

# Clogging Indicators



Clogging indicators are devices that check the life time of the filter elements. They measure the pressure drop through the filter element directly connected to the filter housing.

These devices trip when the clogging of the filter element causes a pressure drop increasing across the filter element.

Filter elements are efficient only if their Dirt Holding Capacity is fully exploited. This is achieved by using filter housings equipped with clogging indicators. The indicator is set to alarm before the element becomes fully clogged.

MP Filtri can supply indicators of the following designs:

- Vacuum switches and gauges
- Pressure switches and gauges
- Differential pressure indicators

These type of devices can be provided with a visual, electrical or both signals. The electronic differential pressure clogging indicator is also available. It provides both analogical 4-20 mA output and digital warning (75% of clogging) and alarm (clogging) outputs.



# Clogging indicators



## Suitable indicator types

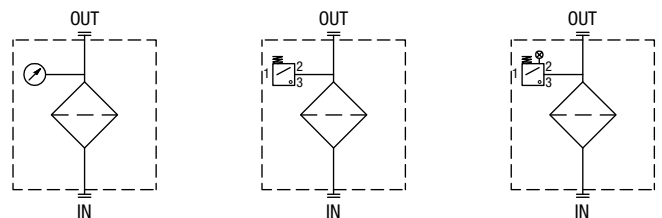
### VACUUM INDICATORS

Vacuum indicators are used on the Suction line to check the efficiency of the filter element.

They measure the pressure downstream of the filter element.

Standard items are produced with R 1/4" EN 10226 connection.

Available products with R 1/8" EN 10226 to be fitted on MPS series.

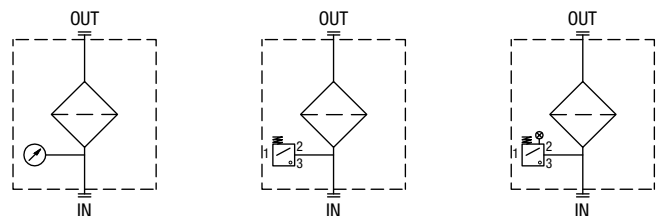


### BAROMETRIC INDICATORS

Pressure indicators are used on the Return line to check the efficiency of the filter element.

They measure the pressure upstream of the filter element.

Standard items are produced with R 1/8" EN 10226 connection.



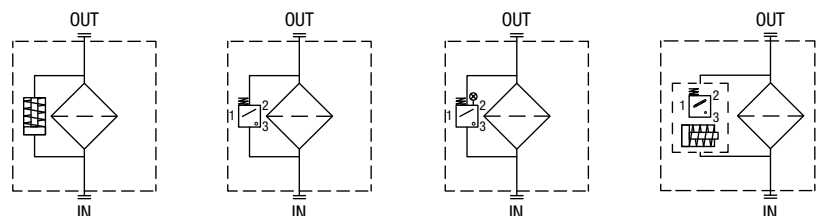
### DIFFERENTIAL INDICATORS

Differential indicators are used on the Pressure line to check the efficiency of the filter element.

They measure the pressure upstream and downstream of the filter element (differential pressure).

Standard items are produced with special connection G 1/2" size.

Also available in Stainless Steel models.



# VACUUM INDICATORS

## Dimensions

VE*50	
Electrical Vacuum Indicator	
R	Ordering code
EN 10226 - R1/4"	VE A 21 A A 50 P01
EN 10226 - R1/8"	VE B 21 A A 50 P01

A/F 27  
Max tightening torque: 25 N·m

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: NBR

**Technical data**

- Vacuum setting: -0.21 bar ±10%
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: EN 175301-803
- Resistive load: 5 A / 14 Vdc  
4 A / 30 Vdc  
5 A / 125 Vac  
4 A / 250 Vac
- Available Atex product: II 1GD Ex ia IIC Tx Ex ia IIIC Tx °C X
- CE certification

VL*51 - VL*52 - VL*53	
Electrical/Visual Vacuum Indicator	
R	Ordering code
EN 10226 - R1/4"	VL A 21 A A xx P01
EN 10226 - R1/8"	VL B 21 A A xx P01

A/F 27  
Max tightening torque: 25 N·m

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Transparent Nylon
- Contacts: Brass - Nylon
- Seal: NBR

**Technical data**

- Vacuum setting: -0.21 bar ±10%
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: EN 175301-803
- Type: 51                      52                      53
- Lamps: 24 Vdc              110 Vdc              230 Vac
- Resistive load: 1 A / 24 Vdc    1 A / 110 Vdc    1 A / 230 Vac

VL*71	
Electrical/Visual Vacuum Indicator	
Connections	Indicator code
EN 10226 - R1/4"	VL A 21 A A 71 P01
EN 10226 - R1/8"	VL B 21 A A 71 P01

A/F 27  
Max tightening torque: 25 N·m

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: NBR

**Technical data**

- Vacuum setting: -0.21 bar ±10%
- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: IEC 61076-2-101 D (M12)
- Lamps: 24 Vdc
- Resistive load: 0.4 A / 24 Vdc

VVA - VVB	
Axial Vacuum Gauge	
R	Ordering code
EN 10226 - R1/4"	VVA 16 P01
EN 10226 - R1/8"	VVB 16 P01

**Hydraulic symbol**

**Dial scale**

**Conversion to SI units**

[cmHg]	[bar]
-12	-0.16
-18	-0.24
-76	-1.01

**Materials**

- Case: Painted Steel
- Window: Transparent plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tube Cu-alloy soft soldered

**Technical data**

- Max working pressure: Static: 7 bar  
Fluctuating: 6 bar  
Short time: 10 bar
- Working temperature: From -40 °C to +60 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Accuracy: Class 2.5 according to EN 13190
- Degree of protection: IP31 according to EN 60529

VVR - VVS		
Radial Vacuum Gauge		
R	A/F	Ordering code
EN 10226 - R1/4"	14	VVR 16 P01
EN 10226 - R1/8"	11	VVS 16 P01

**Hydraulic symbol**

**Dial scale**

**Conversion to SI units**

[cmHg]	[bar]
-12	-0.16
-18	-0.24
-76	-1.01

**Materials**

- Case: Painted Steel
- Window: Transparent plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tube Cu-alloy soft soldered

**Technical data**

- Max working pressure: Static: 7 bar  
Fluctuating: 6 bar  
Short time: 10 bar
- Working temperature: From -40 °C to +60 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Accuracy: Class 2.5 according to EN 13190
- Degree of protection: IP31 according to EN 60529

DESIGNATION & ORDERING CODE								
<b>Series</b>	Configuration example 1:	VE	A	21	A	A	50	P01
<b>VE</b> Electrical vacuum indicator	Configuration example 2:	VL	B	21	A	A	71	P01
<b>VL</b> Electrical/Visual vacuum indicator	Configuration example 3:	VV	R	16				P01
<b>VV</b> Vacuum gauge								
<b>Type VE - VL</b>	<b>Type VV</b>							
<b>A</b> Connection EN 10226 - R1/4"	<b>A</b> Axial connection EN 10226 - R1/4"							
<b>B</b> Connection EN 10226 - R1/8"	<b>B</b> Axial connection EN 10226 - R1/8"							
	<b>R</b> Radial connection EN 10226 - R1/4"							
	<b>S</b> Radial connection EN 10226 - R1/8"							
<b>Vacuum setting</b>		VE	VL	VV				
<b>16</b> 0.16 bar				•				
<b>21</b> 0.21 bar		•	•					
<b>Seals</b>		VE	VL	VV				
<b>A</b> NBR		•	•					
<b>Thermostat</b>		VE	VL	VV				
<b>A</b> Without		•	•					
<b>Electrical connections</b>		VE	VL	VV				
<b>50</b> Connection EN 175301-803		•						
<b>51</b> Connection EN 175301-803, transparent base with lamps 24 Vdc			•					
<b>52</b> Connection EN 175301-803, transparent base with lamps 110 Vdc			•					
<b>53</b> Connection EN 175301-803, transparent base with lamps 230 Vdc			•					
<b>71</b> Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc			•					
	<b>Option</b>							
	<b>P01</b> MP Filtri standard							
	<b>Pxx</b> Customized							

# BAROMETRIC INDICATORS

## Dimensions

BEA*50	
<b>Electrical Pressure Indicator</b>	
Settings	Ordering code
1.5 bar $\pm$ 10%	BE A 15 H A 50 P01
2 bar $\pm$ 10%	BE A 20 H A 50 P01
<p><b>Hydraulic symbol</b></p>	
<p><b>Electrical symbol</b></p>	
<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: Brass</li> <li>- Base: Black Nylon</li> <li>- Contacts: Silver</li> <li>- Seal: HNBR</li> </ul>	
<p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 40 bar</li> <li>- Proof pressure: 60 bar</li> <li>- Working temperature: From -25 °C to +80 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree of protection: IP65 according to EN 60529</li> </ul>	
<p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Electrical connection: EN 175301-803</li> <li>- Resistive load: 5 A / 14 Vdc 4 A / 30 Vdc 5 A / 125 Vac 4 A / 250 Vac</li> </ul> <p>- Available Atex product: II 1GD Ex ia IIC Tx Ex ia IIIC Tx °C X </p> <p>- CE certification</p>	

BEM*41	
<b>Electrical Pressure Indicator</b>	
Settings	Ordering code
1.5 bar $\pm$ 10%	BE M 15 H A 41 P01
2 bar $\pm$ 10%	BE M 20 H A 41 P01
<p><b>Hydraulic symbol</b></p>	
<p><b>Electrical symbol</b></p>	
<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: Brass</li> <li>- Base: Black Nylon</li> <li>- Contacts: Silver</li> <li>- Seal: HNBR</li> </ul>	
<p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 40 bar</li> <li>- Proof pressure: 60 bar</li> <li>- Working temperature: From -25 °C to +80 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree of protection: IP67 according to EN 60529</li> </ul>	
<p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Electrical connection: Four-core cable</li> <li>- Resistive load: 5 A / 14 Vdc 4 A / 30 Vdc 5 A / 125 Vac 4 A / 250 Vac</li> </ul> <p>- CE certification On request this indicator can be provided with main connectors in use for wirings.</p>	

BET*10	
<b>Electrical Pressure Indicator</b>	
Settings	Ordering code
2 bar $\pm$ 10%	BET 20 H F 10 P01
2.5 bar $\pm$ 10%	BET 25 H F 10 P01
<p><b>Hydraulic symbol</b></p>	
<p><b>Electrical symbol</b></p>	
<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: Brass</li> <li>- Base: Black Nylon</li> <li>- Contacts: Silver</li> <li>- Seal: HNBR</li> </ul>	
<p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 10 bar</li> <li>- Proof pressure: 15 bar</li> <li>- Working temperature: From -25 °C to +100 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree of protection: IP65 according to EN 60529</li> </ul>	
<p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Electrical connection: AMP Superseal series 1.5</li> <li>- Resistive load: 0.5 A / 48 Vdc</li> <li>- Thermostat condition: Open up to 30 °C</li> </ul> <p>- CE certification</p>	

BET*30	
<b>Electrical Pressure Indicator</b>	
Settings	Ordering code
2 bar $\pm 10\%$	BET 20 H F 30 P01
2.5 bar $\pm 10\%$	BET 25 H F 30 P01

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR

**Technical data**

- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +100 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: Deutsch DT-04-2-P
- Resistive load: 0.5 A / 48 Vdc
- Thermostat condition: Open up to 30 °C
- CE certification

BET*50	
<b>Electrical Pressure Indicator</b>	
Settings	Ordering code
2 bar $\pm 10\%$	BET 20 H F 50 P01
2.5 bar $\pm 10\%$	BET 25 H F 50 P01

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR

**Technical data**

- Max working pressure: 10 bar
- Proof pressure: 15 bar
- Working temperature: From -25 °C to +100 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: EN 175301-803
- Resistive load: 0.5 A / 48 Vdc
- Thermostat condition: Open up to 30 °C
- CE certification

BL*51 - BL*52 - BL*53	
<b>Electrical/Visual Pressure Indicator</b>	
Settings	Ordering code
1.5 bar $\pm 10\%$	BL A 15 H A xx P01
2 bar $\pm 10\%$	BL A 20 H A xx P01

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Transparent Nylon
- Contacts: Silver
- Seal: HNBR

**Technical data**

- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: EN 175301-803
- Type: 51      52      53
- Lamps: 24 Vdc    110 Vdc    230 Vac
- Resistive load: 1 A / 24 Vdc    1 A / 110 Vdc    1 A / 230 Vac



# BAROMETRIC INDICATORS

## Dimensions

BL*71	
<b>Electrical/Visual Pressure Indicator</b>	
Settings	Ordering code
1.5 bar $\pm 10\%$	BL A 15 HA 71 P01
2 bar $\pm 10\%$	BL A 20 HA 71 P01

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR

**Technical data**

- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25 °C to +80 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP65 according to EN 60529

**Electrical data**

- Electrical connection: IEC 61076-2-101 D (M12)
- Lamps: 24 Vdc
- Resistive load: 0.4 A / 24 Vdc

BVA	
<b>Axial Pressure Gauge</b>	
Settings	Ordering code
1.4 bar $\pm 10\%$	BVA 14 P01
2.5 bar $\pm 10\%$	BVA 25 P01

**Hydraulic symbol**

**Dial scale**

BVA 14 P01

BVA 25 P01

**Materials**

- Case: Painted Steel
- Window: Transparent plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tube Cu-alloy soft soldered

**Technical data**

- Max working pressure: Static: 7 bar  
Fluctuating: 6 bar  
Short time: 10 bar
- Working temperature: From -40 °C to +60 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Accuracy: Class 2.5 according to EN 13190
- Degree of protection: IP31 according to EN 60529

BVR	
<b>Radial Pressure Gauge</b>	
Settings	Ordering code
1.4 bar $\pm 10\%$	BV R 14 P01
2.5 bar $\pm 10\%$	BV R 25 P01

**Hydraulic symbol**

**Dial scale**

BV R 14 P01

BV R 25 P01

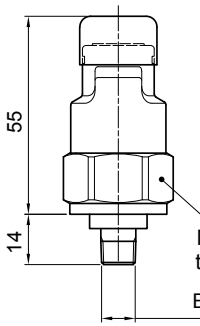
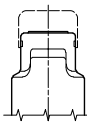
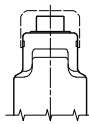
**Materials**

- Case: Painted Steel
- Window: Transparent plastic
- Dial: Painted Steel
- Pointer: Painted Aluminium
- Pressure connection: Brass
- Pressure element: Bourdon tube Cu-alloy soft soldered

**Technical data**

- Max working pressure: Static: 7 bar  
Fluctuating: 6 bar  
Short time: 10 bar
- Working temperature: From -40 °C to +60 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Accuracy: Class 2.5 according to EN 13190
- Degree of protection: IP31 according to EN 60529



BVP - BVQ		Hydraulic symbol	Materials
Visual Pressure Indicator			
Setting	Ordering code		
1.5 bar ±10%	BV P 15 H P01 BV Q 15 H P01		<b>Technical data</b> - Reset: BVP - Automatic reset BVQ - Manual reset - Max working pressure: 10 bar - Proof pressure: 15 bar - Working temperature: From -25 °C to +80 °C - Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 - Degree of protection: IP45 according to EN 60529
2 bar ±10%	BV P 20 H P01 BV Q 20 H P01		
A/F 27 Max tightening torque: 25 N·m EN 10226 - R1/8"		<b>Signals</b>	
			
		Absence of pressure (no indicator)	Presence of pressure (green button rises gradually)
			Clogged filter element (red button risen)

### DESIGNATION & ORDERING CODE

Series	Configuration example 1:	BE	M	15	H	A	41	P01
<b>BE</b> Electrical pressure indicator	Configuration example 2:	BL	A	20	H	A	71	P01
<b>BL</b> Electrical/Visual pressure indicator	Configuration example 3:	BV	R	14				P01
<b>BV</b> Visual pressure indicator	Configuration example 4:	BV	P	20	H			P01

Type	BE	BL	BV
<b>A</b> Standard type	•	•	<b>A</b> Axial connection pressure gauge
<b>M</b> With wired electrical connection	•		<b>R</b> Radial connection pressure gauge
<b>T</b> With thermal switch	•		<b>P</b> Visual indicator with automatic reset
			<b>Q</b> Visual indicator with manual reset

Pressure setting	BEA-BEM	BET	BLA	BVA-BVR	BVP-BVQ
<b>14</b> 1.4 bar				•	
<b>15</b> 1.5 bar	•		•		
<b>20</b> 2 bar	•	•	•		•
<b>25</b> 2.5 bar		•		•	

Seals	BE	BLA	BVA-BVR	BVP-BVQ
<b>H</b> HNBR	•	•		•

Thermostat	BEA-BEM	BET	BLA	BV
<b>A</b> Without	•		•	
<b>F</b> With		•		

Electrical connections	BEA	BEM	BET	BL	BV
<b>10</b> Connection AMP Superseal series 1.5			•		
<b>30</b> Connection Deutsch DT-04-2-P			•		
<b>41</b> Connection via four-core cable		•			
<b>50</b> Connection EN 175301-803	•		•		
<b>51</b> Connection EN 175301-803, transparent base with lamps 24 Vdc				•	
<b>52</b> Connection EN 175301-803, transparent base with lamps 110 Vdc				•	
<b>53</b> Connection EN 175301-803, transparent base with lamps 230 Vdc				•	
<b>71</b> Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc				•	

Option
<b>P01</b> MP Filtri standard
<b>Pxx</b> Customized

# DIFFERENTIAL INDICATORS

## Dimensions

DEA*50	
<b>Electrical Differential Indicator</b>	
Settings	Ordering code
1.2 bar ±10%	DE A 12 x A 50 P01
2 bar ±10%	DE A 20 x A 50 P01
5 bar ±10%	DE A 50 x A 50 P01
7 bar ±10%	DE A 70 x A 50 P01
9.5 bar ±10%	DE A 95 x A 50 P01

A/F 30  
Max tightening torque: 65 N·m

**Hydraulic symbol**

**Electrical symbol**

**Materials**

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR - FPM

**Technical data**

- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree protection: IP66 according to EN 60529  
IP69K according to ISO 20653

**Electrical data**

- Electrical connection: EN 175301-803
- Resistive load: 0.2 A / 115 Vdc

DEH*48	
<b>Hazardous Area Electronic Differential Indicator</b>	
Settings	Ordering code
5 bar ±10%	DE H 50 x A 48 P01
7 bar ±10%	DE H 70 x A 48 P01

A/F 25 mm  
Max tightening torque: 50 N·m

**Connection diagram**

**Materials**

- Body: AISI 316 Stainless steel
- Contacts: Rhodium (tungsten optional)
- Seal: MFQ - FPM

**Protection class** Ex ia IIC T4/T6: Intrinsically safe

**Temperature class** T4 (135 °C) and T6 (85 °C)

**Technical data**

- Max working pressure: 420 bar
- Working temperature: From -60 °C to +125 °C
- Connection type: M20 x 1.5 - 3 core polyrad cable supplied with 5 meters
- Contact type: SPCO/SPDT (Hermetically sealed - volt free contacts)
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP 66/67/68 according to EN 60529

**Electrical data**

- Current Ratings: 24v DC 830mA - 110v AC 180mA
- Electrical Ratings: Ui 30V - Li 250mA - Pi 1.3W

**Certification / Approvals:** ATEX, IECEx, TRCU, INMETRO

**Certification included as standard**

DEH*49	
<b>Hazardous Area Electronic Differential Indicator</b>	
Settings	Ordering code
5 bar ±10%	DE H 50 x A 49 P01
7 bar ±10%	DE H 70 x A 49 P01

A/F 25 mm  
Max tightening torque: 50 N·m

**Connection diagram**

**Materials**

- Body: AISI 316 Stainless steel
- Contacts: Rhodium (tungsten optional)
- Seal: MFQ - FPM

**Protection class** Ex d IIC T4/T6: Flameproof

**Temperature class** T4 (135 °C) and T6 (85 °C)

**Technical data**

- Max working pressure: 420 bar
- Working temperature: From -60 °C to +120 °C : ATEX, IECEx, TRCU, INMETRO  
From -60 °C to +105 °C : UL/CSA
- Connection type: 1/2" NPT - 3 core polyrad cable supplied with 5 meters
- Contact type: SPCO/SPDT (Hermetically sealed - volt free contacts)
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree of protection: IP 66/67/68 according to EN 60529

**Electrical data**

- Current Ratings: 24v DC 830mA - 110v AC 180mA
- Electrical Ratings: Supply Voltage | 24 VDC | 110 VAC |  
Max switching current | 830mA | 180mA |  
Max voltage | 150 V AC/DC |  
Power watts | 20 W VA |

**Certification / Approvals:** ATEX, IECEx, TRCU, INMETRO, UL/CSA Class I Division 1 Groups A-D, UL/CSA Class II Division 1 Groups E-G

**Certification included as standard**

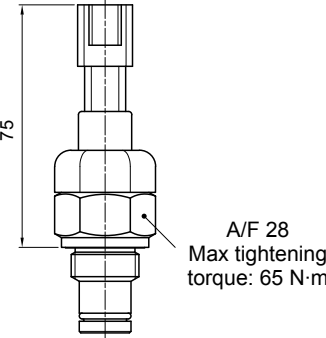
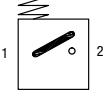
DEH*70		Connection diagram	Materials
<b>Hazardous Area</b> <b>Electronic Differential Indicator</b>			
Settings	Ordering code		
5 bar ±10%	DE H 50 x A 70 P01	<b>Protection class</b> EX ia IIC T6: Intrinsically safe  <b>Temperature class</b> T6 (85 °C)	<b>Technical data</b> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Working temperature: From -20 °C to +80 °C</li> <li>- Connection type: 4 pole male M12 connector - plastic</li> <li>- Contact type: SPCO/SPDT (Hermetically sealed - volt free contacts)</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids</li> <li>- Degree of protection: IP 66/67 according to EN 60529</li> </ul>
7 bar ±10%	DE H 70 x A 70 P01		
		<ul style="list-style-type: none"> <li>- Certification / Approvals: ATEX, IECEx, TRCU, INMETRO</li> <li>- Certification included as standard</li> </ul>	<b>Electrical data</b> <ul style="list-style-type: none"> <li>- Current Ratings: 24v DC 830mA - 110v AC 180mA</li> <li>- Electrical Ratings: Ui 30V - Li 250mA - Pi 1.3W</li> </ul>

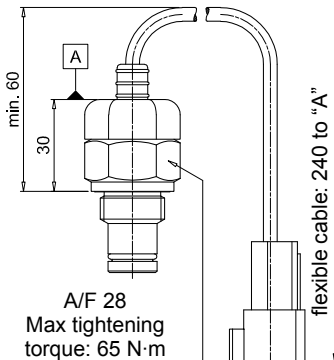
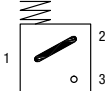
DEM*10		Hydraulic symbol	Materials
<b>Electrical Differential Indicator</b>			
Settings	Ordering code		
1.2 bar ±10%	DE M 12 x x 10 P01	<b>Technical data</b> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Proof pressure: 630 bar</li> <li>- Burst pressure: 1260 bar</li> <li>- Working temperature: From -25 °C to +110 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids</li> <li>- Degree protection: IP66 according to EN 60529</li> </ul>	<b>Electrical data</b> <ul style="list-style-type: none"> <li>- Electrical connection: AMP Superseal series 1.5</li> <li>- Resistive load: 0.2 A / 115 Vdc</li> <li>- Switching type: Normally open contacts (NC on request)</li> <li>- Thermal lockout: Normally open up to 30 °C (option "F")</li> </ul>
2 bar ±10%	DE M 20 x x 10 P01		
5 bar ±10%	DE M 50 x x 10 P01	<b>Electrical symbol</b>	
7 bar ±10%	DE M 70 x x 10 P01		
9.5 bar ±10%	DE M 95 x x 10 P01		

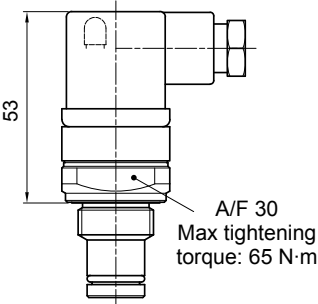
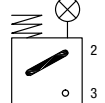
DEM*20		Hydraulic symbol	Materials
<b>Electrical Differential Indicator</b>			
Settings	Ordering code		
1.2 bar ±10%	DE M 12 x x 20 P01	<b>Technical data</b> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Proof pressure: 630 bar</li> <li>- Burst pressure: 1260 bar</li> <li>- Working temperature: From -25 °C to +110 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids</li> <li>- Degree protection: IP66 according to EN 60529</li> </ul>	<b>Electrical data</b> <ul style="list-style-type: none"> <li>- Electrical connection: AMP Time junior</li> <li>- Resistive load: 0.2 A / 115 Vdc</li> <li>- Switching type: Normally open contacts (NC on request)</li> <li>- Thermal lockout: Normally open up to 30 °C (option "F")</li> </ul>
2 bar ±10%	DE M 20 x x 20 P01		
5 bar ±10%	DE M 50 x x 20 P01	<b>Electrical symbol</b>	
7 bar ±10%	DE M 70 x x 20 P01		
9.5 bar ±10%	DE M 95 x x 20 P01		

# DIFFERENTIAL INDICATORS

## Dimensions

DEM*30		
<b>Electrical Differential Indicator</b>		
Settings	Ordering code	
1.2 bar ±10%	DE M 12 x x 30 P01	
2 bar ±10%	DE M 20 x x 30 P01	
5 bar ±10%	DE M 50 x x 30 P01	
7 bar ±10%	DE M 70 x x 30 P01	
9.5 bar ±10%	DE M 95 x x 30 P01	
		
<p><b>Hydraulic symbol</b></p> 		<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: Brass</li> <li>- Base: Black Nylon</li> <li>- Contacts: Silver</li> <li>- Seal: HNBR - FPM</li> </ul> <p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Proof pressure: 630 bar</li> <li>- Burst pressure: 1260 bar</li> <li>- Working temperature: From -25 °C to +110 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree protection: IP66 according to EN 60529</li> </ul> <p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Electrical connection: Deutsch DT-04-2-P</li> <li>- Resistive load: 0.2 A / 115 Vdc</li> <li>- Switching type: Normally open contacts (NC on request)</li> <li>- Thermal lockout: Normally open up to 30 °C (option "F")</li> </ul>

DEM*35			
<b>Electrical Differential Indicator</b>			
Settings	Ordering code		
1.2 bar ±10%	DE M 12 x x 35 P01		
2 bar ±10%	DE M 20 x x 35 P01		
5 bar ±10%	DE M 50 x x 35 P01		
7 bar ±10%	DE M 70 x x 35 P01		
9.5 bar ±10%	DE M 95 x x 35 P01		
		<p><b>Hydraulic symbol</b></p> 	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: Brass</li> <li>- Base: Black Nylon</li> <li>- Contacts: Silver</li> <li>- Seal: HNBR - FPM</li> </ul> <p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Proof pressure: 630 bar</li> <li>- Burst pressure: 1260 bar</li> <li>- Working temperature: From -25 °C to +110 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree protection: IP66 according to EN 60529</li> </ul> <p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Electrical connection: Deutsch DT-04-3-P</li> <li>- Resistive load: 0.2 A / 115 Vdc</li> <li>- Switching type: SPDT contact</li> <li>- Thermal lockout: Normally open up to 30 °C (option "F")</li> </ul>

DLA*51 - DLA*52			
<b>Electrical/Visual Differential Indicator</b>			
Settings	Ordering code		
1.2 bar ±10%	DL A 12 x A xx P01		
2 bar ±10%	DL A 20 x A xx P01		
5 bar ±10%	DL A 50 x A xx P01		
7 bar ±10%	DL A 70 x A xx P01		
9.5 bar ±10%	DL A 95 x A xx P01		
		<p><b>Hydraulic symbol</b></p> 	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: Brass</li> <li>- Base: Transparent Nylon</li> <li>- Contacts: Silver</li> <li>- Seal: HNBR - FPM</li> </ul> <p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Proof pressure: 630 bar</li> <li>- Burst pressure: 1260 bar</li> <li>- Working temperature: From -25 °C to +110 °C</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree protection: IP66 according to EN 60529 IP69K according to ISO 20653</li> </ul> <p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Electrical connection: EN 175301-803</li> <li>- Type: 51                      52</li> <li>- Lamps: 24 Vdc              110 Vdc</li> <li>- Resistive load: 1 A / 24 Vdc      1 A / 110 Vdc</li> </ul>

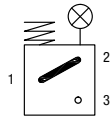
**DLA\*71**

**Electrical/Visual Differential Indicator**

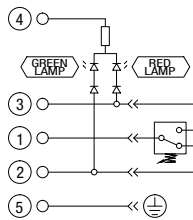
Settings	Ordering code
1.2 bar ±10%	DL A 12 x A 71 P01
2 bar ±10%	DL A 20 x A 71 P01
5 bar ±10%	DL A 50 x A 71 P01
7 bar ±10%	DL A 70 x A 71 P01
9.5 bar ±10%	DL A 95 x A 71 P01

A/F 30  
Max tightening torque: 65 N·m

### Hydraulic symbol



### Electrical symbol



### Materials

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR - FPM

### Technical data

- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree protection: IP65 according to EN 60529  
IP69K according to ISO 20653

### Electrical data

- Electrical connection: IEC 61076-2-101 D (M12)
- Lamps: 24 Vdc
- Resistive load: 0.4 A / 24 Vdc

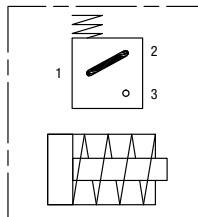
**DLE\*A50**

**Electrical/Visual Differential Indicator**

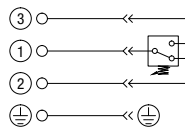
Settings	Ordering code
1.2 bar ±10%	DL E 12 x A 50 P01
2 bar ±10%	DL E 20 x A 50 P01
5 bar ±10%	DL E 50 x A 50 P01
7 bar ±10%	DL E 70 x A 50 P01
9.5 bar ±10%	DL E 95 x A 50 P01

A/F 32  
Max tightening torque: 95 N·m

### Hydraulic symbol



### Electrical symbol



### Materials

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR - FPM

### Technical data

- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree protection: IP65 according to EN 60529

### Electrical data

- Electrical connections: EN 175301-803
- Resistive load: 5 A / 250 Vac
- Available the connector with lamps

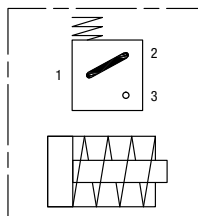
**DLE\*F50**

**Electrical/Visual Differential Indicator**

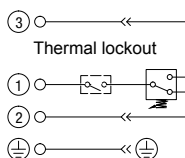
Settings	Ordering code
1.2 bar ±10%	DL E 12 x F 50 P01
2 bar ±10%	DL E 20 x F 50 P01
5 bar ±10%	DL E 50 x F 50 P01
7 bar ±10%	DL E 70 x F 50 P01
9.5 bar ±10%	DL E 95 x F 50 P01

A/F 32  
Max tightening torque: 95 N·m

### Hydraulic symbol



### Electrical symbol



### Materials

- Body: Brass
- Base: Black Nylon
- Contacts: Silver
- Seal: HNBR - FPM

### Technical data

- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids  
HFA, HFB, HFC according to ISO 2943
- Degree protection: IP65 according to EN 60529

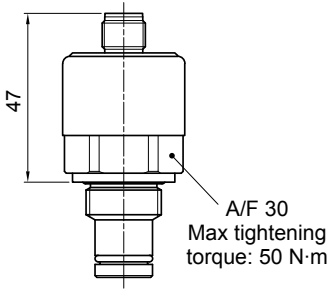
### Electrical data

- Electrical connections: EN 175301-803
- Resistive load: 5 A / 250 Vac
- Thermal lockout setting: +30 °C

# DIFFERENTIAL INDICATORS

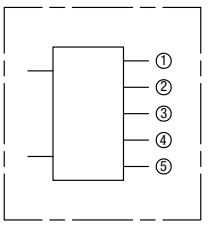
## Dimensions

DTA*70	
<b>Electronic Differential Indicator</b>	
Settings	Ordering code
1.2 bar ±10%	DT A 12 x x 70 P01
2 bar ±10%	DT A 20 x x 70 P01
5 bar ±10%	DT A 50 x x 70 P01
7 bar ±10%	DT A 70 x x 70 P01
9.5 bar ±10%	DT A 95 x x 70 P01



A/F 30  
Max tightening torque: 50 N·m

**Hydraulic symbol**



**Electrical symbol**

①	○	○	+24 Vdc
②	○	○	4 ÷ 20 mA
③	○	○	75% - N.O. Digital output
④	○	○	100% - N.O. Digital output
⑤	○	○	0 Vdc

**Materials**


- Body: Brass
- Internal parts: Brass - Nylon
- Contacts: Silver
- Seal: HNBR - FPM

**Technical data**

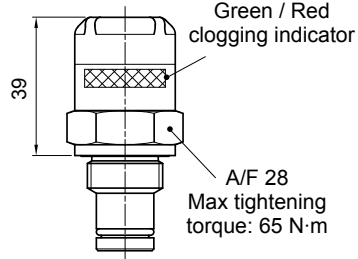
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection: IP67 according to EN 60529

**Electrical data**

- Electrical connection: IEC 61076-2-101 D (M12)
- Power supply: 24 Vdc
- Analogue output: From 4 to 20 mA
- Thermal lockout: 30 °C (all output signals stalled up to 30 °C)



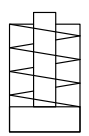
DVA	
<b>Visual Differential Indicator</b>	
Settings	Ordering code
1.2 bar ±10%	DVA 12 x P01
2 bar ±10%	DV A 20 x P01
5 bar ±10%	DV A 50 x P01
7 bar ±10%	DV A 70 x P01
9.5 bar ±10%	DV A 95 x P01



Green / Red clogging indicator

A/F 28  
Max tightening torque: 65 N·m

**Hydraulic symbol**



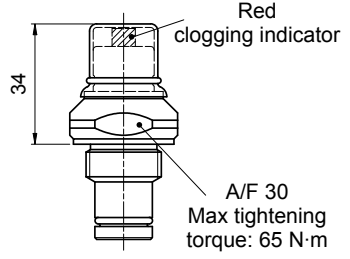
**Materials**

- Body: Brass
- Internal parts: Brass - Nylon
- Contacts: Silver
- Seal: HNBR - FPM

**Technical data**

- Reset: Automatic reset
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection: IP65 according to EN 60529

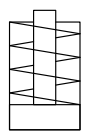
DVM	
<b>Visual Differential Indicator</b>	
Settings	Ordering code
1.2 bar ±10%	DV M 12 x P01
2 bar ±10%	DV M 20 x P01
5 bar ±10%	DV M 50 x P01
7 bar ±10%	DV M 70 x P01
9.5 bar ±10%	DV M 95 x P01



Red clogging indicator

A/F 30  
Max tightening torque: 65 N·m

**Hydraulic symbol**



**Materials**

- Body: Brass
- Internal parts: Brass - Nylon
- Contacts: Silver
- Seal: HNBR - FPM

**Technical data**

- Reset: Manual reset
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection: IP65 according to EN 60529

<b>T2</b>		<b>Materials</b> - Body: Phosphatized steel - Seal: HNBR / FPM				
<b>Indicator plug</b>						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Seal</th> <th style="width: 50%;">Ordering code</th> </tr> <tr> <td>HNBR</td> <td>T2 H</td> </tr> <tr> <td>FPM</td> <td>T2 V</td> </tr> </table>			Seal	Ordering code	HNBR	T2 H
Seal	Ordering code					
HNBR	T2 H					
FPM	T2 V					

### DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATORS

<b>Series</b>		Configuration example 1:	DE	M	50	H	F	50	P01
<b>DE</b> Electrical or Electronic differential indicator		Configuration example 2:	DE	H	50	F	A	70	P01
<b>DL</b> Electrical / Visual differential indicator		Configuration example 3:	DL	E	70	V	A	71	P01
<b>DT</b> Electronic differential indicator		Configuration example 4:	DT	A	50	H	F	70	P01
<b>DV</b> Visual differential indicator		Configuration example 5:	DV	M	95	V			P01

Type	DE	DL	DT	DV
<b>A</b> Standard type	•	•	•	<b>A</b> With automatic reset
<b>M</b> With wired electrical connection	•			<b>M</b> With manual reset
<b>E</b> For high power supply		•		
<b>H</b> Hazardous area	•			

Pressure setting	DEA	DEH	DEM	DLA	DLE	DT	DV
<b>12</b> 1.2 bar	•		•	•	•	•	•
<b>20</b> 2 bar	•		•	•	•	•	•
<b>50</b> 5 bar	•	•	•	•	•	•	•
<b>70</b> 7 bar	•	•	•	•	•	•	•
<b>95</b> 9.5 bar	•		•	•	•	•	•

Seals	DEA	DEH	DEM	DLA	DLE	DT	DV
<b>F</b> MFQ		•					
<b>H</b> HNBR	•		•	•	•	•	•
<b>V</b> FPM	•	•	•	•	•	•	•

Thermostat	DEA	DEH	DEM	DLA	DLE	DT	DV
<b>A</b> Without	•	•	•	•	•		
<b>F</b> With thermostat			•		•	•	

Electrical connections	DEA	DEH	DEM	DLA	DLE	DT	DV
<b>10</b> Connection AMP Superseal series 1.5			•				
<b>20</b> Connection AMP Timer Junior			•				
<b>30</b> Connection Deutsch DT-04-2-P			•				
<b>35</b> Connection Deutsch DT-04-3-P			•				
<b>48</b> Connection M20		•					
<b>49</b> Connection 1/2" NPT		•					
<b>50</b> Connection EN 175301-803	•				•		
<b>51</b> Connection EN 175301-803, transparent base with lamps 24 Vdc				•			
<b>52</b> Connection EN 175301-803, transparent base with lamps 110 Vdc				•			
<b>70</b> Connection IEC 61076-2-101 D (M12)		•				•	
<b>71</b> Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc				•			

Option
<b>P01</b> MP Filtri standard
<b>Pxx</b> Customized

### DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATOR PLUG

<b>Series</b>		Configuration example:	T2	H
<b>T2</b> Indicator plug				
<b>Seals</b>				
<b>H</b> HNBR				
<b>V</b> FPM				



# STAINLESS STEEL DIFFERENTIAL INDICATORS

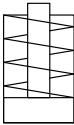
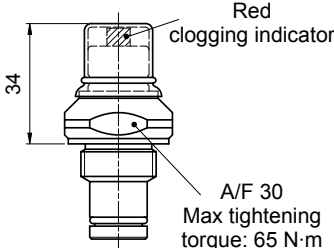
## Dimensions

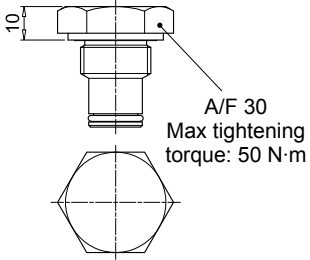
<p><b>DEH*48</b></p> <p><b>Hazardous Area Electronic Differential Indicator</b></p> <table border="1"> <thead> <tr> <th>Settings</th> <th>Ordering code</th> </tr> </thead> <tbody> <tr> <td>5 bar ±10%</td> <td>DE H 50 x A 48 P01</td> </tr> <tr> <td>7 bar ±10%</td> <td>DE H 70 x A 48 P01</td> </tr> </tbody> </table> <p>M20 x 1.5</p> <p>28</p> <p>114</p> <p>87.5</p> <p>A/F 25 mm Max tightening torque: 50 N·m</p>	Settings	Ordering code	5 bar ±10%	DE H 50 x A 48 P01	7 bar ±10%	DE H 70 x A 48 P01	<p><b>Connection diagram</b></p> <p>Red ○ Black</p> <p>White</p> <p>- Certification / Approvals: ATEX, IECEx, TRCU, INMETRO - Certification included as standard</p>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: AISI 316 Stainless steel</li> <li>- Contacts: Rhodium (tungsten optional)</li> <li>- Seal: MFQ - FPM</li> </ul> <p><b>Protection class</b> EX ia IIC T4/T6: Intrinsically safe</p> <p><b>Temperature class</b> T4 (135 °C) and T6 (85 °C)</p> <p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Working temperature: From -60 °C to +125 °C</li> <li>- Connection type: M20 x 1.5 - 3 core polyrad cable supplied with 5 meters</li> <li>- Contact type: SPCO/SPDT (Hermetically sealed - volt free contacts)</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree of protection: IP 66/67/68 according to EN 60529</li> </ul> <p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Current Ratings 24v DC 830mA - 110v AC 180mA</li> <li>- Electrical Ratings Ui 30V - Li 250mA - Pi 1.3W</li> </ul>								
Settings	Ordering code															
5 bar ±10%	DE H 50 x A 48 P01															
7 bar ±10%	DE H 70 x A 48 P01															
<p><b>DEH*49</b></p> <p><b>Hazardous Area Electronic Differential Indicator</b></p> <table border="1"> <thead> <tr> <th>Settings</th> <th>Ordering code</th> </tr> </thead> <tbody> <tr> <td>5 bar ±10%</td> <td>DE H 50 x A 49 P01</td> </tr> <tr> <td>7 bar ±10%</td> <td>DE H 70 x A 49 P01</td> </tr> </tbody> </table> <p>1/2" NPT</p> <p>28</p> <p>114</p> <p>87.5</p> <p>A/F 25 mm Max tightening torque: 50 N·m</p>	Settings	Ordering code	5 bar ±10%	DE H 50 x A 49 P01	7 bar ±10%	DE H 70 x A 49 P01	<p><b>Connection diagram</b></p> <p>Red ○ Black</p> <p>White</p> <p>Green</p> <p>- Certification / Approvals: ATEX, IECEx, TRCU, INMETRO, UL/CSA Class I Division 1 Groups A-D, UL/CSA Class II Division 1 Groups E-G - Certification included as standard</p>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: AISI 316 Stainless steel</li> <li>- Contacts: Rhodium (tungsten optional)</li> <li>- Seal: MFQ - FPM</li> </ul> <p><b>Protection class</b> Ex d IIC T4/T6: Flameproof</p> <p><b>Temperature class</b> T4 (135 °C) and T6 (85 °C)</p> <p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Working temperature: From -60 °C to +120 °C : ATEX, IECEx, TRCU, INMETRO From -60 °C to +105 °C : UL/CSA</li> <li>- Connection type: 1/2" NPT - 3 core polyrad cable supplied with 5 meters</li> <li>- Contact type: SPCO/SPDT (Hermetically sealed - volt free contacts)</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree of protection: IP 66/67/68 according to EN 60529</li> </ul> <p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Current Ratings 24v DC 830mA - 110v AC 180mA</li> <li>- Electrical Ratings</li> </ul> <table border="1"> <tr> <td>Supply Voltage</td> <td>24 VDC   110 VAC</td> </tr> <tr> <td>Max switching current</td> <td>830mA   180mA</td> </tr> <tr> <td>Max voltage</td> <td>150 V AC/DC</td> </tr> <tr> <td>Power watts</td> <td>20 W VA</td> </tr> </table>	Supply Voltage	24 VDC   110 VAC	Max switching current	830mA   180mA	Max voltage	150 V AC/DC	Power watts	20 W VA
Settings	Ordering code															
5 bar ±10%	DE H 50 x A 49 P01															
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Supply Voltage	24 VDC   110 VAC															
Max switching current	830mA   180mA															
Max voltage	150 V AC/DC															
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<p><b>DEH*70</b></p> <p><b>Hazardous Area Electronic Differential Indicator</b></p> <table border="1"> <thead> <tr> <th>Settings</th> <th>Ordering code</th> </tr> </thead> <tbody> <tr> <td>5 bar ±10%</td> <td>DE H 50 x A 70 P01</td> </tr> <tr> <td>7 bar ±10%</td> <td>DE H 70 x A 70 P01</td> </tr> </tbody> </table> <p>M12</p> <p>28 mm O.D.</p> <p>90</p> <p>42.5</p> <p>26.5</p> <p>A/F 25 mm Max tightening torque: 50 N·m</p>	Settings	Ordering code	5 bar ±10%	DE H 50 x A 70 P01	7 bar ±10%	DE H 70 x A 70 P01	<p><b>Connection diagram</b></p> <p>Brown ●</p> <p>Blue ●</p> <p>Black ●</p> <p>- Certification / Approvals: ATEX, IECEx, TRCU, INMETRO - Certification included as standard</p>	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>- Body: AISI 316 Stainless steel housing with internal engineered resin switch</li> <li>- Contacts: Rhodium</li> <li>- Seal: MFQ - FPM</li> </ul> <p><b>Protection class</b> EX ia IIC T6: Intrinsically safe</p> <p><b>Temperature class</b> T6 (85 °C)</p> <p><b>Technical data</b></p> <ul style="list-style-type: none"> <li>- Max working pressure: 420 bar</li> <li>- Working temperature: From -20 °C to +80 °C</li> <li>- Connection type: 4 pole male M12 connector - plastic</li> <li>- Contact type: SPCO/SPDT (Hermetically sealed - volt free contacts)</li> <li>- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943</li> <li>- Degree of protection: IP 66/67 according to EN 60529</li> </ul> <p><b>Electrical data</b></p> <ul style="list-style-type: none"> <li>- Current Ratings 24v DC 830mA - 110v AC 180mA</li> <li>- Electrical Ratings Ui 30V - Li 250mA - Pi 1.3W</li> </ul>								
Settings	Ordering code															
5 bar ±10%	DE H 50 x A 70 P01															
7 bar ±10%	DE H 70 x A 70 P01															



# STAINLESS STEEL DIFFERENTIAL INDICATORS

## Dimensions

DVY		Hydraulic symbol	<b>Materials</b> - Body: AISI 316L - Internal parts: AISI 316L - Nylon - Contacts: Silver - Seal: HNBR - MFQ  <b>Technical data</b> - Reset: Manual reset - Max working pressure: 420 bar - Proof pressure: 630 bar - Burst pressure: 1260 bar - Working temperature: From -25 °C to +110 °C - Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 - Degree protection: IP65 according to EN 60529
Visual Differential Indicator			
Settings	Ordering code		
5 bar ±10%	DV Y 50 x P01		
7 bar ±10%	DV Y 70 x P01		
9.5 bar ±10%	DV Y 95 x P01		
			

X2		Materials
Indicator plug		
Seal	Ordering code	- Body: AISI 316L - Seal: HNBR / MFQ
HNBR	X2 H	
MFQ	X2 F	
		

## DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATORS

<b>Series</b>				Configuration example 1:	DE	H	50	F	A	70	P01
<b>DE</b> Electrical or Electronic differential indicator				Configuration example 2:	DE	X	50	H	A	50	P01
<b>DL</b> Electrical / Visual differential indicator				Configuration example 3:	DL	X	95	V	A	71	P01
<b>DV</b> Visual differential indicator				Configuration example 4:	DV	Y	70	V			P01

Type	DE	DL	DV
<b>H</b> Hazardous area	•		
<b>X</b> Standard type	•	•	•
<b>Y</b> Optional type			•

Pressure setting
<b>50</b> 5 bar
<b>70</b> 7 bar
<b>95</b> 9.5 bar

Seals	DEH	DEX	DLX	DV
<b>F</b> MFQ	•			
<b>H</b> HNBR		•	•	•
<b>V</b> FPM	•	•	•	•

Thermostat
<b>A</b> Without

Electrical connections	DEH	DEX	DLX	DV
<b>48</b> Connection M20	•			
<b>49</b> Connection 1/2" NPT	•			
<b>50</b> Connection EN 175301-803		•		
<b>51</b> Connection EN 175301-803, transparent base with lamps 24 Vdc			•	
<b>52</b> Connection EN 175301-803, transparent base with lamps 110 Vdc			•	
<b>70</b> Connection IEC 61076-2-101 D (M12)	•			

Option
<b>P01</b> MP Filtri standard
<b>Pxx</b> Customized

## DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATOR PLUG

<b>Series</b>		Configuration example	X2	H
<b>X2</b> Indicator plug				

Seals
<b>H</b> HNBR
<b>F</b> MFQ

Filter family	Filter series	Visual indicator	Electrical indicator	Electrical / Visual indicator	Electronic indicator
SUCTION FILTERS	SF2 250 - 350 SF2 500 - 501 - 503 - 504 - 505 SF2 510 - 535 - 540	VVA16P01 VVR16P01	VEA21AA50P01	VLA21AA51P01 VLA21AA52P01 VLA21AA53P01 VLA21AA71P01	
RETURN FILTERS	MPFX-MPTX-MPF-MPT with bypass 1.75 bar MPH with bypass 1.75 bar	BVA14P01 BVR14P01 BVP20HP01 BVQ20HP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
	MPFX-MPTX-MPF-MPT with bypass 3 bar MPH with bypass 2.5 bar FRI 255	BVA25P01 BVR25P01 BVP20HP01 BVQ20HP01	BEA20HA50P01 BEM20HA41P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01	
	MPLX FRI 025 - 040 - 100 - 250 - 630 - 850	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20xAxxP01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01	DTA20xF70P01
RETURN / SUCTION FILTERS	Suction line MRSX 116 - 165 - 166	VVB16P01 VVS16P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
	Return line MRSX 116 - 165 - 166 LMP 124 MULTIPOINT	BVA25P01 BVR25P01 BVP20HP01 BVQ20HP01	BEA25HA50P01 BEM25HA41P01 BET25HF10P01 BET25HF30P01 BET25HF50P01	BLA25HA51P01 BLA25HA52P01 BLA25HA53P01 BLA25HA71P01	
SPIN-ON FILTERS	Suction line MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350	VVB16P01 VVS16P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
	Return line MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350	BVA14P01 BVR14P01 BVP20HP01 BVQ20HP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
	In-line MPS 051 - 071 - 101 - 151 MPS 301 - 351 MSH 050 - 070 - 100 - 150	DVA12xP01 DVM12xP01	DEA12xA50P01 DEM12xAxxP01	DLA12xA51P01 DLA12xA52P01 DLA12xA71P01 DLE12xA50P01 DLE12xF50P01	
LOW & MEDIUM PRESSURE FILTERS	With bypass valve LMP 110 - 112 - 116 - 118 - 119 MULTIPOINT LMP 120 - 122 - 123 MULTIPOINT LMP 210 - 211 - LDP LMP 400 - 401 & 430 - 431 LMP 900 - 901 LMP 902 - 903 LMP 950 - 951 LMP 952 - 953 - 954 LMD 211 - 400 - 401 - 431 - 951 - LDD	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20xAxxP01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01	DTA20xF70P01
	Without bypass valve LMP 110 - 112 - 116 - 118 - 119 MULTIPOINT LMP 120 - 122 - 123 MULTIPOINT LMP 210 - 211 - LDP LMP 400 - 401 & 430 - 431 LMP 900 - 901 LMP 902 - 903 LMP 950 - 951 LMP 952 - 953 - 954 LMD 211 - 400 - 401 - 431 - 951 - LDD	DVA50xP01 DVM50xP01	DEA50xA50P01 DEM50xAxxP01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01	DTA50xF70P01
HIGH PRESSURE FILTERS	With bypass valve FMP 039 - 065 - 135 - 320 FHP 010 - 011 - 065 - 135 - 320 - 500 FMM 050 - 150 FHA 051 FHM 006 - 007 - 010 - 050 - 065 - 135 - 320 - 500 FHB 050 - 135 - 320 FHF 325 FHD 021 - 051 - 326 - 333	DVA50xP01 DVM50xP01	DEA50xA50P01 DEM50xAxxP01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01	DTA50xF70P01 DEH50xA48P01 DEH50xA49P01 DEH50xA70P01 DEH70xA48P01 DEH70xA49P01 DEH70xA70P01
	Without bypass valve FMP 039 - 065 - 135 - 320 FHP 010 - 011 - 065 - 135 - 320 - 500 FMM 050 - 150 FHA 051 FHM 006 - 007 - 010 - 050 - 065 - 135 - 320 - 500 FHB 050 - 135 - 320 FHF 325 FHD 021 - 051 - 326 - 333	DVA70xP01 DVM70xP01	DEA70xA50P01 DEM70xAxxP01	DLA70xA51P01 DLA70xA52P01 DLA70xA71P01 DLE70xA50P01 DLE70xF50P01	DTA70xF70P01 DEH50xA48P01 DEH50xA49P01 DEH50xA70P01 DEH70xA48P01 DEH70xA49P01 DEH70xA70P01
STAINLESS STEEL HIGH PRESSURE FILTERS	With bypass valve FZH 010 - 011 - 039 FZP 039 - 136 FZX 011 FZB 039 FZM 039 FZD 051	DVX50xP01 DVY50xP01	DEX50xA50P01	DLX50xA51P01 DLX50xA52P01	DEH50xA48P01 DEH50xA49P01 DEH50xA70P01 DEH70xA48P01 DEH70xA49P01 DEH70xA70P01
	Without bypass valve FZH 010 - 011 - 039 FZP 039 - 136 FZB 039 FZM 039 FZD 010 - 021 - 051	DVX70xP01 DVY70xP01	DEX70xA50P01	DLX70xA51P01 DLX70xA52P01	DEH50xA48P01 DEH50xA49P01 DEH50xA70P01 DEH70xA48P01 DEH70xA49P01 DEH70xA70P01

**Hazardous area electronic indicator** **NEW**







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