

Product overview

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# Differential pressure measurement

for precise detection and control of differential pressures







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## Delta-p measurement



Designation Function	<b>HE 5409</b> dp-measuring transducer	<b>HE 5410</b> dp-measuring transducer	<b>HE 5411 Lite</b> dp-measuring transducer	<b>HE 5411 Basic</b> dp-measuring transducer
<b>Measuring ranges/ Overload</b>	0 ... 25; 0 – 50 / 750 mbar 0 ... 100 / 750 mbar 0 ... 1000 / 4000 mbar	9 measuring ranges from 2.5 ... 1000 mbar	8 measuring ranges from ± 1.25 mbar: ... 1000 mbar/max. Overpressure of 0.35 – 5 bar	8 measuring ranges from ± 1.25 mbar: ... 1000 mbar/max. Overpressure of 0.35 – 5 bar
<b>Auxiliary energy</b>	10 ... 36 V DC	11 ... 36 V DC	19 ... 30 V DC / 100 ... 240 V AC	19 ... 30 V DC / 100 ... 240 V AC
<b>Pressure connection</b>	Push-in fitting 6 mm external	Hose nipple 6 mm inside	Push-in fitting 6 mm external	Push-in fitting 6 mm external
<b>Output signals</b>	4 ... 20 mA, 2-wire system	4 ... 20 mA, 2-wire system	0 ... 10 V, 4 ... 20 mA	0 ... 10 V, 4 ... 20 mA
<b>Switching outputs</b>	-	-	-	-
<b>Inputs</b>	-	-	-	-
<b>Displays</b>	-	-	-	4-digit 7-segment
<b>Key operation</b>	-	-	-	-
<b>PC parametrisation</b>	-	-	yes	yes
<b>Housing</b>	Dustproof plastic housing	Plastic housing	Dustproof plastic housing	Dustproof plastic housing
 <b>ATEX approval</b>	Zone 2 + 22	-	Zone 2 + 22 *	Zone 2 + 22 *
<b>Mounting</b>	Wall mounting	Top hat rail mounting	Wall mounting	Wall mounting
<b>Dimensions (W × H × D)</b>	113 × 80 × 60 mm	22,5 × 113 × 115 mm	113 × 80 × 60 mm	113 × 80 × 60 mm
<b>Advantages and special features</b>	Zero point adjustment (button)	Zero point adjustment (pot)	<ul style="list-style-type: none"> <li>Zero point adjustment (button)</li> <li>Test output signal (50%)</li> <li>Measuring range linear/square root</li> </ul>	<ul style="list-style-type: none"> <li>Zero point adjustment (button)</li> <li>Test output signal (50%)</li> <li>Measuring range linear/square root</li> </ul>
<b>Ranges of application</b>	 Ventilation/air conditioning technology  Firing/heating technology  Filter monitoring			



# Small difference – big effect



HE 5411 Premium 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 ± 1.25 mbar: ... 1000 mbar/max. Overpressure of 0.35 – 5 bar	7 measuring ranges from ± 2.5 ... 1000 mbar/max. Overpressure of 0.35 – 5 bar	0 ... 35 / 160 mbar 0 ... 90 / 400 mbar 0 ... 450 / 2000 mbar	6 measuring ranges from ± 10 mbar ... ± 100 bar
19 ... 30 V DC / 100 ... 240 V AC	24 V DC / 100 ... 240 V AC	24 V DC / 100 ... 240 V AC	15 ... 45 V DC (Power loop)
Push-in fitting 6 mm external	Push-in fitting 6 mm external	Push-in fitting 6 mm external 1 × 8 mm for air blast (8 bar)	¼-18 NPT
0 ... 10 V, 4 ... 20 mA	0 ... 10 V, 4 ... 20 mA	4 ... 20mA	4 ... 20 mA, 2-wire, HART **
1 × changeover contact 250 V AC, 5 A (limit value)	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 LED limit value display	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	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
113 × 80 × 60 mm	113 × 80 × 60 / 159 × 128 × 60 mm	200 × 150 × 100 mm	130 × 205 × 128 mm
<ul style="list-style-type: none"> <li>• Zero point adjustment (button)</li> <li>• Test output signal (50%)</li> <li>• Measuring range linear/square root</li> </ul>	<ul style="list-style-type: none"> <li>• LED differential pressure column</li> <li>• Intuitive, simple operation</li> <li>• HD version in robust die-cast aluminum housing</li> </ul>	<ul style="list-style-type: none"> <li>• LED differential pressure column</li> <li>• Intuitive, simple operation</li> <li>• Automatic cleaning of the sample gas line</li> </ul>	<ul style="list-style-type: none"> <li>• HD version in robust die-cast aluminum housing</li> <li>• Housing can be rotated 360 °</li> <li>• Display can be rotated 360 °</li> </ul>
	✓ Control    ✓ Monitoring of industrial filter systems		✓ Power plant technology ✓ Chemical & heavy industry

\* Labelling for devices with:

19...36 V DC (Lite, Basic, Premium) except for measuring range ± 1.25 mbar: UK CE Ex II 3D Ex tc IIIC T135° Dc IP65

19...36 V DC (Lite, Basic) except for measuring range ± 1.25 mbar: UK CE Ex II 3G Ex nR IIC T4 Gc

100...240 V AC: UK CE Ex II 3D Ex tc IIIC T135° Dc IP65

Measuring range ± 1.25 mbar: UK CE

\*\* Highway Addressable Remote Transducer



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*„We were particularly impressed by the  
open communication with the various  
departments, the contact persons  
and the good quality of the products“*

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



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