS**

OJ Electronics was the first to introduce the kind of advanced, easy-to-use and highly accurate pressure transmitters you will find in our PTH series. By popular demand we have expanded that range, creating variants that are ideally suited for a vast selection of applications. You can get pressure transmitters, ventilation controllers, pressure transmitters with relays and dual-input pressure transmitter from us.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	PTH-3202	Analog Pressure Transmitter  • 0-2500Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges	5703502550275
	PTH-3202-CK	Analog Pressure Transmitter  0-2500Pa 0-10V, 2-10V, 0-20mA or 4-20mA Screw terminals 8 measuring ranges Incl. connection kit	5703502550886
PTH PRINCIPAL TRANSPORTER CALL	PTH-3502	Analog Pressure Transmitter  • 0-5000Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges	5703502550831
	PTH-3502-CK	Analog Pressure Transmitter  • 0-5000Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges  • Incl. connection kit	5703502551210
2500	PTH-3202-DF	Analog Pressure Transmitter  • 0-2500Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges  • Display shows either Pressure or Flow	5703502550695
	PTH-3202-DF-CK	Analog Pressure Transmitter  • 0-2500Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges  • Display shows either Pressure or Flow  • Incl. connection kit	5703502550893

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	PTH-3203-DF	Analog Pressure Transmitter  • 0-2500Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 10 measuring ranges  • Display shows either Pressure or Flow	5703502551333
2500 © 1000 000	PTH-3502-DF	Analog Pressure Transmitter  • 0-5000Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges  • Display shows either Pressure or Flow	5703502550848
	PTH-3502-DF-CK	Analog Pressure Transmitter  • 0-5000Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • 8 measuring ranges  • Display shows either Pressure or Flow  • Incl. connection kit	5703502551227
	PTH-6201	Modbus RTU Pressure Transmitter  • 0-2500Pa  • Screw terminals	5703502551326
PTH metaline transporter	PTH-6201-CK	Modbus RTU Pressure Transmitter  • 0-2500Pa  • Screw terminals  • Incl. connection kit	5703502900803
2508	PTH-6201-DF	Modbus RTU Pressure Transmitter  • 0-2500Pa  • Screw terminals  • Display shows either Pressure or Flow	5703502900155
	PTH-6202	Modbus RTU Pressure Transmitter  • 0-2500Pa  • RJ12 connector  • QuickPlug™	5703502550930
	PTH-6202-CK	Modbus RTU Pressure Transmitter  • 0-2500Pa  • RJ12 connector  • QuickPlug <sup>™</sup> • Incl. connection kit	5703502904849
	PTH-6502	Modbus RTU Pressure Transmitter  • 0-5000Pa  • RJ12 connector  • QuickPlug™	5703502551319
	PTH-6202-2	Dual Modbus RTU Pressure Transmitter  • 2 x 0-2500Pa  • 2 x temperature input for either NTC12k or PT1000  • Spring connectors	5703502903873
	PTH-6502-2	Dual Modbus RTU Pressure Transmitter  • 2 x 0-5000Pa  • 2 x temperature input for either NTC12k or PT1000  • Spring connectors	5703502551319

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	PTH-6201-2	Dual Modbus RTU Pressure Transmitter  • 2 x 0-2500Pa  • 2 x temperature input for either NTC12k or PT1000  • Spring connectors for temperature  • RJ12 connectors for Modbus  • QuickPlug™	5703502903859
2000	PTH-3202-DR	Analog Pressure Transmitter  • 0-2500Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • Relay  • Display shows either Pressure or Flow	5703502903842
2000	VCH-6201-DI	Modbus RTU Ventilation Controller	5703502903835
	VCH-6201-DI	Analog Ventilation Controller  • 0-2500Pa  • 0-10V, 2-10V, 0-20mA or 4-20mA  • Screw terminals  • Display shows either Pressure or Flow	5703502903835
	VCH-1212-P	Ventilation Controller for Pressure  • Powered by 230VAC  • 3 set points  • Screw terminals  • Works with Analog or Modbus Pressure Transmitters (Delivered without Pressure Transmitter)  • Controls output: 0-10V  • Controls output: OJ-DV products	5703502903880

## **ROTARY HEAT EXCHANGER DRIVE & MOTOR**

The new DRHX range is OJ Electronics' latest invention: drives and motors created especially for use with rotation heat exchangers. The DRHX replaces our successful RHX2 solutions.

The new DRHX range is based on stepper motor technology and sensorless motor control. It is equipped with a sophisticated software that monitors the rotation of the rotor, which means that no physical/optical rotor guard is required. Instead the DRHX uses the feedback signal from the motor to calculate if the belt is broken, additionally the feedback signal ensure that the motor gets exactly the current it needs to supply the right speed and torque. The DRHX series covers the range from 2Nm to 14Nm with both Modbus and analogue control. Additionally a version with a 3x7-segment

display is available. The DRHX range is designed to be very easy to install, compact and flexible as possible. Their small size make them easy to fit in, and you can place them horizontally or vertically.

(Drive, motor and cable shall be ordered individual).

- Energy-optimum recovery
- OJ Air2 compatible
- Gear-free technology ensures accurate control throughout wide speed range.
- Sensorless rotation monitor no physical/optical rotor guard is required.
- Wide product range from 2Nm to 14Nm
- Modbus, 0-10V control and 3x7-segment display

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	OJ-DRHX-1055-MNN5	<ul> <li>Drive for stepmotor</li> <li>55W, 2Nm</li> <li>1x230V supply, Modbus interface, IP54</li> </ul>	5703502905969
<b>i</b> ⇔	OJ-DRHX-1055-MAD5	<ul> <li>Drive for stepmotor</li> <li>55W, 2Nm</li> <li>1x230V supply, Modbus &amp; 0-10V DC interface, 3x7-segment display, IP54</li> </ul>	5703502906133
	OJ-DRHX-1220-MNN5	<ul> <li>Drive for stepmotor</li> <li>110/220W, 4/8Nm</li> <li>1x230V supply, Modbus interface, IP54</li> </ul>	5703502905976
ai ai	OJ-DRHX-1220-MAD5	<ul> <li>Drive for stepmotor</li> <li>110/220W, 4/8Nm</li> <li>1x230V supply, Modbus &amp; 0-10V DC interface, 3x7-segment display, IP54</li> </ul>	5703502905983
	OJ-DRHX-1690-MAN5	<ul> <li>Drive for stepmotor</li> <li>690W, 14Nm</li> <li>1x230V supply, Modbus &amp; 0-10V DC interface, IP54</li> </ul>	5703502906140

PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
MRHX-3P02N-03C5	<ul> <li>Stepmotor 2Nm</li> <li>3 x 150V</li> <li>Dimension 85 x 85 x 67 mm</li> </ul>	5703502906331
MRHX-3P04N-03C5	<ul> <li>Stepmotor 4Nm</li> <li>3 x 150V</li> <li>Dimension 85 x 85 x 97 mm</li> </ul>	5703502906348
MRHX-3P08N-25	<ul> <li>Stepmotor 8Nm</li> <li>3 x 150V</li> <li>Dimension 85 x 85 x 156 mm</li> </ul>	5703502906355
MRHX-3P14N-35	<ul> <li>Stepmotor 14Nm</li> <li>3 x 220V</li> <li>Dimension 134 x 134 x 170 mm</li> </ul>	5703502906515
97301	Motor extension cable 0.5 m	5703502906645
97302	Motor extension cable 2.0 m	5703502906652
97303	Motor extension cable 3.0 m	5703502906669
97304	Motor extension cable 5.0 m	5703502906676

## **TEMPERATURE CONTROLLERS**

Our standard range of HVAC temperature controllers are our simplest options and very easy to install. We offer several different models, allowing you to control temperatures in AHUs for commercial applications and HVAC systems on any scale. You can explore our basic temperature control range below – and if you want something more advanced, we recommend our OJ Air2 system.

### **EXTENSIVE RANGE FOR TEMPERATURE CONTROL**

The OJ Electronics range for HVAC temperature control includes:

- Air handling controllers
- Temperature controllers for DIN-rail mounting
- Temperature controllers for wall mounting

#### SIMPLE INSTALLATION, RELIABLE OPERATION

Turn a knob. That's all you need to do to set these HVAC temperature controllers. There are no webservers involved, no sophisticated functions to remember.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	ETN4-1999	Temperature Controller  Digital termostat  Din-rail mount  -19.5°C/70.0°C  230V, 16A  Incl. NTC12K sensor, 3m	5703502650289
	TRD-3986	Air handling controller for small and medium sized ventilation systems  Two analog 0-10V outputs for: Control of one heating battery Sequential control of two heating batteries Sequential control of heating battery and cooling battery Sequential control of cross-flow heat exchanger and heating battery Sequential control of rotary heat exchanger and heating battery Sequential control of rotary heat exchanger and heating battery Two 250 VAC relays for Damper motors and Start/Stop of fans Two inputs for PT1000 Frost protection for heating batteries Din-rail mount 24VAC/DC	5703502550497
0 40 50 20 10 -10 10 -10 (EE or O)	ETI-1221	<ul> <li>Industry Thermostat</li> <li>Thermostat for 35 mm din rail mounting</li> <li>+10/+110°C, 230V, 10A</li> </ul>	5703502532905
	ETI-1551	<ul> <li>Industry Thermostat</li> <li>Thermostat for 35 mm din rail mounting</li> <li>+10/+50°C, 230V, 10A</li> </ul>	5703502532875
	ETI/F-1551	<ul> <li>Industry Thermostat</li> <li>Thermostat for 35 mm din rail mounting</li> <li>Incl. NTC12K sensor</li> <li>+10/+50°C, 230V, 10A</li> </ul>	5703502532998

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
THE STATE OF THE S	EFRP-31	Temperature controller for DIN-rail.  14-24VAC / 0-10V DC  External sensor and night setback using an external clock.  1-step (0-10VDC or 10-0 VDC) P-Reg.  All ETF-xx44 sensors (NTC12K) can  be used	5703502540849
20 - 10 st. 6	EFRP-91	Temperature controller for wall mounting.  14-24VAC / 0-10V DC Internal sensor and night setback using an external clock.  1 step (0-10VDC or 10-0 VDC) P-Reg.  All ETF.xx44 sensors (NTC12K) can be used.	5703502540856
10 - 10 10 10 10 - 10	EFRP-900	<ul> <li>Potentiometer for wall mounting</li> <li>0-10V DC</li> <li>Scale range 0-100%</li> </ul>	5703502540986

## **POWER CONTROLLERS**

Power and step controllers for easy integration with electric heater coils

At OJ Electronics you will find a complete range of TRIAC controls to control electric heater coils in AHUs. And you will find them easy to work with: each model is designed for easy integration with any range of heater coils for comfort heating.

The OJ range of TRIAC control options includes:

- Power controllers with 1, 2 or 3 phases
- DIN-rail power controller
- Step controls

# ACCURATE AND DURABLE ELECTRIC HEAT CONTROL

The OJ power and step controllers are engineered to give you several benefits, including

- accurate, noiseless control
- long life expectancy

The built-in PID controller makes installation and operation simple, straightforward and reliable, saving you money on installation and power consumption.

The TRIAC range starts at 1x16 amps (3.6 kW) and goes all the way up to 3x63 amps (43 kW).

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	EFS-9252	<ul> <li>Power controller</li> <li>25A</li> <li>3x230V / 10 kW, 3x400V / 17 kW</li> </ul>	5703502550121
	EFS-9253	<ul> <li>Power controller</li> <li>25A</li> <li>3x230V / 10 kW, 3x400V / 17 kW</li> <li>Control in all 3 phases</li> <li>Star connection or assymetrical load</li> </ul>	5703502550152
(CO)	EFS-9402	<ul> <li>Power controller</li> <li>40A</li> <li>3x230V / 16 kW, 3x400V / 28 kW</li> </ul>	5703502550138
	EFSK-9402	<ul> <li>Power controller</li> <li>40A</li> <li>3x230V / 16 kW, 3x400V / 28 kW</li> <li>Must be placed in active airflow</li> </ul>	5703502550770
	EFS-9632	<ul> <li>Power controller</li> <li>63A</li> <li>3x230V / 25 kW, 3x400V / 44 kW</li> </ul>	5703502550145
	EFSK-9632	<ul> <li>Power controller</li> <li>63A</li> <li>3x230V / 25 kW, 3x400V / 44 kW</li> <li>Must be placed in active airflow</li> </ul>	5703502550787

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
20 - 40	ETFVP-999	<ul> <li>Room temperature</li> <li>-20/+70°C (scale 0-40°C),12 kOhm @ 25°C</li> <li>NTC sensor</li> <li>Set point offset potentiometer</li> </ul>	5703502550640
D 111 =	EFM-9251	<ul> <li>Power controller for din-rail</li> <li>25A</li> <li>230V / 5.7 kW, 400V / 10 kW</li> </ul>	5703502540801
	EFK-23	<ul><li>Power controller for surface wall mounting</li><li>16A</li><li>230V/3.6kW</li></ul>	5703502550442
	EFK-40	<ul> <li>Power controller for surface wall mounting</li> <li>16A</li> <li>400V/6.4kW</li> </ul>	5703502550572
	EFH-23	<ul><li>Power controller for bulit-in</li><li>16A</li><li>230V/3.6kW</li></ul>	5703502550589
	EFH-40	<ul><li>Power controller for bulit-in</li><li>16A</li><li>400V/6.4kW</li></ul>	5703502550596
	ETT-6-11	<ul><li>Step controller for din-rail</li><li>With 6 relays</li><li>230V, 6x6A</li></ul>	5703502532042
	ETT-6-31	<ul><li>Step controller for din-rail</li><li>With 6 relays</li><li>24V, 6x6A</li></ul>	5703502532066

All ETF-xxx/99 sensors (NTC) can be used

## **TEMPERATURE SENSORS**

The OJ range of electronic temperature sensors are used as signal emitters for electronic thermostats, regulators and thermometers. Many different versions are available, ensuring that you can get a temperature sensor for almost any application. For example, you can get sensors for installation in floors, on walls, in machinery, pipes, in tanks, watertight spaces or outdoor.

#### RAPID RESPONSE TIMES

Each of our temperature sensors (known as the ETF series) contains a resistance sensor element (NTC or PT 1000) enclosed in a housing of plastic or metal – and every ETF model has been designed to achieve the shortest possible response times. This is ensured by using resistance sensors that convert temperature into ohmic resistance.

PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
ETF-122	<ul> <li>Sensor, floor heating</li> <li>Frost protection</li> <li>Tubular receptacle</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-40/+120°C</li> <li>Ø 6.5 x 30 mm, 2.5 m cable</li> </ul>	5703866100468
ETF-144/99A	<ul> <li>Sensor, floor heating</li> <li>Frost protection</li> <li>Tubular receptacle</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-20/+70°C</li> <li>Ø 6.5 x 30 mm, 2.5 m cable</li> </ul>	5703866101069
ETF-198B-5	<ul> <li>Sensor, floor heating</li> <li>Frost protection</li> <li>Tubular receptacle</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-40/+150°C</li> <li>Ø 5 x 20 mm, 5 m cable</li> </ul>	5703502903125
ETF-198-3	<ul> <li>Sensor, floor heating</li> <li>Frost protection</li> <li>Tubular receptacle</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+120°C</li> <li>Ø 6.5 x 30 mm, 2.5 m cable</li> </ul>	5703866101052
ETF-422	<ul> <li>Sensor, non-aggressive liquids</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-40/+120°C</li> <li>Ø 6.5 x 100 mm, 1/4" pipe thread, mac. 6 atm, 2.5 m cable</li> </ul>	5703866101489
ETF-498	<ul> <li>Sensor, non-aggressive liquids</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+165°C</li> <li>Ø 6.5 x 100 mm, 1/4" pipe thread, max. 6 atm, 2.5 m cable</li> </ul>	5703866101588

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	ETF-522	<ul> <li>Sensor, machine parts</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-40/+120°C</li> <li>Ø 6.5 x 50 mm, max. 0.5 atm, 2.5 m cable</li> </ul>	5703866101601
	ETF-598-3	<ul> <li>Sensor, machine parts</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+165°C</li> </ul>	5703866115745
	ETF-598B-5	<ul> <li>Ventilation sensor</li> <li>-40/+150°C, 1000 Ohm @ 0°C</li> <li>PT-1000</li> <li>Ø 6 x 32 mm, 5 m cable</li> </ul>	5703502903132
+	ETF-598B-5A	<ul> <li>Ventilation sensor</li> <li>-40/+150°C, 1000 Ohm @ 0°C</li> <li>PT-1000</li> <li>Ø 7 x 53 mm, 5 m cable</li> </ul>	5703502903149
	ETF-598A-3	<ul> <li>Ventilation sensor</li> <li>-20/+70°C, 1000 Ohm @ 0°C</li> <li>PT-1000</li> <li>Ø 6.5 x 50 mm, 3 m cable</li> </ul>	5703502902296
Garmador strates user connex user connex User connex Trees, connex	ETF-744/99	<ul> <li>Watertight space/external sensor</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-20/+70°C</li> <li>85 x 45 x 35 mm, IP54</li> </ul>	5703866101854
	ETF-822	<ul> <li>Sensor, non-aggresive liquids</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-40/+120°C</li> <li>Ø 6.5 x 200 mm, 1/4" pipe thread max. 6 atm, 2.5 m cable</li> </ul>	5703866101939
	ETF-898	<ul> <li>Sensor, non-aggressive liquids</li> <li>PT-1000, 1000 ohm @ 0°C</li> <li>Ø 6.5 x 200mm, 1/4" pipe thread max. 6 atm, 2.5m cable</li> </ul>	
	ETF-998-H	<ul> <li>Room sensor/wall installation</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-20/+70°C</li> <li>79 x 80 x 16 mm, IP20, white</li> </ul>	5703502500300
	ETF-944/99-H	<ul> <li>Room sensor/wall installation</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-20/+70°C</li> <li>79 x 80 x 16 mm, IP20, white</li> </ul>	5703502500379
	ETF-1098L1-0.5	<ul> <li>Sensor for ventilation</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-40/+85°C</li> <li>Ø 12x100, 0.5 m or 4.0 m cable</li> </ul>	5703502701325
	ETF-1098L1-4	<ul> <li>Sensor for ventilation</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-40/+85°C</li> <li>Ø 12x100, 0.5 m or 4.0 m cable</li> </ul>	5703502701349

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	ETF-1198-SR-1/2	<ul> <li>Watersensor for heater</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+165°C, 1/2" tapered screw thread</li> <li>Ø 3 x 250 mm, 10 m cable</li> </ul>	5703502500881
	ETF-1198SR	<ul> <li>Watersensor for heater</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+165°C, 1/4" tapered screw thread</li> <li>Ø 3 x 250 mm, 10 m cable</li> </ul>	5703502660080
	ETF-1133/44/55	<ul> <li>Ventilation sensor</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-30/+90°C</li> <li>Ø 6,5 x 200 mm, maks. 0.5 atm, 2.5 m cable</li> </ul>	5703866100406
	ETF-1144/99	<ul> <li>Ventilation sensor</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-10/+60°C</li> <li>Ø 6,5 x 200 mm, maks. 0.5 atm, 2.5 m cable</li> </ul>	5703866102738
	ETF-1198	<ul> <li>Ventilation sensor</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+165°C</li> <li>Ø 6,5 x 200 mm, maks. 0.5 atm, 2.5 m cable</li> </ul>	5703866100444
TEMPERATURE TYPE ETF. 16.	ETF-1633/44/55	<ul> <li>Plant sensor, pipe</li> <li>NTC, 12 kOhm @ 25°C</li> <li>With fixing strap</li> <li>-50/+70°C</li> <li>65 x 50 x 44 mm, max. pipe 50 mm</li> </ul>	5703866100758
	ETF-1698	<ul> <li>Plant sensor, pipe</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-50/+70°C</li> <li>65 x 50 x 44 mm, max. pipe 50 mm</li> </ul>	5703866100802
TEMPERATURE CONTROL OF	ETF-1733/44/55	<ul> <li>Watertight space/external sensor</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-40/+70°C</li> <li>54 x 52 x 27 mm</li> </ul>	5703866100819
	ETF-1798	<ul> <li>Watertight space/external sensor</li> <li>PT-1000, 1000 Ohm @ 0°C</li> <li>-40/+70°C</li> <li>54 x 52 x 27 mm</li> </ul>	5703866100864
ini	ETF-1899A	<ul> <li>Plant sensor</li> <li>NTC, 12 kOhm @ 25°C</li> <li>-20/+70°C</li> <li>2.5 m cable</li> </ul>	5703866080357

## **TEMPERATURE TRANSMITTERS**

Our series of Modbus temperature transmitters allows you to measure and control temperatures in your HVAC installations with great accuracy. Available in different mechanical variants to fit ducts or rooms, our Modbus temperature transmitters are very easy to install.

#### RAPID AND EFFICIENT RESPONSE

Our Modbus temperature transmitters deliver the temperature data digitally via Modbus RTU technology. This ensures that measurement accuracy is not reduced by cable losses, bringing you highly reliable data. You system can respond swiftly and efficiently to adjust temperatures as required.

# TEMPERATURE TRANSMITTERS FOR DUCTS OR ROOMS

Our Modbus temperature sensors come in two variants:

- TTH-6202 for flexible installation in ventilation ducts, supplied with pre-fitted 7m cable
- TTH-6040-W a stylish option for wall installation in rooms

Both sensors feature Modbus RTU connectivity and are fully compatible with advanced system solutions such as OJ Air2.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	TTH-6040-W	<ul> <li>Modbus RTU temperature sensor</li> <li>-10/+40°C</li> <li>Wall mounting</li> <li>Including a junction box for conversion from 4-core cable to modular Modbus cable RJ12.</li> <li>QuickPlug™</li> </ul>	5703502903996
65	TTH-6202	<ul> <li>Modbus RTU temperature sensor</li> <li>-10/+40°C</li> <li>Duct sensor</li> <li>7m cable with RJ12 connector</li> <li>QuickPlug™</li> </ul>	5703502903095

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## **AIR QUALITY SENSOR**

Our VOC air quality sensors allow your air handling system to be demand controlled in accordance with the level of volatile organic compounds (VOCs) in the air. These air quality sensors monitor the air quality in ventilation ducts on the basis of its content of VOCs, which can come from many sources: people, furnishings, cleaning agents, building materials, etc. The air quality sensor transmits this information via Modbus to your chosen electronic controller (in e.g. PLC, BMS or SCADA systems), allowing it to respond accordingly.

#### CONVERTS VOC CONCENTRATIONS INTO CO. EQUIVALENTS

The VTH air quality sensors automatically convert VOC concentration levels into a CO<sub>2</sub> equivalent, which means that you can easily use them instead of CO<sub>2</sub> sensors.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
Q	VTH-6202	<ul> <li>VOC/ CO₂ (equivalent) transmitter</li> <li>Ø 19 x 160 mm w. flange for duct mounting</li> <li>7m cable with RJ12 connector</li> <li>QuickPlug™</li> </ul>	5703502722290
J-al-	VTH-6242	<ul> <li>VOC/ CO<sub>2</sub> (equivalent) transmitter</li> <li>Ø 19 x 160 mm w. flange for duct mounting</li> <li>Connection 4 x 1.5mm<sup>2</sup> screw terminals</li> </ul>	5703502901787

## **AIRFLOW TRANSMITTERS**

#### **AIRFLOW TRANSMITTERS**

Our ESF-35 series of electronic airflow transmitters is designed to measure the air velocity in all ventilation systems – whether natural or mechanical. These airflow transmitters not only measure air velocity – they also measure temperatures from 0 to 50°C.

#### PROMOTE SAFETY - AND EASY RENOVATION

The ESF-35 airflow transmitters are ideal for ensuring that there is sufficient airflow in your system to allow your heating coils to switch on safely. And they are popular for renovations of older systems, too: simply drill a hole and insert one of these compact, electronic airflow transmitter for accurate, resistance-free airflow measurement.

#### **CHOOSE BETWEEN THREE VERSIONS**

ESF-35-1 Airflow transmitter for mechanical ventilation – for high air velocities; with built-in relay function ESF-35-2 Airflow transmitter for mechanical ventilation – for high air velocities

ESF-35-4 Airflow transmitter for natural ventilation – for lower air velocities.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	ESF-35-1	<ul> <li>Measuring range 0.5 – 8m/s or 0.5 – 16m/s</li> <li>24VAC / 16-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>Relay 6A</li> </ul>	5703502510798
	ESF-35-2	<ul> <li>Measuring range 0.5 – 8m/s or 0.5 – 16m/s</li> <li>24VAC / 16-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> </ul>	5703502510804
	ESF-35-4	<ul> <li>Measuring range 0.2 – 1m/s or 0.5 – 2m/s</li> <li>24VAC / 16-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> </ul>	5703502560106

## **OJ AIR HUMIDITY**

The OJ Air Humidity range covers both general and specialized needs. Our HTH series of humidity transmitters are ideal for any application where you need a humidity sensor. Available in versions for installation in rooms or ventilation ducts, these humidity transmitters measure the current air humidity with great accuracy so that your demand-controlled ventilation system can respond quickly and efficiently to changing conditions.

For more specific tasks, we offer our NVP moisture alarm relays as well as our EHP controllers, which are used with analogue humidity transmitters to control humidifiers and/or dehumidifiers.

#### MEASURING HUMIDITY AND TEMPERATURE - MODBUS OUTPUT

Our HTH-62xx humidity transmitters are designed for duct installation and are capable of measuring humidity and temperature. Data is transmitted via Modbus, and flexible length options make these humidity sensors suitable for ventilation systems on any scale.

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
full-elex O1	HTH-6121	Humidity transmitter for surface wall mounting     Output signal 4-20 mA     10-100% rH     8-20V DC	5703502560113
	HTH-6122	<ul> <li>Humidity transmitter for suspension</li> <li>Output signal 4-20 mA</li> <li>10-100% rH</li> <li>8-20V DC</li> </ul>	5703502560120
	HTH-6202	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>7m cable with RJ12 connector</li> <li>QuickPlug™</li> <li>Address: 7Ah</li> </ul>	5703502560168
	HTH-6203	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>7m cable with RJ12 connector</li> <li>QuickPlug™</li> <li>Address: 7Bh</li> </ul>	5703502722023
	HTH-6204	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>7m cable with RJ12 connector</li> <li>QuickPlug™</li> <li>Address: 7Ch</li> </ul>	5703502560199

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	HTH-6242	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>Connection 4 x 1.5mm² screw terminals</li> <li>Address: 7Ah</li> </ul>	5703502901817
	HTH-6243	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>Connection 4 x 1.5mm² screw terminals</li> <li>Address: 7Bh</li> </ul>	5703502901800
	HTH-6244	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>Connection 4 x 1.5mm² screw terminals</li> <li>Address: 7Ch</li> </ul>	5703502901794
	HTH-6245	<ul> <li>Modbus RTU Humidity and Temperature transmitter</li> <li>18-30VDC</li> <li>Ø 19 x 250 mm w. flange for duct mounting</li> <li>Connection 4 x 1.5mm² screw terminals</li> <li>Address: 7Dh</li> </ul>	5703502903378
out of the second	EHP-15	<ul> <li>Hygrostats tor DIN-rail installation</li> <li>10-90%</li> <li>230V</li> <li>8A</li> <li>Adjustable differential and sensor tolerances.</li> </ul>	5703502510774
NO. T. T. NO.	F-NVP-15	Moisture and water leakage alarm for din-rail installation     230V     10A	5703502410142
	F-NVP-16	<ul> <li>Moisture and water leakage alarm with audible alarm signal</li> <li>230V</li> <li>10A</li> </ul>	5703502410135
	F-NVP-35	<ul> <li>Moisture and water leakage alarm for DIN-rail installation</li> <li>24V</li> <li>10A</li> </ul>	5703502560045

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PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
F-NVPF-16	Moisture and water leakage alarm     Plant sensor	5703866102806
F-NVPF	<ul><li> Moisture and water leakage alarm</li><li> Sensing ribbon</li><li> Sensor tape, by the metre</li></ul>	5703502510736
F-NVPFL	<ul><li>Moisture and water leakage alarm</li><li>Glue for sensing ribbon</li><li>0.3L</li></ul>	5703502510811

## **ACCESSORIES**

	PRODUCT TYPE	PRODUCT FEATURES / TECHNICAL DATA	EAN-NUMBER
	ETFL-3	<ul> <li>Accessories for temperature sensors</li> <li>Sensor pocket</li> <li>AISI 316</li> <li>Ø 10 x 100 mm, 3/8" pipe thread</li> </ul>	5703866102509
	ETFP-1A	<ul> <li>Accessories for temperature sensors</li> <li>Heat paste with injector</li> <li>3g</li> </ul>	5703502500898
12.2 4 40 0 12.2 12	OJ-Air2-WP55	<ul> <li>Room temperature sensor</li> <li>Set point offsetting ±5°C</li> <li>PT1000 sensor</li> </ul>	5703502701707
•	OJ-Air2PWR80	<ul> <li>Trafo for DIN-rail mounting</li> <li>1 x 230, 2 x 24V/2 x 60VA</li> </ul>	5703502701738
	ETT-KH	Cover for GreenZone modules, ETT-6 and TRD, wall mounting	5703502590042

## KNOW HOW CREATES

For over half a century OJ Electronics has specialised in designing and developing electronic controls for HVAC and underfloor heating systems.

With a reliable yet flexible supply chain, we take pride in delivering quality and performance in all our systems.

We understand the challenges our customers face and work closely with them to find original solutions. And by channelling our insight we create new opportunities for professionals throughout the industry to provide greater comfort.

OJ ELECTRONICS A/S

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