### Product overview



## Differential pressure measurement

for precise detection and control of differential pressures













Designation Function	HE 5409 dp-measuring transducer	HE 5410 dp-measuring transducer	HE 5411 Lite + Basic dp-measuring transducer	HE 5411 Premium dp-measuring transducer
Measuring ranges	0 25 / 0 50 / 0 100 / 0 1000	9 measuring ranges from 2.5 1000 mbar	8 measuring ranges from ± 1.25 mbar 1000 mbar/max.	8 measuring ranges from ± 1.25 mbar 1000 mbar/max.
Auxiliary energy	10 36 V DC	10 36 V DC	19 36 V DC / 100 240 V AC	19 36 V DC / 100 240 V AC
Pressure connection	Plug-in connector Ø 6 mm external	Hose nipple Ø 6 mm inside	Plug-in connector Ø 6 mm external	Plug-in connector Ø 6 mm external
Output signals	4 20 mA, 2-wire system	4 20 mA, 2-wire system	0 10 V, 4 20 mA	0 10 V, 4 20 mA
Switching outputs	-	-	-	1× changeover contact 250 V AC, 5 A (limit value)
Inputs	-	-	-	-
Displays	-	-	4-digit 7-segment	4-digit 7-segment LED limit value display
Key operation	-	-	-	yes
PC parametrisation	-	-	yes	yes
Housing	Dustproof plastic housing	Plastic housing	Dustproof plastic housing	Dustproof plastic housing
⟨£x⟩ ATEX approval	Zone 2 + 22	-	Zone 2 + 22 *	Zone 22 *
Mounting	Wall mounting	Top hat rail mounting	Wall mounting	Wall mounting
Dimensions (W × H × D)	113 × 80 × 60 mm	22,5 × 113 × 115 mm	113 × 80 × 60 mm	113 × 80 × 60 mm
Advantages and special features	Zero point adjustment (button)	Zero point adjustment (pot)	Zero point adjustment (button)     Test output signal (50%)     Measuring range linear/square root	Zero point adjustment (button)     Test output signal (50%)     Measuring range linear/square root
Ranges of application	<b>✓</b> \	/entilation/air conditioning tech	nology ✓ Firing/heating tech	nology   Filter monitoring



## Delta-p measurement Small difference - big effect







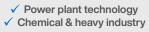


HE 5413 dp-measuring transducer	HE 5422 / HE 5422 HD dp-Regulator	HE 5422 MR dp-Controller with measuring hose cleaning	HE 5425 dp-measuring transducer
8 measuring ranges from ± 2.5 mbar 1000 mbar/max.	7 measuring ranges from ± 2.5 1000 mbar/max.	035/090/0450	6 measuring ranges from ± 10 mbar ± 100 bar
19 36 V DC / 100 240 V AC	24 V DC and 100 240 V AC in one	24 V DC and 100 240 V AC in one	15 45 V DC (Power loop)
2 × Plug-in connector Ø 6 mm external	Plug-in connector Ø 6 mm external	Plug-in connector Ø 6 mm external 1×8 mm for air blast (8 bar)	1/4-18 NPT
0 10 V, 4 20 mA	0 10 V, 4 20 mA	420 mA	4 20 mA, 2-wire, HART **
-	1× changeover contact (operation/fault) 1× changeover contact (cleaning) 2× changeover contacts (alarms)	1× changeover contact (operation/fault) 1× changeover contact (cleaning) 2× changeover contacts (alarms)	dp; derived from: Flow rate (volume and measured flow), fill level (level, volume, mass)
-	3 × digital inputs 24 V DC: start, post-cleaning, hold measured value	2 × digital inputs 24 V DC: start, post-cleaning,	-
-	4-digit 7-segment 8 × LED status displays 16 × LED differential pressure column	3-digit 7-segment 11 × LED status displays 16 × LED differential pressure column	5-digit, 7-segment, 8 mm 8-digit, 14-segment, 5 mm bargraph 2 % resolution
-	yes	yes	yes
yes	yes	yes	yes
Dustproof plastic housing	Dustproof plastic housing/ Die-cast aluminum housing	Dustproof plastic housing	Diecast aluminum housing, stainless steel, laminated safety glass
Zone 22	Zone 22	Zone 22	-
Wall mounting	Wall mounting	Wall mounting	Wall and pipe mounting
191 × 80 × 60 mm	113 × 80 × 60 / 159 × 128 × 60 mm	200 × 150 × 100 mm	130 × 205 × 128 mm
<ul> <li>Up to 3 measuring channels per devic</li> <li>M12 connector plug w/o cable gland</li> <li>Galvanically separated outputs selectable</li> </ul>	LED differential pressure column     Intuitive, simple operation     HD version in robust die-cast aluminum housing	LED differential pressure column     Intuitive, simple operation     Automatic cleaning of the sample gas line	HD version in robust die-cast aluminum housing     Housing can be rotated 360 °     Display can be rotated 360 °

19...36 V DC (Lite, Basic, Premium) except for measuring range ± 1,25 mbar: UK € 13D Ex tc IIIC T135° Dc IP65 19...36 V DC (Lite, Basic) except for measuring range  $\pm$  1,25 mbar:  $\stackrel{\text{UK}}{\text{CR}}$  C  $\stackrel{\text{UK}}{\text{CR}}$  II3G Ex nR IIC T4 Gc 100...240 V AC: UK C € IIID Ex to IIIC T135° Do IP65

Measuring range ± 1,25 mbar: CAC€

\*\* Highway Addressable Remote Transducer







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**Renate Thörner,** Product Manager at Bio-Circle Surface Technology GmbH



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