Full-Range Pressure and Ventilation Control

KNOW
HOW
CREATES

HVAC
CONTROLS & POWER

OJ Air Pressure

Ventilation Controllers and Pressure Transmitters

OJ ELECTRONICS
BY BITZER GROUP

Application Specific Solutions

Ventilation controllers

Use this range for fan control, damper control – and inside rooftop fans. Choose between several variants – from small, simple and straightforward to larger units for sophisticated control.

Equipment made to match your needs

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.

Our development team responded to customer wishes when they made the new range: They developed application-specific versions of our well-known and highly accurate pressure transmitters. They also created all-new ventilation controllers that include built-in versions for rooftop fans.

The result? This range is sure to have exactly what you – and your clients – need to monitor and control air flow and pressure. Anywhere at all. And with astounding accuracy.

A version for every application

OJ Electronics was the first to introduce the kind of sophisticated, easy-to-use and highly accurate pressure transmitters you'll find in the Pressure Transmitter series (PTH). By popular demand we have expanded that range, creating variants that are ideally suited for a vast selection of applications.

Pressure transmitters with relays

Excellent, all-round choice for field installation. Use for filter monitoring, frost protection, heating coil protection and more.

Pressure transmitters

The classic range. Use for trouble-free pressure measurement, flow measurement and filter monitoring.

Put pressure transmitters

A great choice for use with air handling units. Fitted with two inputs for pressure and two inputs for temperature, these units are not just cost-efficient, but also very easy to install.

Plug & Play

Based on Modbus technology, the majority of the OJ Air Pressure programme is true Plug & Play technology – and every single solution is very easy to install.
If you want even more sophisticated control, the entire range is a perfect match for the OJ Drives™, OJ Air™ Plus and OJ GreenZone™ product ranges.

Energy savings

These pressure transmitters and ventilation controllers offer a simple way of ensuring very efficient system performance: getting exactly the right pressure translates into system savings. Filter monitoring also helps conserve power by ensuring that dirty filters are replaced before pressure drop leads to excessive energy waste.

Reliable solution

OJ Electronics' original PTH pressure transmitters set new standards for accuracy and are used by quality-conscious clients around the world. This expanded range builds directly on their tried-and-tested technology: They fit all applications, all measuring ranges, and ensure extremely accurate control.

Ventilation Controllers

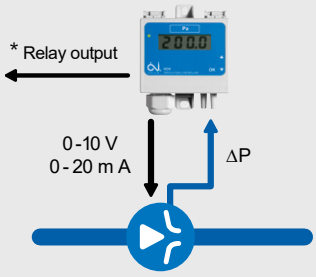
The VCH range meets many different needs. The compact versions are ideal for e.g. incorporating into rooftop fans, while the 230 V version with BMS are typically used in building projects, such as blocks of flats, where they control air exhausts. Both types are ideal matches for the OJ-DV range of drives. The range also allows for operation at different speeds, e.g. for night, day and override mode. And our most recent variant offers four set points, making it ideal for local exhaust ventilation applications such as kitchen fans.

Of course you get the easy connectivity you expect from an OJ solution. For the VCH-1212-P model, which is used in conjunction with the pressure transmitter of your choice, you can even get Modbus connectivity for optimum accuracy – and access to a range of BMS functions, including status readouts and alarms.

Fan controller

Type: VCH-3202-DI / VCH-3202-DR

The unit controls the fan motor, adjusting its performance to ensure constant air pressure/flow.

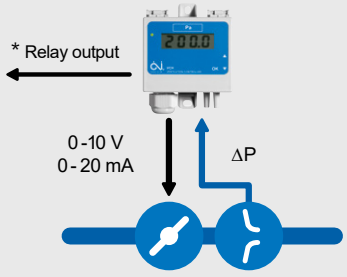


* Only applies for type VCH-3202-DR

Damper controller

Type: VCH-3202-DI / VCH-3202-DR

The unit regulates the damper to ensure constant air pressure/flow in the ducts.

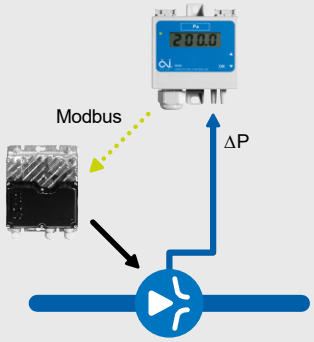


* Only applies for type VCH-3202-DR

Rooftop controller + OJ-DV

Type: VCH-6201-DI

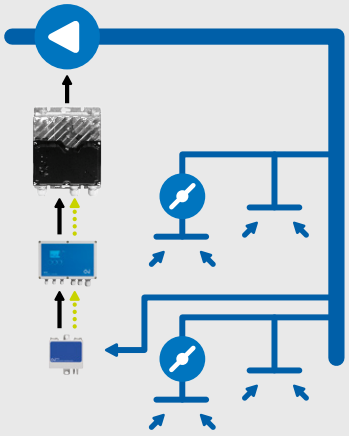
The unit controls a rooftop fan via an OJ-DV drive to ensure constant air pressure/flow in the ducts.



Apartment block ventilation

Type: VCH-1212-P

Together with one of the pressure sensor units (PTH), the 230V VCH controls any 10V motor to ensure constant air pressure in the ducts.



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		VCH-3202-DI	VCH-3202-DR	VCH-3212-DI	VCH-3222-DI	VCH-6201-DI	VCH-1212-P
FUNCTIONALITY	Display readouts	•	•	•	•	•	•
	Resolution 0.1 Pa	•	•	•	•	•	
	Flow measurement	•	•	•	•	•	
	Ext Modbus RTU RS-485 for BMS						•
	Start/Stop input				•		•
	Screw terminal connection	•	•	•		•	•
	Spring terminal connection				•		
	1 x Cable Gland PG11, Ø3-10 mm	•	•	•	•	•	
	3 x Cable Gland M12, Ø2.5-6.5 mm						•
	2 x Cable Gland M16, Ø4.0-9.5 mm						•
	1 x Cable Gland M20, Ø5.5-12.0 mm						•
	Number of Setpoints	1	1	4	Variable	1	3
	Output: 0-10 V, 4-20 mA, 2-10 V, 0-20 mA	•	•	•	•		0-10 V
	Output: Modbus to OJ Drive series					•	•
	Relay 1 mA – 1 A SPDT 0-30 V		•				
	Alarm/Motor relay 8 A AC1, 3 A AC3, 0-230 VAC						•
	NTC 10 K/12 K/22 K sensor input						•
	Available pressure measuring ranges	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	*1
	Available flow measuring ranges	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable	
TECHNICAL DATA	Pressure ranges: Pa	0 ... 2,500	0 ... 2,500	0 ... 2,500	0 ... 2,500	0 ... 2,500	*1
	Pressure ranges: Inch water column		0 ... 10.4				
	Flow ranges: l/s – m^3/h – m^3/s – cfm	0.000...9,999	0.000...9,999	0.000...9,999	0.000...9,999	0.000...9,999	
	Power supply: 24 VAC ±15%, 50/60 Hz	•	•	•	•	•	
	Power supply: 13.5-28 VDC	•	•	•	•	•	
	Power supply: 230 VAC ±10 %, 50 Hz						•
	Power consumption	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W
	Temperature range	-20/+40 *2	-20/+40 *2	-20/+40 *2	-20/+40 *2	-20/+40 *2	-30/+50
	Enclosure rating	IP55	IP55	IP55	IP55	IP55	IP54
	Long-term stability, typically 1 year	4.0 Pa	4.0 Pa	4.0 Pa	4.0 Pa	4.0 Pa	
	Size [l:h:w] 75 x 91 x 38	•	•	•	•	•	
	Size [l:h:w] 223 x 175 x 55						•
	Accuracy, display/modbus readouts < 0.5 % x mv + 2.5 Pa	•	•	•	•	•	*1
	Accuracy, analogue output signal < 0.5 % x MV + 0.3 % x SR + 2.5 Pa	•	•	•	•		*1

MV = Measured Value.
SR = Set measuring Range.

*1 = VCH-1212-P is delivered without pressure sensor. Choose from the PTH variants.
*2 = Up to +70°C if DC is used as supply voltage.

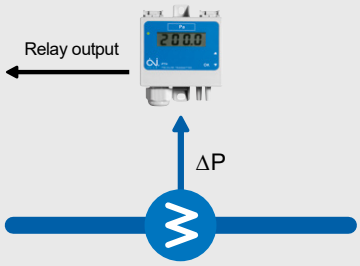
Pressure Transmitters with Relays

This pressure transmitter has built-in relays. It is an excellent all-round choice for field installation; it's versatility makes it ideally suited for handling situations where you do not know exactly what kind of controllers will be used – for example whether the controller will require 0-10 V/0-20 mA or a relay signal. And the relay output can even be inverted.

Use the pressure transmitters to make sure filters are replaced in time, to be warned about ice forming in the heat exchanger, and to ensure sufficient air flow before heating coils are switched on.

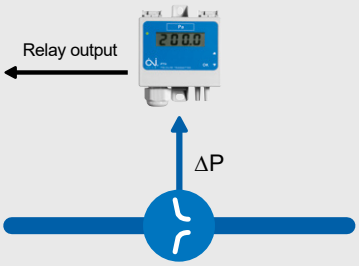
Filter monitoring

The relay is activated when the pre-determined pressure is reached. This version monitors the filter and indicates when it needs replacing.



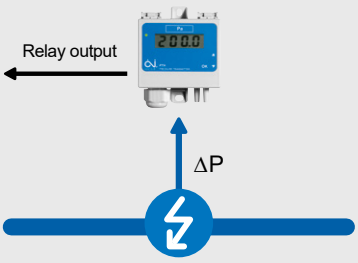
Flow monitoring

This version monitors the air flow; the relay is activated when the pre-determined air flow is reached.



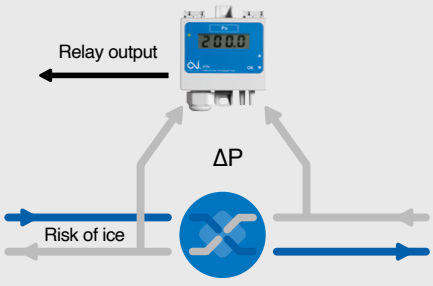
Overheat monitoring

Prevents overheating by making sure that there is sufficient air pressure across the electric heating coil before it can be switched on.



Frost protection/alarm

Lets you know whether ice is forming in the heat exchanger by detecting increases in pressure.



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		PTH-3202-DR
FUNCTIONALITY	Display readouts	•
	Resolution 0.1 Pa	•
	Flow measurement	•
	Spring terminal connection	•
	Cable Gland PG11, Ø3-10 mm	•
	Output: 0-10 V, 4-20 mA, 2-10 V, 0-20 mA	•
	Relay 1 mA – 1 A SPDT 0-30 V	•
	Available pressure measuring ranges	Adjustable
	Available flow measuring ranges	Adjustable
TECHNICAL DATA	Pressure ranges: Pa	0 ... 2,500
	Pressure ranges: Inch Water Column	0 ... 10.4
	Flow ranges: l/s – m3/h – m3/s – cfm	0.000 ... 9,999
	Power supply: 24 VAC ±15 %, 50/60 Hz	•
	Power supply: 13.5-28 VDC	•
	Power consumption	0.5 W
	Temperature range	-20/+40 *1
	Enclosure rating IP55	•
	Long-term stability, typically 1 year	4.0 Pa
	Size [l:h:w] 75 x 91 x 38	•
	Accuracy, display readouts < 0.5 % x MV + 2.5 Pa	•
	Accuracy, analogue output signal < 0.5 % x MV + 0.3% x SR + 2.5 Pa	•

MV = Measured Value.
SR = Set measuring Range.

*1 = Up to +70°C if DC is used as supply voltage.

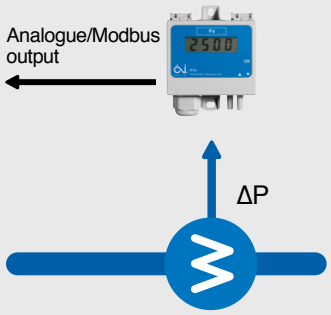
Accurate Pressure Transmitters

This classic range of pressure transmitters is a firm favourite with quality-conscious professionals worldwide. These flexible units measure flow/pa with impressive accuracy and can be used wherever you want a specific under/overpressure.

Available in nine variants, with or without display and with Modbus or analogue output (0-10 V and 0-20 mA) – choose the version you need to measure pressure, flow in ventilation ducts or through filters, etc.

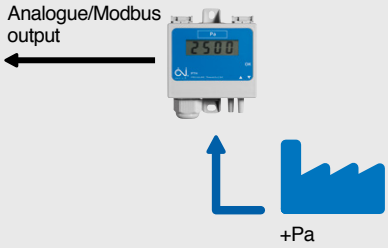
Filter monitoring

This transmitter measures the actual pressure through the filter, making it easy to ensure that filters are replaced in time.



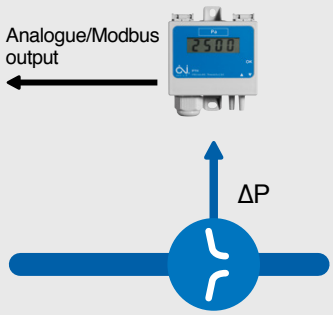
Pressure measurement

Here, the unit is used to measure air pressure in a factory space. Visual readouts are provided on the display, and the data can also be transmitted to external equipment.



Flow monitoring

The transmitter not only measures whether there is air flow in the ventilation ducts, but also provides exact numerical values. Incremental changes down to 0.1 Pa are instantly recorded and converted into flow adjustments, which will be shown on the display.

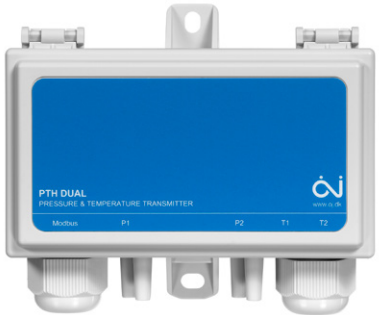


		PTH-3202	PTH-3502	PTH-3202-DF	PTH-3203-DF	PTH-3502-DF	PTH-6201	PTH-6201-DF	PTH-6202	PTH-6502
FUNCTIONALITY	Display readouts			•	•	•		•		
	Resolution 0.1 Pa			•	•	•		•		
	Flow measurement			•	•	•		•		
	Modbus communication						•	•	•	•
	Quickplug™ connection								•	•
	Screw terminal connection	•	•	•	•	•	•	•		
	Cable Gland PG11, Ø3-10 mm	•	•	•	•	•	•	•		
	Output: 0-10 V, 4-20 mA, 2-10 V, 0-20 mA	•	•	•	•	•				
	Available pressure measuring ranges	8	8	8	10	8	Auto	Auto	Auto	Auto
	Available flow measuring ranges			14	14	14		14		
TECHNICAL DATA	Pressure ranges: Pa	-50 ... +50 0 ... 100 0 ... 150 0 ... 300 0 ... 500 0 ... 1,000 0 ... 1,600 0 ... 2,500	0 ... 500 0 ... 1,000 0 ... 1,600 0 ... 2,000 0 ... 2,500 0 ... 3,000 0 ... 4,000 0 ... 5,000	-50 ... +50 0 ... 100 0 ... 150 0 ... 300 0 ... 500 0 ... 1,000 0 ... 1,600 0 ... 2,500	0 ... 25 0 ... 50 0 ... 100 0 ... 200 0 ... 250 0 ... 500 0 ... 625 0 ... 1,000 0 ... 1,250 0 ... 2,250	0 ... 500 0 ... 1,000 0 ... 1,600 0 ... 2,000 0 ... 2,500 0 ... 3,000 0 ... 4,000 0 ... 5,000	0 ... 2,500	0 ... 2,500	0 ... 2,500	0 ... 5,000
	Flow ranges: l/s – m3/h – m3/s – cfm			0 ... 1.00 0 ... 3.00 0 ... 5.00 0 ... 10.00 0 ... 30.00 0 ... 50.00 0 ... 99.99 0 ... 100.0 0 ... 300.0 0 ... 500.0 0 ... 1,000 0 ... 3,000 0 ... 5,000 0 ... 9,999	0 ... 1.00 0 ... 3.00 0 ... 5.00 0 ... 10.00 0 ... 30.00 0 ... 50.00 0 ... 99.99 0 ... 100.0 0 ... 300.0 0 ... 500.0 0 ... 1,000 0 ... 3,000 0 ... 5,000 0 ... 9,999	0 ... 1.00 0 ... 3.00 0 ... 5.00 0 ... 10.00 0 ... 30.00 0 ... 50.00 0 ... 99.99 0 ... 100.0 0 ... 300.0 0 ... 500.0 0 ... 1,000 0 ... 3,000 0 ... 5,000 0 ... 9,999		0 ... 1.00 0 ... 3.00 0 ... 5.00 0 ... 10.00 0 ... 30.00 0 ... 50.00 0 ... 99.99 0 ... 100.0 0 ... 300.0 0 ... 500.0 0 ... 1,000 0 ... 3,000 0 ... 5,000 0 ... 9,999		
	Power supply: 24 VAC +- 15 %, 50/60 Hz	•	•	•	•	•	•	•		
	Power supply: 13.5 - 28 VDC	•	•	•	•	•	•	•	•	•
	Power consumption	0.34 W	0.34 W	0.5 W	0.5 W	0.5 W	0.34 W	0.5 W	0.34 W	0.34 W
	Temperature range	-20/+40 *1	-20/+40 *1	-20/+40 *1	-20/+40 *1	-20/+40 *1	-20/+40 *1	-20/+40 *1	-20/+40 *1	-20/+40 *1
	Enclosure rating IP55	•	•	•	•	•	•	•	•	•
	Long-term stability, typically 1 year	4.0 Pa	8.0 Pa	4.0 Pa	4.0 Pa	8.0 Pa	4.0 Pa	4.0 Pa	4.0 Pa	8.0 Pa
	Size [l:h:w] 77 x 91 x 38	•	•	•	•	•	•	•	•	•
	Accuracy, display/modbus < 0.5 % x MV + 2.5 Pa			•	•		•	•	•	
	< 0.5 % x MV + 5 Pa					•				•
	Accuracy, analogue output signal < 0.5 % x MV + 0.3 % x SR + 2.5 Pa	•		•	•					
	< 0.5 % x MV + 0.3 % x SR + 5 Pa		•			•				

MV = Measured Value.
SR = Set measuring Range.

*1 = Up to +70°C if DC is used as supply voltage.

Dual-Input Pressure Transmitters

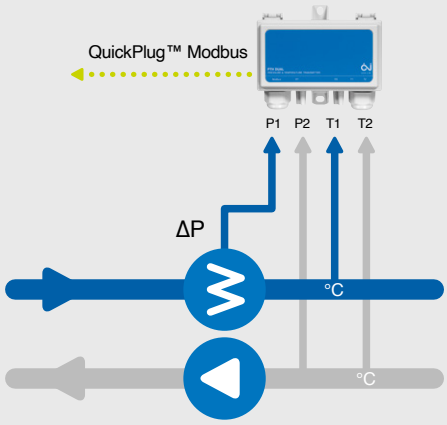


These units have two inputs for pressure and two inputs for temperature. Combining these dual inputs in a single unit makes installation quicker and reduces the risk of mistakes: factory operators/installers only have to handle one unit at a time, and each unit has exactly the right number of inputs.

The dual-input pressure transmitters even communicate via Modbus. All units in the range can be installed in the exact location you want them to be, thereby promoting efficiency. And they are a very cost-efficient alternative to combining several units.

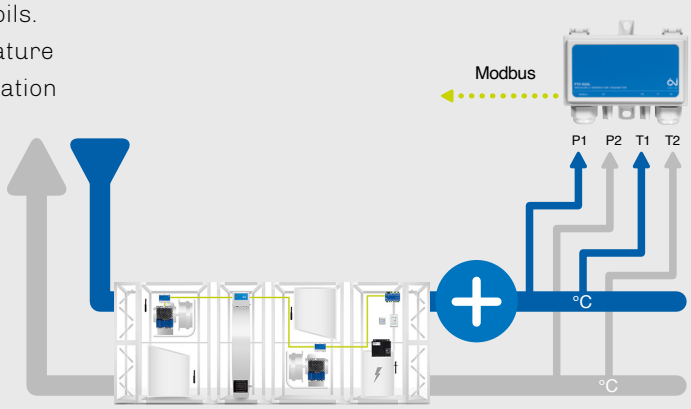
Factory installed

Install directly in AHU units to measure pressure across the filter and across the motor. Measuring the temperature in both air ducts. Communication via Modbus for easy integration in the system.



Field installed

Excellent for AHU systems with heating coils. The unit measures pressure and temperature in both air ducts and forwards the information via Modbus.



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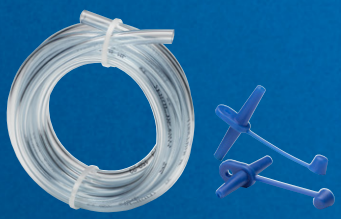
		PTH-6201-2	PTH-6501-2	PTH-6202-2
FUNCTIONALITY	Modbus communication	•	•	•
	Quickplug™ connection			•
	Spring terminal connection	•	•	
	Cable Gland PG11, Ø3-10 mm	•	•	
	NTC12K / PT1000 sensor input	•	•	•
	Available pressure measuring ranges	Auto	Auto	Auto
TECHNICAL DATA	Pressure ranges: Pa	0 ... 2,500	0 ... 5,000	0 ... 2,500
	Power supply: 13.5 - 28 VDC	•	•	•
	Power consumption	0.4 W	0.4 W	0.4 W
	Temperature range	-20/+40 *1	-20/+40 *1	-20/+40 *1
	Enclosure rating IP54	•	•	•
	Long-term stability, typically 1 year	4.0 Pa	8.0 Pa	4.0 Pa
	Size [l:h:w] 110 x 95 x 43	•	•	•
	Accuracy < 0.5 % x MV + 2.5 Pa	•		•
	< 0.5 % x MV + 5 Pa		•	

MV = Measured Value. *1 = Up to +70°C if DC is used as supply voltage.

Accessories for OJ Air Pressure

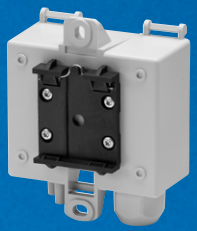


PTH-Connection-Kit

Tube, 2 m.
2 x tube connection.

DV-VCH-Cable

Cable to connect VCH and DV, 1 m.



DIN-rail mount

All OJ Air Pressure products can be delivered with DIN-rail mounting. Contact our sales department.

The OJ Way

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Founded in 1964 and headquartered in Sønderborg, Denmark, OJ Electronics produces electronic controls for underfloor heating and HVAC controls and drives. Our products are available through partners and distributors worldwide, and we have subsidiaries and sales offices in key markets, including the United States and Poland. Everywhere, we are known for our innovative approach, insistence on product quality, and deep application knowledge – all of which helps customers differentiate themselves in the market.

In June 2023, OJ Electronics was acquired by BITZER Electronics, a BITZER Group company also headquartered in Sønderborg. This makes OJ Electronics part of the BITZER Group family, which is represented at 75 locations in over 40 countries and employs some 4000 people worldwide.

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OJ ELECTRONICS A/S

HEADQUARTERS
Stenager 13 B
6400 Sønderborg
Denmark

www.ojelectronics.com

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