

LMP 210-211

Maximum working pressure up to 6 MPa (60 bar) - Flow rate up to 365 l/min



TYPICAL FILTER SIZING Selection Software

Step ①

Select "FILTER SIZING SOFTWARE" after login

The screenshot shows the MP Filtri website's homepage. A user profile for 'WELCOME MARIO ROSSI' is displayed. Below it, a section titled 'Then here you're selecting the tool wanted:' contains three buttons: 'FILTER SIZING SOFTWARE' (highlighted with a blue box), 'POWER TRANSMISSION SOFTWARE', and 'MODIFY PROFILE'. At the bottom of the page, there is contact information for MP Filtri srl.

OR

Select "FILTER SIZING" after login from a product page

The screenshot shows a product page for 'MPFX' filter elements. The 'FILTER SIZING' button is highlighted with a blue box at the bottom right of the page. To the right, there is a technical drawing of a filter element and some descriptive text about tank-mounted return filters.

Choose the type of filter family.
Enter the main data for sizing the filter
then push CALCULATE.

Step ②

The screenshot shows the 'FILTER SIZING SOFTWARE' interface. Under 'RETURN/SUCTION', the 'RETURN' tab is selected. The 'Product: MPFX' dropdown is set to 'MPFX - Mineral oil'. Input fields include Working Pressure (bar), Flow rate (l/min), Fluid type (ISO VG 46 SUS 216), Viscosity (cSt), and Viscosity (cSt). Filtration is set to 'A25 - 25 µm absolute inorganic microfibre'. Connection Type is 'G 1''. A 'CALCULATE' button is highlighted with a blue box.

The screenshot shows the 'FILTER SIZING SOFTWARE' interface with the same configuration as the previous step. The 'Product: MPFX' dropdown is set to 'MPFX - Mineral oil'. Input fields include Working Pressure (bar), Flow rate (l/min), Fluid type (ISO VG 46 SUS 216), Viscosity (cSt), and Viscosity (cSt). Filtration is set to 'A25 - 25 µm absolute inorganic microfibre'. Connection Type is 'G 1''. A 'CALCULATE' button is highlighted with a blue box.

Select the desired options to choose the appropriate filter type for the application.

The screenshot shows the 'FILTER SIZING SOFTWARE' interface with various filter selection options. At the top, a table lists working pressure, flow rate, DP max, working temperature, filtration, connection type, fluid type, seal, working temperature with options, and viscosity. Below this, a 'Filter type' search bar is shown with 'MPFX - Tank lid mounting - [Pmax x -] Bi = 75 bar Bypass' selected. Under 'Option1', 'Single or duplex' is selected. A 'DIN Standard' dropdown is set to 'NOT APPLICABLE' and an 'Indicator' dropdown is set to 'Visual'. At the bottom, a table displays search results for filter types, including columns for Image, Code, Prex, Qmax, ΔP, Housing ΔP, Element ΔP, Connection, Seal, and Link.

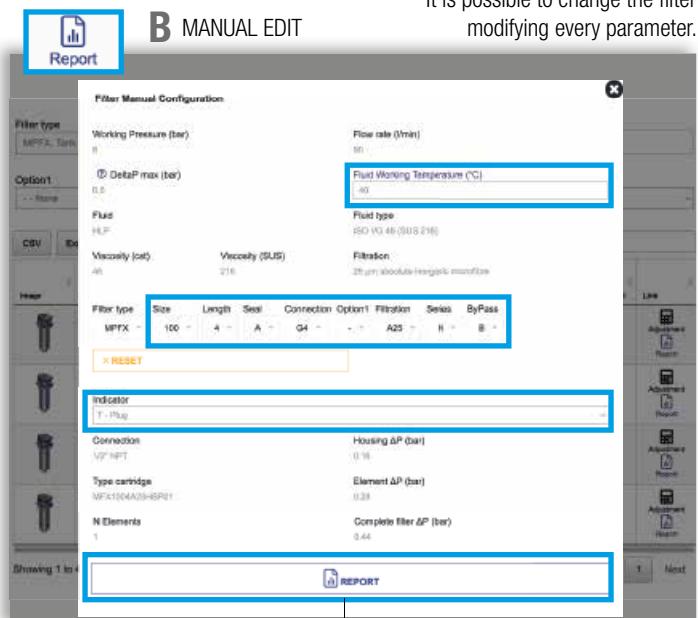
TYPICAL FILTER SIZING

Step 4

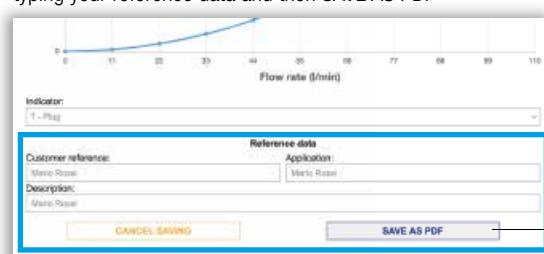
Choose the most suitable filter from the proposed list.

Filter type	Valve	Seal							
MPX: Tank lid mounting - [Pmax = 1 bar]	B: 1.75 bar Bypass	A: NBR	X RESET						
Option1	Single or duplex	DIN Standard	Indicator						
-- None	Single	NOT APPLICABLE	Visual						
CSV	Excel	Show 10 entries	Search:						
Image	Code	Peak bar psi	Qmax dm³/h gpm us gal/min	dP bar inHg psig	Housing AP bar psi	Element AP bar psi	Connection	Seal	Link
	MPX-100-S-A-G3-A25-H-BPSI	B 116 95.74 25.3 0.47 7 0.12 2 0.35 5 G 1"	A	 Attachment					
	MPX-104-S-A-G3-A25-H-BPSI	B 116 95.74 25.3 0.47 7 0.12 2 0.35 5 G 1"	A	 Attachment					

Step 5



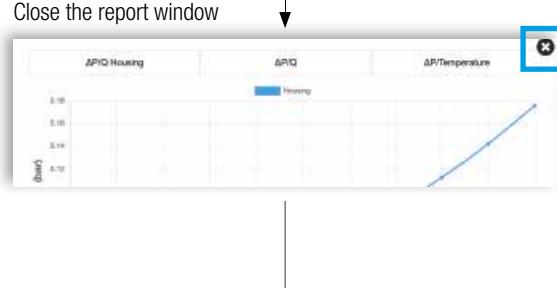
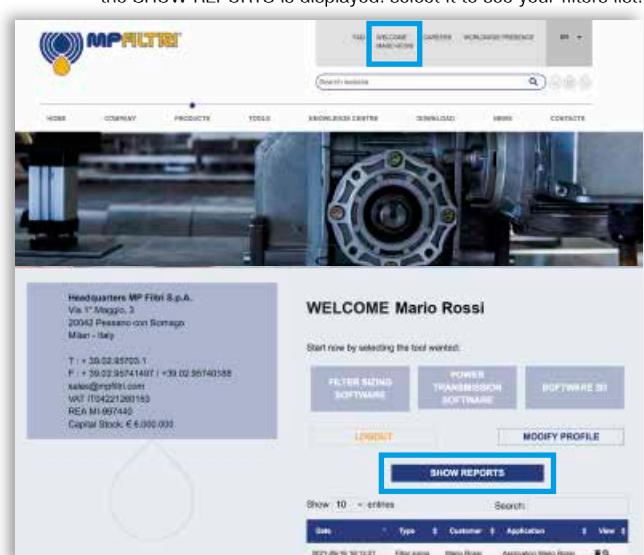
SAVE IN YOUR ARCHIVE
typing your reference data and then **SAVE AS PDF**



A new browser window displays the pdf

see A

By clicking your WELCOME button,
the SHOW REPORTS is displayed; select it to see your filters list



LMP 210-211 GENERAL INFORMATION

Description

Low & Medium Pressure filters

Maximum working pressure up to 6 MPa (60 bar)

Flow rate up to 365 l/min

LMP210 is a range of versatile low pressure filter for transmission, protection of sensitive components in low pressure hydraulic systems and filtration of the coolant into the machine tools.

They are also suitable for the off-line filtration of small reservoirs.

They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- Flanged connections up to 1 1/2", for a maximum flow rate of 365 l/min (LMP210)
- Female threaded connections up to 1 1/2", for a maximum return flow rate of 365 l/min (LMP211)
- Fine filtration rating, to get a good cleanliness level into the system
- Water removal elements, to remove the free water from the hydraulic fluid. For further information, see the Contamination Management document and the dedicate leaflet.
- Bypass valve, to relieve excessive pressure drop across the filter media
- Visual, electrical and electronic differential clogging indicators

Common applications:

Delivery lines, in any low pressure industrial equipment or mobile machines

Technical data

Filter housing materials

- Head: Aluminium
- Bowl: Cataphoretic painted steel
- Bypass valve: AISI 304 - Polyamide

Pressure

- Test pressure: 9 MPa (90 bar)
- Burst pressure: 21 MPa (210 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 6 MPa (60 bar)

Bypass valve

- Opening pressure 350 kPa (3.5 bar) $\pm 10\%$
- Other opening pressures on request.

Δp element type

- Microfibre filter elements - series N: 20 bar
- Fluid flow through the filter element from OUT to IN

Seals

- Standard NBR series A
- Optional FPM series V

Temperature

From -25 °C to +110 °C

Connections

Inlet/Outlet In-Line

Note

LMP 210 - 211 filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]			Volumes [dm ³]				
	Length	1	2	3	Length	1	2	3
LMP 210-211		3.10	4.80	6.40		1.60	2.10	2.80

GENERAL INFORMATION LMP 210-211

FILTER ASSEMBLY SIZING Flow rates [l/min]

Filter series	Length	Filter element design - N Series									
		A03	A06	A10	A16	A25	M25	M60	M90	P10	P25
LMP 210	1	106	130	190	200	221	286	287	287	261	265
	2	153	175	220	237	249	288	289	290	265	269
	3	204	214	248	260	265	289	290	291	277	281
LMP 211	1	118	149	227	240	269	358	359	360	324	330
	2	178	207	268	292	307	361	362	363	329	335
	3	247	260	306	323	329	362	363	364	345	351

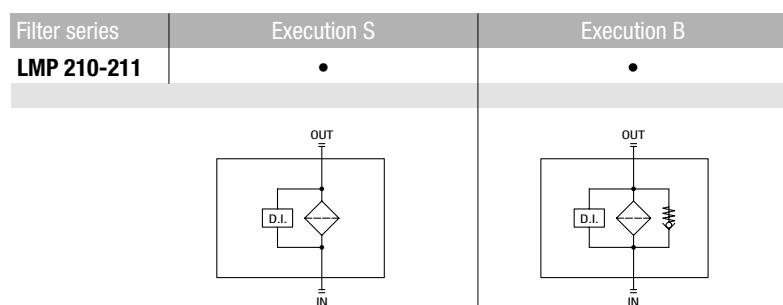
Maximum flow rate for a complete low and medium pressure filter with a pressure drop $\Delta p = 0.7$ bar.

The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

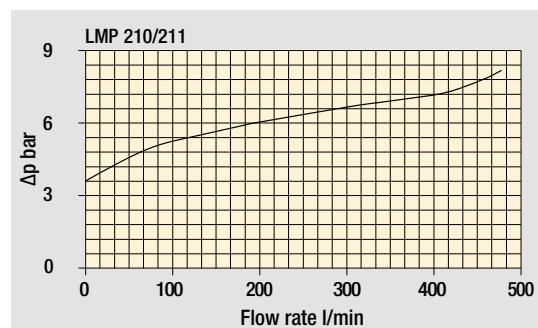
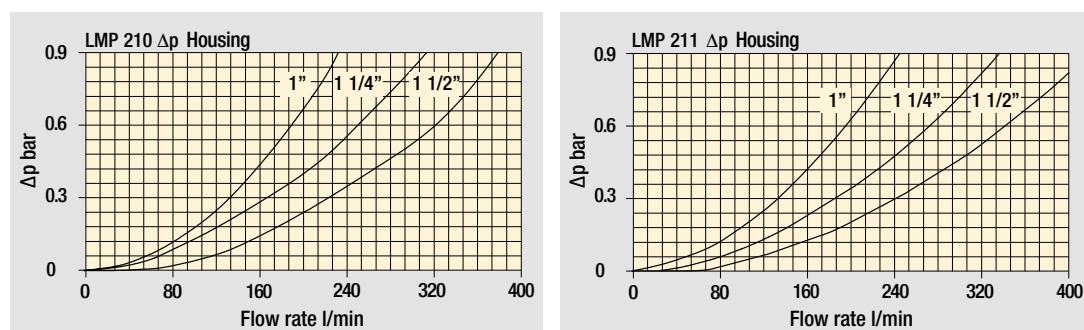
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfilttri.com.

You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure. Please, contact our Sales Department for further additional information.

Hydraulic symbols



Pressure drop



Bypass valve
pressure drop

The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

LMP 210

Designation & Ordering code

COMPLETE FILTER

Series and size	Configuration example: LMP210 3 B A F1 A10 N P01								
LMP210									
Length	1 2 3								
Bypass valve	S Without bypass B With bypass 3.5 bar								
Seals and treatments									
A NBR									
V FPM									
Connections									
F1 1" SAE 3000 psi/M									
F2 1 1/4" SAE 3000 psi/M									
F3 1 1/2" SAE 3000 psi/M									
F4 1" SAE 3000 psi/UNC									
F5 1 1/4" SAE 3000 psi/UNC									
F6 1 1/2" SAE 3000 psi/UNC									
Filtration rating (filter media)									
A03 Inorganic microfiber 3 µm	M25 Wire mesh 25 µm								
A06 Inorganic microfiber 6 µm	M60 Wire mesh 60 µm								
A10 Inorganic microfiber 10 µm	M90 Wire mesh 90 µm								
A16 Inorganic microfiber 16 µm	P10 Resin impregnated paper 10 µm								
A25 Inorganic microfiber 25 µm	P25 Resin impregnated paper 25 µm								
WA025 Water absorber inorganic microfiber 25 µm									
Element Δp									
N 20 bar									
Execution									
P01 MP Filtri standard									
Pxx Customized									

FILTER ELEMENT

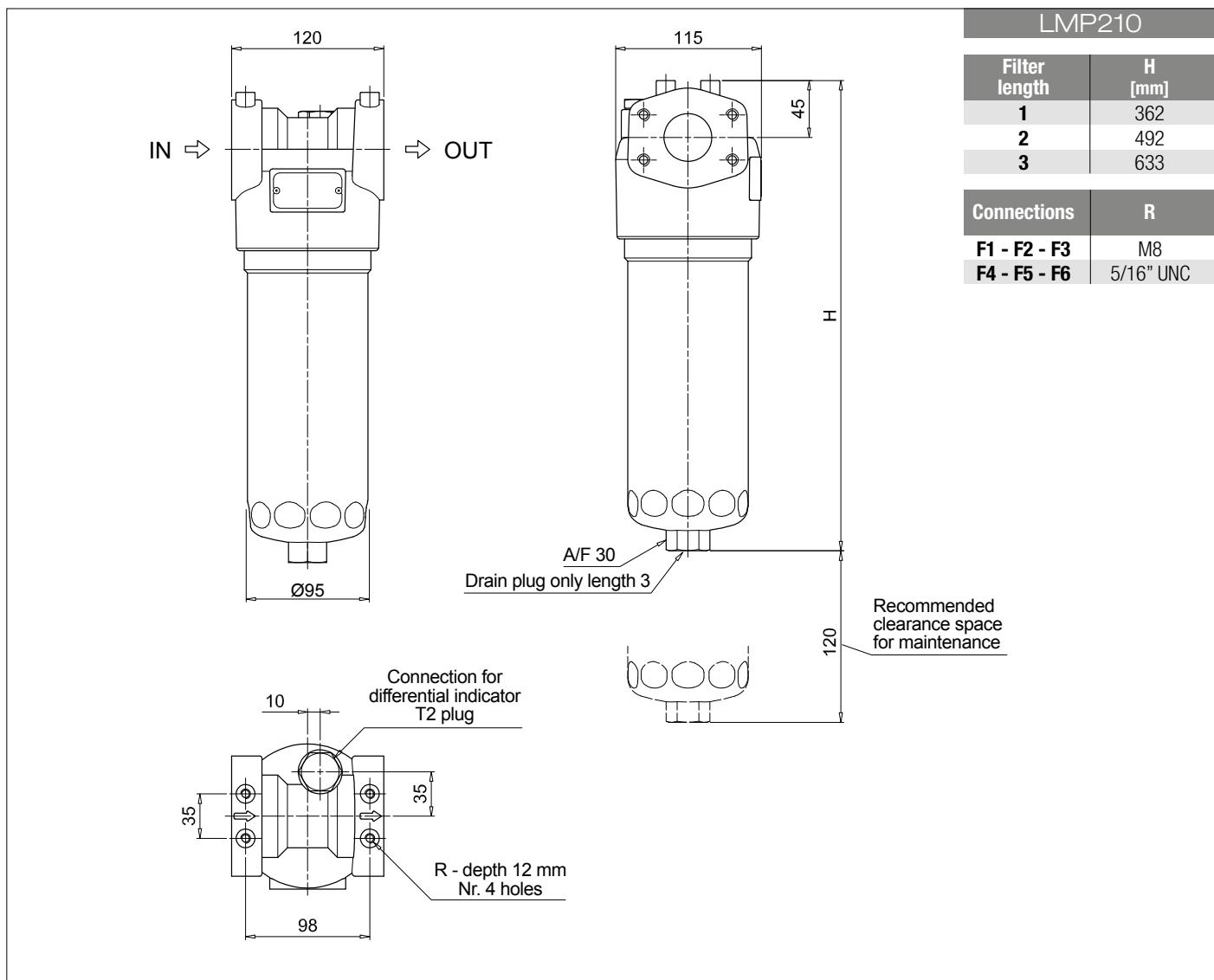
Element series and size	Configuration example: CU210 3 A10 A N P01								
CU210									
Element length	1 2 3								
Filtration rating (filter media)									
A03 Inorganic microfiber 3 µm	M25 Wire mesh 25 µm								
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WA025 Water absorber inorganic microfiber 25 µm									
Seals and treatments									
A NBR									
V FPM									
Element Δp									
N 20 bar									
Execution									
P01 MP Filtri standard									
Pxx Customized									

CLOGGING INDICATORS

DEA Electrical differential indicator
DEM Electrical differential indicator
DLA Electrical / visual differential indicator
DLE Electrical / visual differential indicator

See page 478

DTA Electronic differential indicator
DVA Visual differential indicator
DVM Visual differential indicator
T2 Plug



LMP 211

Designation & Ordering code

COMPLETE FILTER																			
Series and size		Configuration example: LMP211 3 B A D 6 A10 N P01																	
LMP211																			
Length		<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3																	
Bypass valve		<input checked="" type="checkbox"/> S Without bypass <input type="checkbox"/> B With bypass 3.5 bar																	
Seals and treatments		<input checked="" type="checkbox"/> A NBR <input type="checkbox"/> V FPM																	
Connections		<input checked="" type="checkbox"/> A G 1" <input type="checkbox"/> B G 1 1/4" <input type="checkbox"/> C G 1 1/2" <input type="checkbox"/> D 1" NPT <input type="checkbox"/> E 1 1/4" NPT <input type="checkbox"/> F 1 1/2" NPT <input type="checkbox"/> G SAE 16 - 1 5/16" - 12 UN <input type="checkbox"/> H SAE 20 - 1 5/8" - 12 UN <input type="checkbox"/> I SAE 24 - 1 7/8" - 12 UN																	
Connection for differential indicator		<input checked="" type="checkbox"/> 6 With plugged connection																	
Filtration rating (filter media)		<table border="0"> <tr> <td>A03 Inorganic microfiber 3 µm</td> <td>M25 Wire mesh 25 µm</td> </tr> <tr> <td>A06 Inorganic microfiber 6 µm</td> <td>M60 Wire mesh 60 µm</td> </tr> <tr> <td>A10 Inorganic microfiber 10 µm</td> <td>M90 Wire mesh 90 µm</td> </tr> <tr> <td>A16 Inorganic microfiber 16 µm</td> <td>P10 Resin impregnated paper 10 µm</td> </tr> <tr> <td>A25 Inorganic microfiber 25 µm</td> <td>P25 Resin impregnated paper 25 µm</td> </tr> </table>								A03 Inorganic microfiber 3 µm	M25 Wire mesh 25 µm	A06 Inorganic microfiber 6 µm	M60 Wire mesh 60 µm	A10 Inorganic microfiber 10 µm	M90 Wire mesh 90 µm	A16 Inorganic microfiber 16 µm	P10 Resin impregnated paper 10 µm	A25 Inorganic microfiber 25 µm	P25 Resin impregnated paper 25 µm
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		<table border="0"> <tr> <td>Element Δp</td> <td>Execution</td> </tr> <tr> <td><input checked="" type="checkbox"/> N 20 bar</td> <td><input checked="" type="checkbox"/> P01 MP Filtri standard</td> </tr> <tr> <td><input type="checkbox"/> Pxx Customized</td> <td></td> </tr> </table>								Element Δp	Execution	<input checked="" type="checkbox"/> N 20 bar	<input checked="" type="checkbox"/> P01 MP Filtri standard	<input type="checkbox"/> Pxx Customized					
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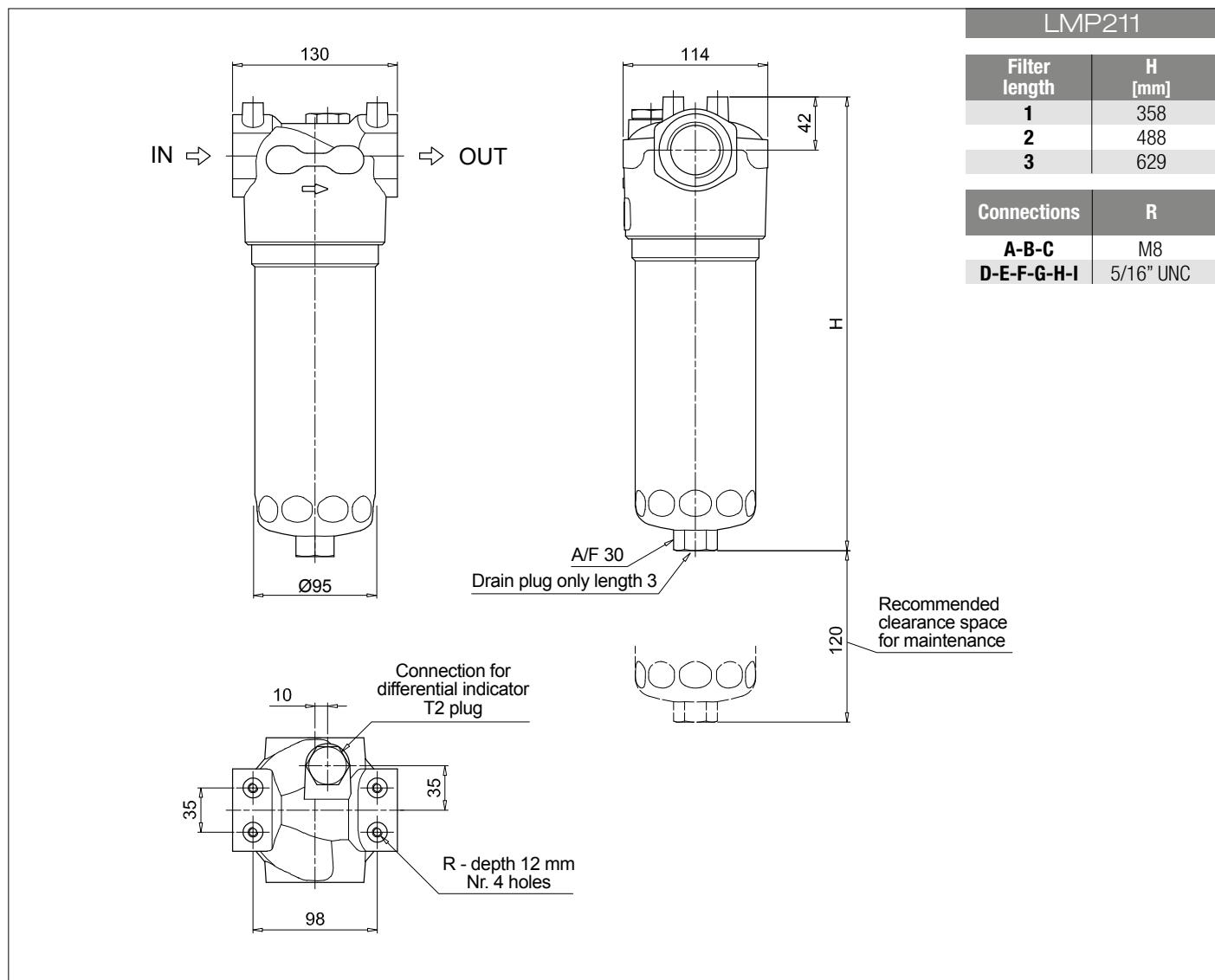
FILTER ELEMENT																			
Element series and size		Configuration example: CU210 3 A10 A N P01																	
CU210																			
Element length		<input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3																	
Filtration rating (filter media)		<table border="0"> <tr> <td>A03 Inorganic microfiber 3 µm</td> <td>M25 Wire mesh 25 µm</td> </tr> <tr> <td>A06 Inorganic microfiber 6 µm</td> <td>M60 Wire mesh 60 µm</td> </tr> <tr> <td>A10 Inorganic microfiber 10 µm</td> <td>M90 Wire mesh 90 µm</td> </tr> <tr> <td>A16 Inorganic microfiber 16 µm</td> <td>P10 Resin impregnated paper 10 µm</td> </tr> <tr> <td>A25 Inorganic microfiber 25 µm</td> <td>P25 Resin impregnated paper 25 µm</td> </tr> </table>								A03 Inorganic microfiber 3 µm	M25 Wire mesh 25 µm	A06 Inorganic microfiber 6 µm	M60 Wire mesh 60 µm	A10 Inorganic microfiber 10 µm	M90 Wire mesh 90 µm	A16 Inorganic microfiber 16 µm	P10 Resin impregnated paper 10 µm	A25 Inorganic microfiber 25 µm	P25 Resin impregnated paper 25 µm
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		<table border="0"> <tr> <td>Seals and treatments</td> <td>Element Δp</td> <td>Execution</td> </tr> <tr> <td><input checked="" type="checkbox"/> A NBR</td> <td><input checked="" type="checkbox"/> N 20 bar</td> <td><input checked="" type="checkbox"/> P01 MP Filtri standard</td> </tr> <tr> <td><input type="checkbox"/> V FPM</td> <td></td> <td><input type="checkbox"/> Pxx Customized</td> </tr> </table>								Seals and treatments	Element Δp	Execution	<input checked="" type="checkbox"/> A NBR	<input checked="" type="checkbox"/> N 20 bar	<input checked="" type="checkbox"/> P01 MP Filtri standard	<input type="checkbox"/> V FPM		<input type="checkbox"/> Pxx Customized	
Seals and treatments	Element Δp	Execution																	
<input checked="" type="checkbox"/> A NBR	<input checked="" type="checkbox"/> N 20 bar	<input checked="" type="checkbox"/> P01 MP Filtri standard																	
<input type="checkbox"/> V FPM		<input type="checkbox"/> Pxx Customized																	
WA025 Water absorber inorganic microfiber 25 µm																			

CLOGGING INDICATORS

See page 478

DEA	Electrical differential indicator
DEM	Electrical differential indicator
DLA	Electrical / visual differential indicator
DLE	Electrical / visual differential indicator

DTA	Electronic differential indicator
DVA	Visual differential indicator
DVM	Visual differential indicator
T2	Plug

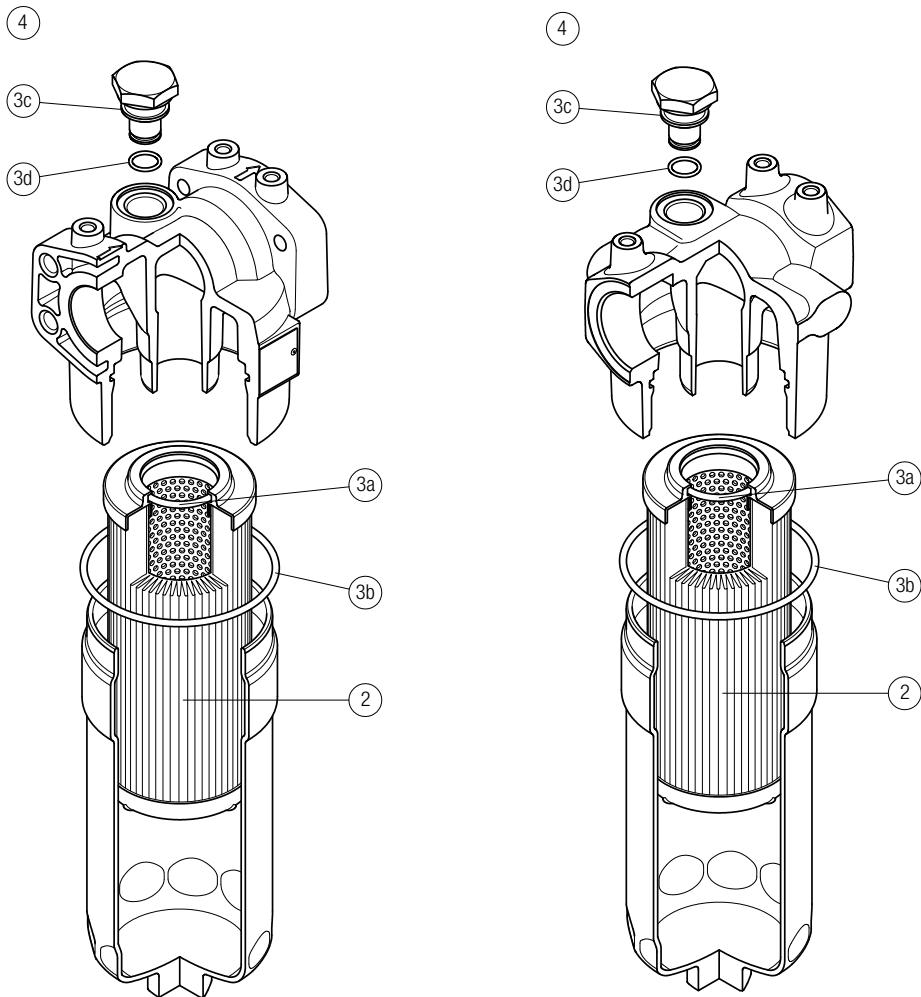


LMP 210-211 SPARE PARTS

Order number for spare parts

LMP 210

LMP 211



Item:	Q.ty: 1 pc. ②	Q.ty: 1 pc. ③ (3a ÷ 3d)	Q.ty: 1 pc. ④
Filter series	Filter element	Seal Kit code number NBR FPM	Indicator connection plug NBR FPM
LMP 210-211	See order table	02050435 02050436	T2H T2V

Clogging indicators

Introduction

Filter elements are efficient only if their Dirt Holding Capacity is fully exploited. This is achieved by using filter housings equipped with clogging indicators.

These devices trip when the clogging of the filter element causes an increase in pressure drop across the filter element.

The indicator is set to alarm before the element becomes fully clogged.

MP Filtri can supply indicators of the following designs:

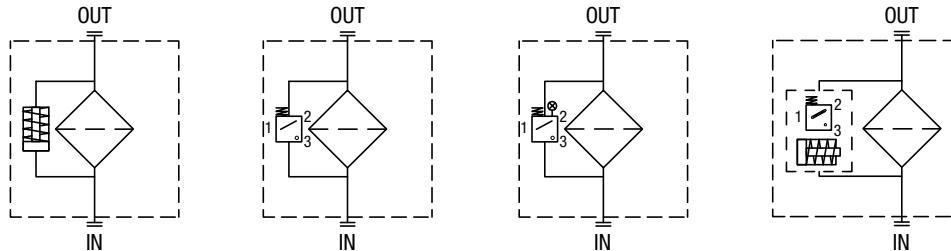
- Vacuum switches and gauges
- Pressure switches and gauges
- Differential pressure indicators

These type of devices can be provided with a visual, electrical or both signals.

Suitable indicator types

DIFFERENTIAL INDICATORS

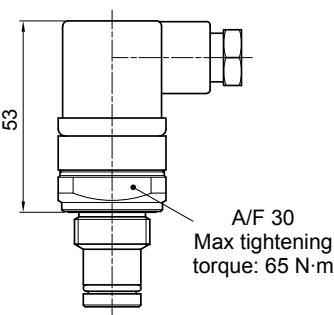
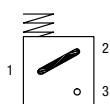
Differential indicators are used on the Pressure line to check the efficiency of the filter element. They measure the pressure upstream and downstream of the filter element (differential pressure). Standard items are produced with special connection G 1/2" size. Also available in Stainless Steel models.



Quick reference guide

Filter family	Filter series	Visual indicators	Electrical indicators	Electrical / Visual indicators
	ELIXIR® LFEX060-080-110-160	DVS25HP01	DES25HA10P01 DES25HA30P01 DES25HA80P01	
With bypass valve 3.5 bar	LMP 110 - 112 - 116 - 118 - 119 MULTIPORT LMP 120 - 122 - 123 MULTIPORT 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 DEM20XX10P01 DEM20XX20P01 DEM20XX30P01 DEM20XX35P01 DTA20xF70P01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01
	ELIXIR® LFEX060-080-110-160	DVS40HP01	DES40HA10P01 DES40HA30P01 DES40HA80P01	
Without bypass valve	LMP 110 - 112 - 116 - 118 - 119 MULTIPORT LMP 120 - 122 - 123 MULTIPORT 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 DEM50XX10P01 DEM50XX20P01 DEM50XX30P01 DEM50XX35P01 DTA50xF70P01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01

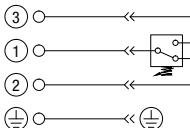
DEA*50	
Electrical Differential Indicator	
Settings	Ordering code
2.0 bar $\pm 10\%$	DE A 20 x A 50 P01
5.0 bar $\pm 10\%$	DE A 50 x A 50 P01


Hydraulic symbol**Materials**

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

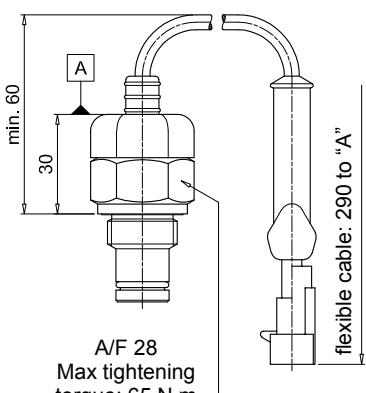
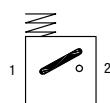
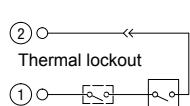
Technical data

- 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
- Degree protection: IP69K according to ISO 20653

Electrical symbol**Electrical data**

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

DEM*10	
Electrical Differential Indicator	
Settings	Ordering code
2.0 bar $\pm 10\%$	DE M 20 x 10 P01
5.0 bar $\pm 10\%$	DE M 50 x 10 P01


Hydraulic symbol**Electrical symbol****Materials**

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

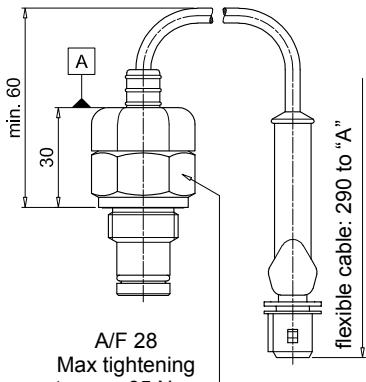
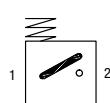
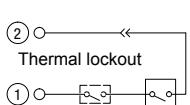
Technical data

- 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

Electrical data

- Electrical connection: AMP Superseal series 1.5
- Resistive load: 0.2 A / 115 Vdc
- Switching type: Normally open contacts (NC on request)
- Thermal lockout: Normally open up to 30 °C (option "F")

DEM*20	
Electrical Differential Indicator	
Settings	Ordering code
2.0 bar $\pm 10\%$	DE M 20 x 20 P01
5.0 bar $\pm 10\%$	DE M 50 x 20 P01


Hydraulic symbol**Electrical symbol****Materials**

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

Technical data

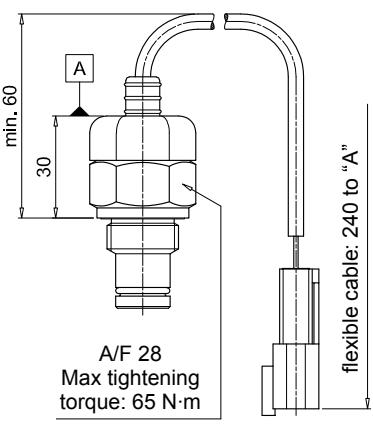
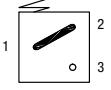
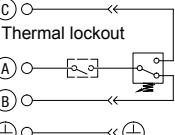
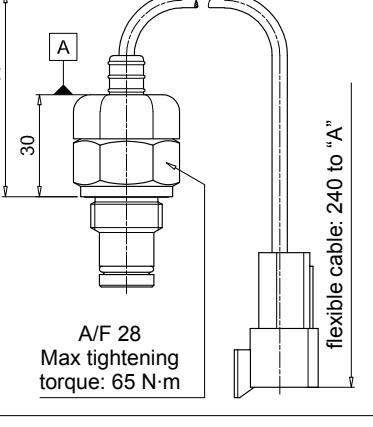
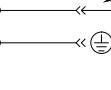
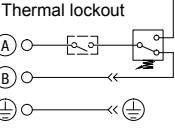
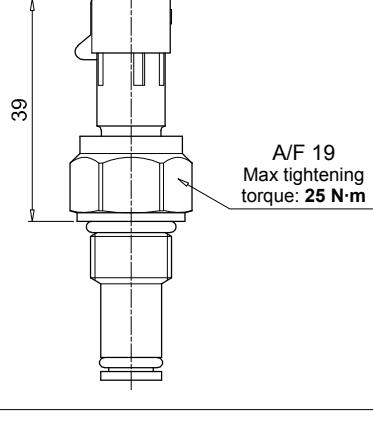
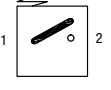
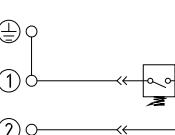
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection: IP66 according to EN 60529

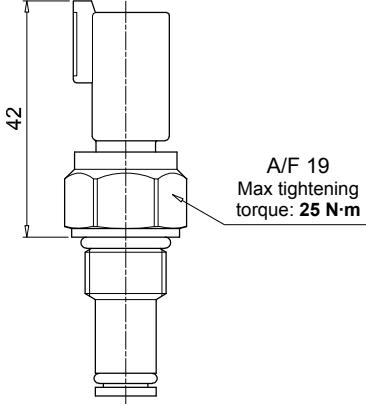
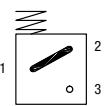
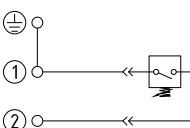
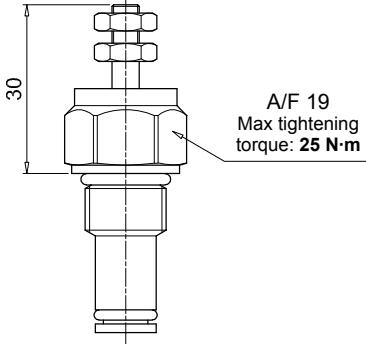
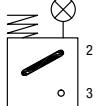
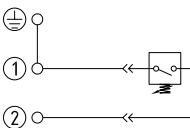
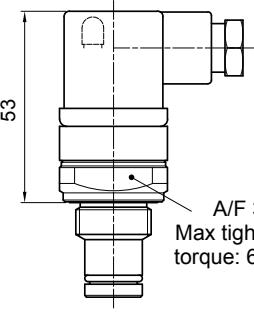
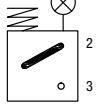
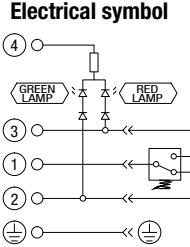
Electrical data

- Electrical connection: AMP Time junior
- Resistive load: 0.2 A / 115 Vdc
- Switching type: Normally open contacts (NC on request)
- Thermal lockout: Normally open up to 30 °C (option "F")

DIFFERENTIAL INDICATORS

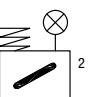
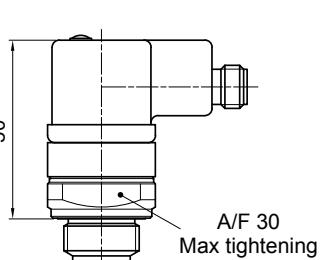
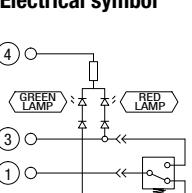
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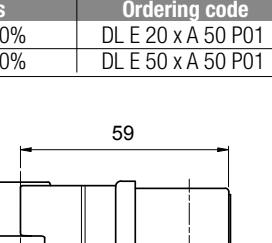
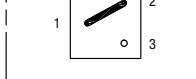
<p>DEM*30</p> <p>Electrical Differential Indicator</p> <table border="1"> <thead> <tr> <th>Settings</th><th>Ordering code</th></tr> </thead> <tbody> <tr> <td>2.0 bar $\pm 10\%$</td><td>DE M 20 x x 30 P01</td></tr> <tr> <td>5.0 bar $\pm 10\%$</td><td>DE M 50 x x 30 P01</td></tr> </tbody> </table>  <p>A/F 28 Max tightening torque: 65 N·m</p>	Settings	Ordering code	2.0 bar $\pm 10\%$	DE M 20 x x 30 P01	5.0 bar $\pm 10\%$	DE M 50 x x 30 P01	<p>Hydraulic symbol</p>  <p>Electrical symbol</p>  <p>③ ○ → Thermal lockout ② ○ → [] ① ○ → [] ○ → []</p>	<p>Materials</p> <ul style="list-style-type: none"> - Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM <p>Technical data</p> <ul style="list-style-type: none"> - 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 <p>Electrical data</p> <ul style="list-style-type: none"> - Electrical connection: Deutsch DT-04-3-P - Resistive load: 0.2 A / 115 Vdc - Switching type: SPDT contact - Thermal lockout: Normally open up to 30 °C (option "F")
Settings	Ordering code							
2.0 bar $\pm 10\%$	DE M 20 x x 30 P01							
5.0 bar $\pm 10\%$	DE M 50 x x 30 P01							
<p>DEM*35</p> <p>Electrical Differential Indicator</p> <table border="1"> <thead> <tr> <th>Settings</th><th>Ordering code</th></tr> </thead> <tbody> <tr> <td>2.0 bar $\pm 10\%$</td><td>DE M 20 x x 35 P01</td></tr> <tr> <td>5.0 bar $\pm 10\%$</td><td>DE M 50 x x 35 P01</td></tr> </tbody> </table>  <p>A/F 28 Max tightening torque: 65 N·m</p>	Settings	Ordering code	2.0 bar $\pm 10\%$	DE M 20 x x 35 P01	5.0 bar $\pm 10\%$	DE M 50 x x 35 P01	<p>Hydraulic symbol</p>  <p>Electrical symbol</p>  <p>④ ○ → Thermal lockout ③ ○ → [] ② ○ → [] ① ○ → [] ○ → []</p>	<p>Materials</p> <ul style="list-style-type: none"> - Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM <p>Technical data</p> <ul style="list-style-type: none"> - 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 <p>Electrical data</p> <ul style="list-style-type: none"> - Electrical connection: Deutsch DT-04-3-P - Resistive load: 0.2 A / 115 Vdc - Switching type: SPDT contact - Thermal lockout: Normally open up to 30 °C (option "F")
Settings	Ordering code							
2.0 bar $\pm 10\%$	DE M 20 x x 35 P01							
5.0 bar $\pm 10\%$	DE M 50 x x 35 P01							
<p>DES*10</p> <p>Electrical Differential Indicator</p> <table border="1"> <thead> <tr> <th>Settings</th><th>Ordering code</th></tr> </thead> <tbody> <tr> <td>2.5 bar $\pm 10\%$</td><td>DE S 25 H A 10 P01</td></tr> <tr> <td>4.0 bar $\pm 10\%$</td><td>DE S 40 H A 10 P01</td></tr> </tbody> </table>  <p>A/F 19 Max tightening torque: 25 N·m</p>	Settings	Ordering code	2.5 bar $\pm 10\%$	DE S 25 H A 10 P01	4.0 bar $\pm 10\%$	DE S 40 H A 10 P01	<p>Hydraulic symbol</p>  <p>Electrical symbol</p>  <p>② ○ → [] ① ○ → [] ○ → []</p>	<p>Materials</p> <ul style="list-style-type: none"> - Body: Brass - Internal parts: Brass - Polyamide - Contacts: Silver - Seal: HNBR <p>Technical data</p> <ul style="list-style-type: none"> - Max working pressure: 16 bar - Proof pressure: 24 bar - Burst pressure: 48 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: IP67 according to EN 60529 <p>Electrical data</p> <ul style="list-style-type: none"> - Electrical connection: AMP Superseal series 1.5 - Resistive load: 0.2 A / 24 Vdc - Switching type: Normally open contacts (NC on request)
Settings	Ordering code							
2.5 bar $\pm 10\%$	DE S 25 H A 10 P01							
4.0 bar $\pm 10\%$	DE S 40 H A 10 P01							

<p>DES*30</p> <p>Electrical Differential Indicator</p> <table border="1"> <thead> <tr> <th>Settings</th><th>Ordering code</th></tr> </thead> <tbody> <tr> <td>2.5 bar $\pm 10\%$</td><td>DE S 25 HA 30 P01</td></tr> <tr> <td>4.0 bar $\pm 10\%$</td><td>DE S 40 HA 30 P01</td></tr> </tbody> </table>  <p>A/F 19 Max tightening torque: 25 N·m</p> <p>42</p>	Settings	Ordering code	2.5 bar $\pm 10\%$	DE S 25 HA 30 P01	4.0 bar $\pm 10\%$	DE S 40 HA 30 P01	<p>Hydraulic symbol</p>  <p>1 2 3</p> <p>Electrical symbol</p>  <p>① ②</p>	<p>Materials</p> <ul style="list-style-type: none"> - Body: Brass - Internal parts: Brass - Polyamide - Contacts: Silver - Seal: HNBR <p>Technical data</p> <ul style="list-style-type: none"> - Max working pressure: 16 bar - Proof pressure: 24 bar - Burst pressure: 48 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: IP67 according to EN 60529 <p>Electrical data</p> <ul style="list-style-type: none"> - Electrical connection: Deutsch DT-04-2-P - Resistive load: 0.2 A / 24 Vdc - Switching type: Normally open contacts (NC on request)
Settings	Ordering code							
2.5 bar $\pm 10\%$	DE S 25 HA 30 P01							
4.0 bar $\pm 10\%$	DE S 40 HA 30 P01							
<p>DES*80</p> <p>Electrical Differential Indicator</p> <table border="1"> <thead> <tr> <th>Settings</th><th>Ordering code</th></tr> </thead> <tbody> <tr> <td>2.5 bar $\pm 10\%$</td><td>DE S 25 HA 80 P01</td></tr> <tr> <td>4.0 bar $\pm 10\%$</td><td>DE S 40 HA 80 P01</td></tr> </tbody> </table>  <p>A/F 19 Max tightening torque: 25 N·m</p> <p>30</p>	Settings	Ordering code	2.5 bar $\pm 10\%$	DE S 25 HA 80 P01	4.0 bar $\pm 10\%$	DE S 40 HA 80 P01	<p>Hydraulic symbol</p>  <p>1 2 3</p> <p>Electrical symbol</p>  <p>① ②</p>	<p>Materials</p> <ul style="list-style-type: none"> - Body: Brass - Internal parts: Brass - Polyamide - Contacts: Silver - Seal: HNBR <p>Technical data</p> <ul style="list-style-type: none"> - Max working pressure: 16 bar - Proof pressure: 24 bar - Burst pressure: 48 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: IP67 according to EN 60529 <p>Electrical data</p> <ul style="list-style-type: none"> - Electrical connection: Stud #10-32 UNF - Resistive load: 0.2 A / 24 Vdc - Switching type: Normally open contacts (NC on request)
Settings	Ordering code							
2.5 bar $\pm 10\%$	DE S 25 HA 80 P01							
4.0 bar $\pm 10\%$	DE S 40 HA 80 P01							
<p>DLA*51 - DLA*52</p> <p>Electrical/Visual Differential Indicator</p> <table border="1"> <thead> <tr> <th>Settings</th><th>Ordering code</th></tr> </thead> <tbody> <tr> <td>2.0 bar $\pm 10\%$</td><td>DL A 20 x A x x P01</td></tr> <tr> <td>5.0 bar $\pm 10\%$</td><td>DL A 50 x A x x P01</td></tr> </tbody> </table>  <p>A/F 30 Max tightening torque: 65 N·m</p> <p>53</p>	Settings	Ordering code	2.0 bar $\pm 10\%$	DL A 20 x A x x P01	5.0 bar $\pm 10\%$	DL A 50 x A x x P01	<p>Hydraulic symbol</p>  <p>1 2 3</p> <p>Electrical symbol</p>  <p>④ ③ ① ② ⑤</p> <p>(GREEN LAMP) (RED LAMP)</p>	<p>Materials</p> <ul style="list-style-type: none"> - Body: Brass - Base: Transparent polyamide - Contacts: Silver - Seal: HNBR - FPM <p>Technical data</p> <ul style="list-style-type: none"> - 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 - Degree protection: IP69K according to ISO 20653 <p>Electrical data</p> <ul style="list-style-type: none"> - Electrical connection: EN 175301-803 - Type 51 52 - Lamps 24 Vdc 110 Vdc - Resistive load: 1 A / 24 Vdc 1 A / 110 Vdc
Settings	Ordering code							
2.0 bar $\pm 10\%$	DL A 20 x A x x P01							
5.0 bar $\pm 10\%$	DL A 50 x A x x P01							

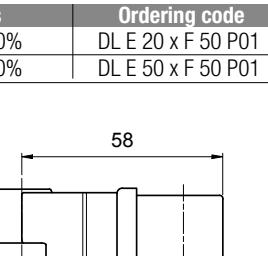
DIFFERENTIAL INDICATORS

Dimensions

DLA*71		Hydraulic symbol	Materials	
Electrical/Visual Differential Indicator				
Settings	Ordering code			
2.0 bar $\pm 10\%$	DLA 20 x A 71 P01		<ul style="list-style-type: none"> - Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM 	
5.0 bar $\pm 10\%$	DLA 50 x A 71 P01			
 A/F 30 Max tightening torque: 65 N·m		Electrical symbol	Technical data	
		<ul style="list-style-type: none"> - 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				
<ul style="list-style-type: none"> - Electrical connection: IEC 61076-2-101 D (M12) - Lamps: 24 Vdc - Resistive load: 0.4 A / 24 Vdc 				

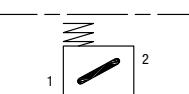
DLE*A50		Hydraulic symbol	Materials	
Electrical/Visual Differential Indicator				
Settings	Ordering code			
2.0 bar $\pm 10\%$	DL E 20 x A 50 P01			
5.0 bar $\pm 10\%$	DL E 50 x A 50 P01			
			<ul style="list-style-type: none"> - Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM 	
		Technical data	Electrical data	
		<ul style="list-style-type: none"> - 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 	<ul style="list-style-type: none"> - Electrical connections: EN 175301-803 - Resistive load: 5 A / 250 Vac - Available the connector with lamps 	

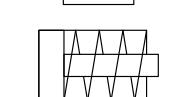
DLE*F50	
Electrical/Visual Differential Indicator	
Settings	Ordering code
2.0 bar $\pm 10\%$	DL E 20 x F 50 P01
5.0 bar $\pm 10\%$	DL E 50 x F 50 P01



A/F 32
Max tightening torque: 95 N·m

Hydraulic symbol	Materials
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Materials

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

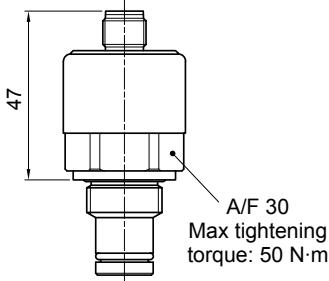
Technical data	Electrical data
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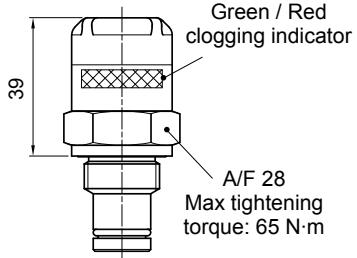
Technical data

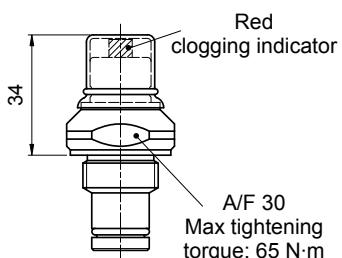
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection: IP65 according to EN 60529

Electrical data

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

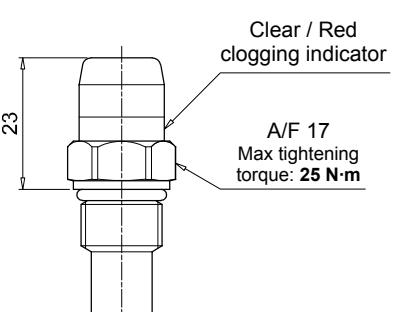
DTA*70		Hydraulic symbol	Materials	
Electronic Differential Indicator				
Settings	Ordering code			
2.0 bar $\pm 10\%$	DT A 20 x 70 P01			
5.0 bar $\pm 10\%$	DT A 50 x 70 P01			
 <p>47 A/F 30 Max tightening torque: 50 N·m</p>			Technical data	
			- Body: Brass	
			- Internal parts: Brass - Polyamide	
			- 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)	

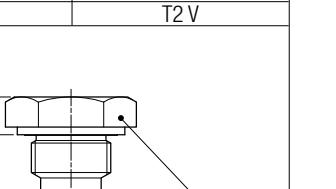
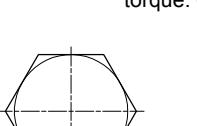
DVA		Hydraulic symbol	Materials	
Visual Differential Indicator				
Settings	Ordering code			
2.0 bar $\pm 10\%$	DVA 20 x P01			
5.0 bar $\pm 10\%$	DVA 50 x P01			
 <p>39 Green / Red clogging indicator A/F 28 Max tightening torque: 65 N·m</p>			Technical data	
			- Reset: Automatic reset	
			- Max working 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		Hydraulic symbol	Materials	
Visual Differential Indicator				
Settings	Ordering code			
2.0 bar $\pm 10\%$	DV M 20 x P01			
5.0 bar $\pm 10\%$	DV M 50 x P01			
 <p>34 Red clogging indicator A/F 30 Max tightening torque: 65 N·m</p>			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	

DIFFERENTIAL INDICATORS

Dimensions

DVS		Hydraulic symbol	Materials
Visual Differential Indicator			
Settings	Ordering code		
2.5 bar ±10%	DV S 25 H P01		- Body: Brass
4.0 bar ±10%	DV S 40 H P01		- Internal parts: Brass - Polyamide
			Technical data
			- Reset: Automatic reset
			- Max working pressure: 16 bar
			- Proof pressure: 24 bar
			- Burst pressure: 48 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: IP67 according to EN 60529

T2			Materials
Seal	Ordering code		
HNBR	T2 H		- Body: Phosphatized steel - Seal: HNBR / FPM
FPM	T2 V		
 <p>A/F 30 Max tightening torque: 65 N·m</p>			
			

DIFFERENTIAL INDICATORS

Dimensions

DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATORS

Series	Configuration example 1: DE M 20 H F 50 P01					
DE Electrical differential indicator	Configuration example 2: DL E 50 V A 71 P01					
DL Electrical/Visual differential indicator	Configuration example 3: DT A 20 H F 70 P01					
DT Electronic differential indicator	Configuration example 4: DV M 50 V P01					
DV Visual differential indicator						
Type	DE	DL	DT	DV		
A Standard type	•	•	•	A With automatic reset		
M With wired electrical connection	•	-	-	M With manual reset		
E For high power supply	-	•	-	S With automatic reset		
S Compact version	•	-	-			
Pressure setting						
20 2.0 bar						
25 2.5 bar						
40 4.0 bar						
50 5.0 bar						
Seals						
H HNBR						
V FPM						
Thermostat	DEA	DEM	DLA	DLE	DT	DV
A Without	•	•	•	•	-	-
F With thermostat	-	•	-	•	•	-
Electrical connections	DEA	DEM	DLA	DLE	DT	DV
10 Connection AMP Superseal series 1.5	-	•	-	-	-	-
20 Connection AMP Timer Junior	-	•	-	-	-	-
30 Connection Deutsch DT-04-2-P	-	•	-	-	-	-
35 Connection Deutsch DT-04-3-P	-	•	-	-	-	-
50 Connection EN 175301-803	•	-	-	•	-	-
51 Connection EN 175301-803, transparent base with lamps 24 Vdc	-	-	•	-	-	-
52 Connection EN 175301-803, transparent base with lamps 110 Vdc	-	-	•	-	-	-
70 Connection IEC 61076-2-101 D (M12)	-	-	-	-	•	-
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	-	•	-	-	-
Option						
P01 MP Filtri standard						
Pxx Customized						

DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATOR PLUG

Series	Configuration example T2 H	
T2 Indicator plug		
Seals		
H HNBR		
V FPM		