



DESCRIPTION

Universal electronic device **Δp – FILTER-CONTROL** with **programmable Δp range**, which the user can programme, via the parameter **rAn**, himself within the measuring span of a group.

With 2 **relay outputs**, 1x max. limiting value and 1x min limiting value. 4 linear **analogue outputs 0-20 mA, 4-20 mA, 0-10 V and 2-10 V** are programmable. **Universal on supply voltages**: Can be connected to 110-120 VAC, 230-240 VAC and 24 VDC. Small IP65 housing in shapely design.

Examples: Ventilation and air-conditioning units, clean room technology, filter control, fill level control and regulation, flow detection system, etc.

The differential pressure (+ P1↑ und P2↓ -), the positive pressure (+ P1↑) or the negative pressure (P2↓ -) is measured via the gauge connections and displayed on the bright red display. The target values can also be displayed and thus set precisely.

The two **Δp switching point**, parameter **ALL (ALARM min)** and parameter **ALH (ALARM max)** are set via the keys. The ALARM switching points are for signalling an alarm in the case of a shortfall or excess on pressure of the Δp values in the control range. After switching on the power supply, the switching points can be suppressed via the parameters **ALS** and **AHS** for an adjustable time, in order to prevent a false alarm, if e.g. the operating pressure must be built up after switching on the power supply

For air-related applications with the ever-present turbulences, a programmable **Δp damping** of the switching points, the analogue outputs and the display via the Parameter **dPd**, is a necessary, functional advantage.

4 linear short circuit protected analogue outputs **0-20 mA, 4-20 mA, 0-10 V and 2-10 V** are programmable and are available for pressure-proportional output signal for further process controls.

CHARACTERISTICS

- Universal electrical connection for 230-240 VAC and 110-120 VAC and 24 VDC in one device
- Robust, practical proven pressure sensor, insensitive to wet media
- Pressure sensor highly overloadable, temperature compensated and manual zero point calibration by pressing buttons
- Pressure connection protected (manufactured in series) with replaceable filters FT-P-X-CE and connected police-filter in addition, for measurement applications in a dusty environment.
- 9 device groups with user-programmable Δp measuring range within the measuring span of one group:

- Group 1:	0 - 0,4 mbar	to	0 - 2 mbar
- Group 2:	0 - 1 mbar	to	0 - 5 mbar
- Group 3:	0 - 2 mbar	to	0 - 10 mbar
- Group 4:	0 - 10 mbar	to	0 - 50 mbar
- Group 5:	0 - 20 mbar	to	0 - 100 mbar
- Group 6:	0 - 100 mbar	to	0 - 500 mbar
- Group 7:	0 - 200 mbar	to	0 - 1000 mbar
- Group 8:	0 - 1 bar	to	0 - 5 bar
- Group 9:	0 - 2 bar	to	0 - 10 bar
- Short circuit protected analogue output 0-20 mA, 4-20 mA, 0-10 V and 2-10 V programmable
- Programmable Δp damping: Approx. 1 s to 240 s
- Relay output 1, limiting value contact, Alarm max, programmable
- Relay output 2, limiting value contact, Alarm min., programmable
- relay outputs with switch-over contacts, **gilded**, potential-free, fail safe, switchable for manual tests
- Extreme ambient temperature range -20°C to +60°C
- Housing protection type IP 65
- Universal device for the lowest need for storage space, with meaningful functions required in practice
- Machinery directive 2006/42/EC, low voltage directive 2006/95/EC and EMC directive 2004/108/EC are fulfilled
- High reliability via "burn in"

TECHNISCHE DATEN / TECHNICAL DATA

Gruppe - max. Messbereich: / Group - max. range:

Messbereiche Δp	:	0-0.4 - 0-2	Messspanne / measuring range	mbar.....	1 - 2.....ORDER-INDEX: mbar-
Gruppe 1-9	:	0-1 - 0-5	Messspanne / measuring range	mbar.....	2 - 5.....ORDER-INDEX: mbar-
Pressure ranges Δp	:	0-2 - 0-10	Messspanne / measuring range	mbar.....	3 - 10.....ORDER-INDEX: mbar-
Group 1-9	:	0-10 - 0-50	Messspanne / measuring range	mbar.....	4 - 50.....ORDER-INDEX: mbar-
	:	0-20 - 0-100	Messspanne / measuring range	mbar.....	5 - 100.....ORDER-INDEX: mbar-
	:	0-100 - 0-500	Messspanne / measuring range	mbar.....	6 - 500.....ORDER-INDEX: mbar-
	:	0-200 - 0-1000	Messspanne / measuring range	mbar.....	7 - 1000.....ORDER-INDEX: mbar-
	:	0-1b - 0-5b	Messspanne / measuring range	bar.....	8 - 5b.....ORDER-INDEX: bar -
	:	0-2b - 0-10b	Messspanne / measuring range	bar.....	9 - 10b.....ORDER-INDEX: bar -

**Wählen Sie eine Gruppe aus für die Messbereiche, die im Gerät verfügbar sein sollen.
Please choose out of one group for the ranges, which should be integrated in the unit.**

Anzeige, Display : Digital, 3-stellig, 7-Segment - LED rot, 14 mm hoch :.....**ORDER-INDEX: -D-**
Digital, 3-digit, 7-segment - LED (red), 14 mm high.

Δp -Dämpfung, Damping : Programmierbar / programmable: ca. 0 s bis / to 240 s

Überlastbarkeit : **Statischer Gleichdruck einseitig / Static balanced pressure on one side:**
Overload capacity : Messbereich / range, bis / up to: 0.4 - 10 mbar: pmax = 250 mbar
Messbereich / range, bis / up to: 10 - 100 mbar: pmax = 750 mbar
Messbereich / range, bis / up to: 100 - 1000 mbar: pmax = 4 bar
Messbereich / range, bis / up to: 1b - 10b bar: pmax = 20 bar
Statischer Gleichdruck beidseitig / Static balanced pressure on two sides:
Messbereich / range, bis / up to: 0.4 - 10 mbar: pmax = 0,6 bar
Messbereich / range, bis / up to: 10 - 100 mbar: pmax = 5 bar
Messbereich / range, bis / up to: 100 - 1000 mbar: pmax = 10 bar
Messbereich / range, bis / up to: 1b - 10b bar: pmax = 20 bar

Gesamtfehler : Linearität + Hysterese + Reproduzierbarkeit : \pm 1% F.S. ab / from \geq 3 mbar Messbereich / range
Total error : Linearität + Hysterese + Reproduzierbarkeit : \pm 2% F.S. bis / to \leq 2 mbar Messbereich / range
Linearity + hysteresis + reproducibility : \pm 4% F.S. bis / to \leq 0,5 mbar Messbereich / range

Langzeitstabilität : 0,1 % F.S. / Jahr ab / from \geq 3 mbar Messbereich / range (F.S. = vom Messbereich / Full Scale)
: 0,25 % F.S. / Jahr bis / to \leq 2 mbar Messbereich / range
Long term stability : 0,5 % F.S. / year bis / to \leq 0,5 mbar Messbereich / range

Temperaturfehler : +10°C bis/to + 50°C: 0,025 % F.S. / K, ab / from \geq 3 mbar Messbereich / range
Temperature error : +10°C bis/to + 50°C : 0,050 % F.S. / K, ab / from \leq 2 mbar Messbereich / range
: +10°C bis/to + 50°C : 0,065 % F.S. / K, ab / from \leq 0,5 mbar Messbereich / range

Betriebstemperatur : -20°C bis + 60°C.
Operating temperature : - 4°F to +140°F.

Druckmedium : Nicht brennbare Gase, Luft, die Polyamid, Polyetherimide, POM, PVC, Silizium, Silicon, Edelstahl, Messing, Aluminium und Gold nicht angreifen.

Pressure media : Not flammable gases, air, not corroding polyamide, polyetherimide, POM, PVC, silicone, silicon, stainless steel, brass, aluminium and gold.

Signalansgänge : **1: Digital:** Relais / relay, 1x potentialfreier Wechsler: min 10 mA, max 2 A cos phi = 1, 24-255 V, 50-60 Hz, \geq 24 VDC.
Signal outputs : Leuchtdiode für ALARM max / LED ALARM max
2: Digital: Relais / relay, 1x potentialfreier Wechsler: min 10 mA, max 2 A cos phi = 1, 24-255 V, 50-60 Hz, \geq 24 VDC.
Leuchtdiode für ALARM min / LED ALARM min

All relay contacts 1x change-over switch : min 10 mA, max 2 A cos phi = 1, 24-255 V, 50-60 Hz, \geq 24 VDC.

Signalansgänge : **Analogausgang, linear, programmierbar / Analogue output, linear, programmable:**
Signal outputs : 0-20 mA, 4-20 mA, Bürde / load = max. 500 Ω , 0-10 V, 2-10 V, Bürde / load = min. 10 k Ω ,

Stromversorgung : **Universell: 230 - 240 V \approx** , 50 - 60 Hz umschaltbar auf / changeable to: **110 - 120 V \approx** , 50 - 60 Hz**ORDER-INDEX: 24DC-240AC**
Power supply : und / and **24 VDC** in einem Gerät verfügbar / in one unit available.
: **Universell: 24 V \approx** , 50 - 60 Hz umschaltbar auf / changeable to: **12 V \approx** , 50 - 60 Hz**ORDER-INDEX: 24DC-24AC**
: und / and **24 VDC** in einem Gerät verfügbar / in one unit available.

Nennleistung : Nominal power: 5 VA; 2,5 W
Elektr. Anschluss : Schraubklemmen, max. Drahtquerschnitt 2,5 mm²
Electric connection : Screw terminal, max cross section of wire AWG 14

Druckanschluss : 2x POM-Kunststoff-Schlauchverschraubungen mit Überwurfmutter / 2x POM-plastic-tube connectors with connector nut:
Pressure connection : Schlauchgrößen / size of tube: Da/OD = 6 mm, Di/ID = 4 mm:.....**ORDER-INDEX: -64POM-**

Druckanschluss : 2x POM-Kunststoff-Schlauchverschraubungen mit Überwurfmutter / 2x POM-plastic-tube connectors with connector nut:
Pressure connection : Schlauchgrößen / size of tube: Da/OD = 8 mm, Di/ID = 6 mm:.....**ORDER-INDEX: -86POM-**

Druckanschluss : 2x POM-Kunststoff-Schlauchtülle ohne Überwurfmutter / 2x POM-plastic-tube connectors without connector nut:
Pressure connection : Schlauchgrößen / size of tube: Di/ID = 6 mm,**ORDER-INDEX: -T6POM-**

Druckanschluss : 2x POM-Kunststoff-Schlauchtülle ohne Überwurfmutter / 2x POM-plastic-tube connectors without connector nut:
Pressure connection : Schlauchgrößen / size of tube: Di/ID = 8 mm,**ORDER-INDEX: -T8POM-**

Gehäuse **1** : Abmessungen / dimensions : 80 x 160 x 55 mm, Drei Kabeleinführungen, blind, M16x1,5 / Three cable inputs M16x1,5
Housing **1** : Material / material : ABS. Farbe / colour: grau / grey. Gewicht / weight : 350 g
Schutzart / protection class : IP 65.....**ORDER-INDEX: -AB-**

Vorschriften / Rules : EN 60 204-1, EN 61010, EN 61326-1, EN 61326-2-3, BGV A3.

Bestell-Nr.	:	DPD Gruppe-Messb. - Anzeige - Volt-AC - Anschluss - Gehäuse - CE
	:	mbar / bar - - - - -
ORDER-INDEX	:	DPD Group - range - Display - Volt-DC - Connection - Case - CE
Beispiel 1 / example 1	:	DPD 4 - 50 - D - 24DC-24AC - 64POM - AB - CE
Beispiel 2 / example 2	:	DPD 5 - 100 - D - 24DC-240AC - T6POM - AB - CE

Änderungen vorbehalten / subject to change, Stand 05.03.2015, Z1275001_003_DPD_GB

µmes-Made in Germany