

FMMX 050 series

Maximum working pressure up to 42 MPa (420 bar) - Flow rate up to 154 l/min



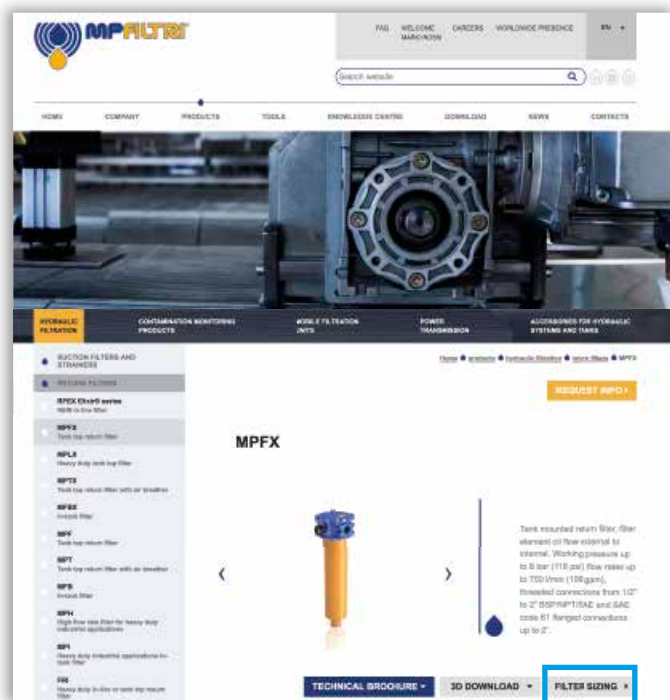
TYPICAL FILTER SIZING Selection Software

Step ①

Select "FILTER SIZING SOFTWARE" after login

OR

Select "FILTER SIZING" after login from a product page



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

Step ②

Enter the main data for sizing the filter
then push CALCULATE.

PRODUCT SELECTION POWER TRANSMISSION SOFTWARE FILTER SIZING SOFTWARE

SUCTION LOW & MEDIUM PRESSURE HIGH PRESSURE
RETURN/SUCTION RETURN STAINLESS STEEL HIGH PRESSURE

Working Pressure (bar) * 5 Flow rate (l/min) * 90 DP max of the project (bar) * 0.5 Fluid Working Temperature (°C) * 40

Fluid * HLP - Mineral oils Fluid type * ISO VG 46 (SUS 216) Viscosity (cst) * 46 Viscosity (SUS) * 216

Filtration * A25 - 25 µm absolute inorganic microfibre Connection Type * G 1"

CALCULATE

PRODUCT SELECTION POWER TRANSMISSION SOFTWARE FILTER SIZING SOFTWARE

SUCTION LOW & MEDIUM PRESSURE HIGH PRESSURE
RETURN/SUCTION RETURN STAINLESS STEEL HIGH PRESSURE

Product: MPFX Working Pressure (bar) * 5 Flow rate (l/min) * 90 DP max of the project (bar) * 0.5 Fluid Working Temperature (°C) * 40

Fluid * HLP - Mineral oils Fluid type * ISO VG 46 (SUS 216) Viscosity (cst) * 46 Viscosity (SUS) * 216

Filtration * A25 - 25 µm absolute inorganic microfibre Connection Type * G 1"

CALCULATE

Step ③

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

Working Pressure 8 (bar) Fluid HLP
Flow rate 90 (l/min) Fluid type ISO VG 46 (SUS 216)
DP max of the project 0.5 (bar) Seal A - NBR
Working Temperature 40 (°C) Optional seals V - FPM
Filtration 25 µm absolute inorganic microfibre Working Temperature with options -20 + 110 (°C)
Connection Type G 1" Viscosity 46 (cst) - 216 (SUS)

NEW SEARCH

Filter type MPFX: Tank top mounting - (Pmax) 1 Valve B: 1.75 bar System Seal A: NBR X-RESET

Option1 Single or duplex DIN Standard NOT APPLICABLE Indicator Visual

CSV Excel Show 10 entries Search:

Image	Code	Press bar	Qmax l/min	Qmax gpm	DP bar	Housing DP psi	Element DP bar	Element DP psi	Connection	Seal	Link	
	MPFX-100-3-A-G3-A25-HBPS1	8	116	30.74	25.3	0.47	7	0.12	2	0.35	G 1"	A
	MPFX-100-3-A-G3-A25-HBPS1	8	116	30.74	25.3	0.47	7	0.12	2	0.35	G 1"	A

Step 4

Choose the most suitable filter from the proposed list.

Image	Code	Pmax bar	Pmin psi	Qmax l/min	Qmin us	AP bar	Housing AP psi	Element AP bar	Connection	Seal	Link			
	MPTX-100-5-A-Q3-A25-H-BPFI	8	116	25.74	25.3	0.47	7	0.12	2	0.35	5	G 1"	A	
	MPTX-104-5-A-Q3-A25-H-BPFI	8	116	25.74	25.3	0.47	7	0.12	2	0.35	5	G 1"	A	

Step 5

It is possible to change the filter modifying every parameter.



A SAVE YOUR FILTER'S REPORT



B MANUAL EDIT



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



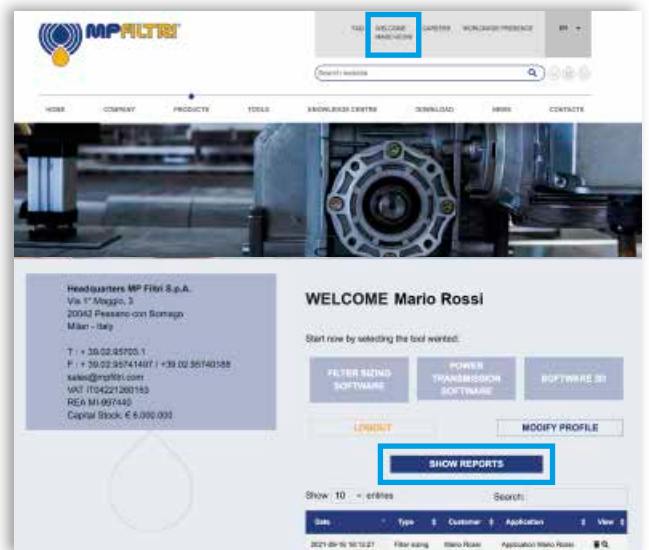
A new
browser window
displays the pdf

see **A**

Close the report window



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





THE **X** CONCEPT FOR OUR FILTERS

Protect the performance of your system with MYclean.

Quality and efficiency are fundamental for MP Filtri:

this exclusive new filter element possesses polygon shape geometry and specific seal that ensures only original spare parts can be used - ensuring correct operation and higher system reliability.

FMMX 050 series

with **MYCLEAN** HPX 050 Filter Element



- **Protects the machine from improper use of non-original products.**
- **Safety of constant quality protection & reliability**

With exclusive filter element you are sure that only MP Filtri filter elements can be used, ensuring the best cleaning level of the oil due to the use of originals filter elements.



The products identified as FMMX 050 are protected by:

- Italian Patent n° 102014902261205
- Canadian Patent n° 2,937,258
- European Patent n° 16181725.9
- US Patent n° 15/224,337

TOGETHER WITH **MYCLEAN**, AS OPTION, FMMX 050 SERIES CAN BE PROVIDED WITH

zerospark®
THE ANTI-STATIC FILTERS

THE **Z** CONCEPT FOR OUR FILTERS



Zerospark® is a specialist solution designed to solve the problem of electrostatic discharge inside hydraulic filters. Caused by the electrical charge build-up due to the passage of oil through the filters, this can result in damage to filter elements, oils and circuit components. It can even cause fire hazards in environments where flammable materials are present.

FMMX 050 GENERAL INFORMATION

Description

Technical data

High Pressure filters

In-line

Maximum working pressure up to 42 MPa (420 bar)

Flow rate up to 154 l/min

FMMX is a range of versatile high pressure filter for protection of sensitive components in high pressure hydraulic systems in the mobile machines.

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

Available features:

- Female threaded connections up to 1 1/4", for a maximum flow rate of 250 l/min
- Fine filtration rating, to get a good cleanliness level into the system
- Bypass valve, to relieve excessive pressure drop across the filter media
- Low collapse filter element "N", for use with filters provided with bypass valve
- Low collapse filter element with external support "R", for filter element protection against the back pressure caused by the check valve in filters provided with the bypass valve
- High collapse filter element with external support "S", for filter element protection against the back pressure caused by the check valve in filters not provided with the bypass valve
- Visual, electrical and electronic differential clogging indicators

Common applications:

- Agricultural machines
- Mobile machines

Filter housing materials

- Head: Painted cast iron, black RAL 9005
- Housing: Phosphatized steel
- Bypass valve: Steel

Pressure

- Test pressure: 63 MPa (630 bar)
- Burst pressure: 126 MPa (1260 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 42 MPa (420 bar)

Bypass valve

- Opening pressure 600 kPa (6 bar) $\pm 10\%$
- Other opening pressures on request.

Δp element type

- Microfiber filter elements - series N-R: 20 bar
- Microfiber filter elements - series S: 210 bar
- Wire mesh 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

In-line Inlet/Outlet

Note

FMMX filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

Filter series	Weights [kg]					Volumes [dm³]						
	Length	1	2	3	4	5	Length	1	2	3	4	5
FMMX 050		3.11	3.48	3.90	4.36	5.54		0.34	0.48	0.63	0.81	1.23

Filter series	Length	Filter element design - N Series						Filter element design - S Series				
		A03	A06	A10	A16	A25	M25	A03	A06	A10	A16	A25
FMMX 050	1	42	43	79	82	106	147	29	39	57	59	74
	2	52	57	85	96	121	149	45	49	76	88	114
	3	66	69	97	106	130	150	58	61	89	99	125
	4	83	89	113	115	134	152	74	80	106	108	129
	5	107	110	130	134	141	154	93	95	111	121	139

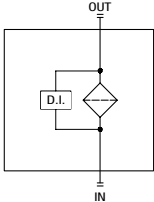
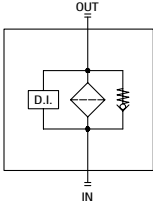
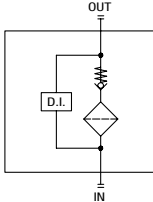
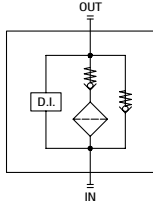
Maximum flow rate for a complete pressure filter with a pressure drop $\Delta p = 1.5$ bar.

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.mpfiltri.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.

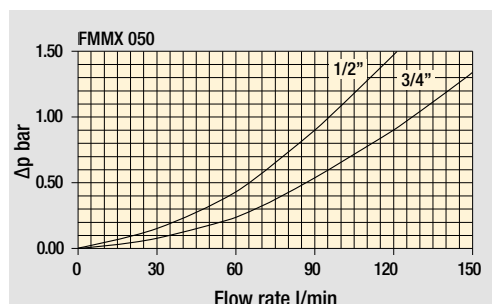
Hydraulic symbols

Filter series	Style S	Style B	Style T	Style D
FMMX 050				

Pressure drop

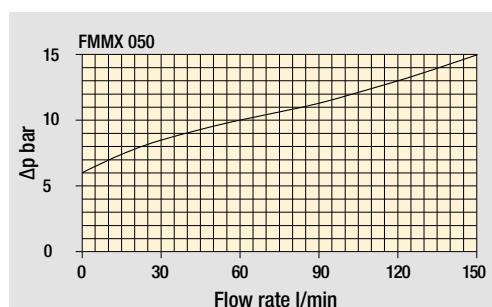
Filter housings

Δp pressure drop

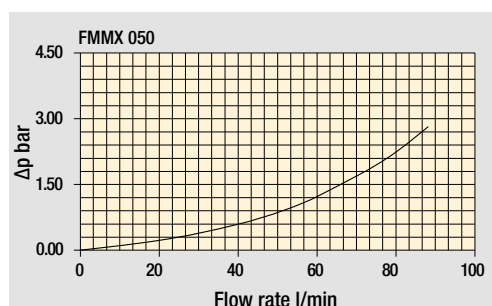


Bypass valve

pressure drop



Valves



Filter housing
with check valve

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

FMMX 050

Designation & Ordering code

COMPLETE FILTER

Series and size Configuration example: **FMMX050** **3** **B** **A** **G** **A10** **N** **P01**

FMMX050 Filter featuring **MYCLEAN** Filter Element

Length **1** **2** **3** **4** **5**

Valves

S Without bypass
B With bypass 6 bar
T With check valve, without bypass
D With check valve, with bypass 6 bar

Seals

A NBR
V FPM

Connections

A M18x1.5 - ISO 6149 **E** 1/2" NPT
B M22x1.5 - ISO 6149 **F** 3/4" NPT
C G 1/2" **G** SAE 8 - 3/4" - 16 UNF
D G 3/4" **H** SAE 12 - 1 1/16" - 12 UN

Filtration rating (filter media)

A03 Inorganic microfiber	3 µm
A06 Inorganic microfiber	6 µm
A10 Inorganic microfiber	10 µm
A16 Inorganic microfiber	16 µm
A25 Inorganic microfiber	25 µm
M25 Wire mesh	25 µm

Element Δp

	S	B	T	D
N 20 bar	-	•	-	-
R 20 bar	-	-	-	•
S 210 bar	•	-	•	-

Valves

Executions

Base	zero spark	
P01	Z01	Upper connection for clogging indicator
P02	Z02	Without connection for clogging indicator
P03	Z03	Frontal connection for clogging indicator
Pxx	Zxx	Customized

FILTER ELEMENT

Element series and size Configuration example: **HPX050** **3** **A10** **A** **N** **P01**

HPX050 Filter Element with **MYCLEAN** feature

Element length **1** **2** **3** **4** **5**

Filtration rating (filter media)

A03 Inorganic microfiber	3 µm
A06 Inorganic microfiber	6 µm
A10 Inorganic microfiber	10 µm
A16 Inorganic microfiber	16 µm
A25 Inorganic microfiber	25 µm
M25 Wire mesh	25 µm

Seals

A NBR
V FPM

Element Δp

N 20 bar
R 20 bar
S 210 bar

Executions

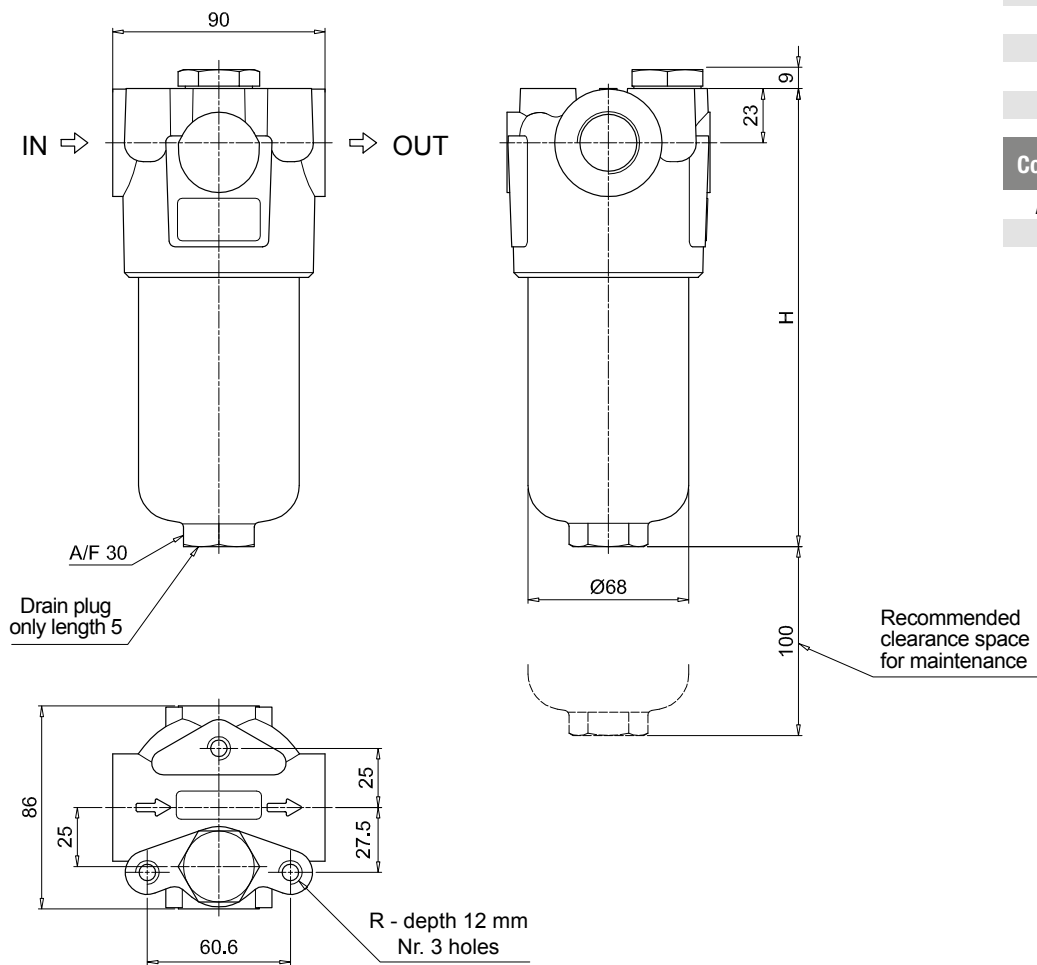
Base	zero spark	
P01	Z01	MP Filtri standard
Pxx	Zxx	Customized

CLOGGING INDICATORS

See page 622

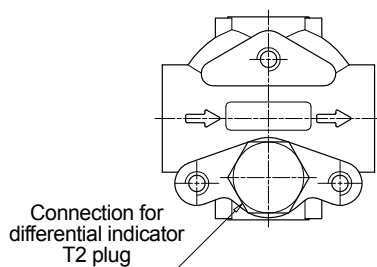
DEA Electrical differential indicator
DEM Electrical differential indicator
DLA Electrical / visual differential indicator
DLE Electrical / visual differential indicator

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

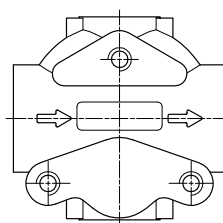


FMMX050	
Filter length	H [mm]
1	158
2	195
3	237
4	285
5	407
Connections	R
A-B-C-D	M10
E-F-G-H	3/8" UNC

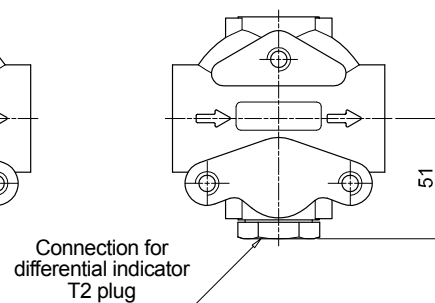
Execution P01



Execution P02



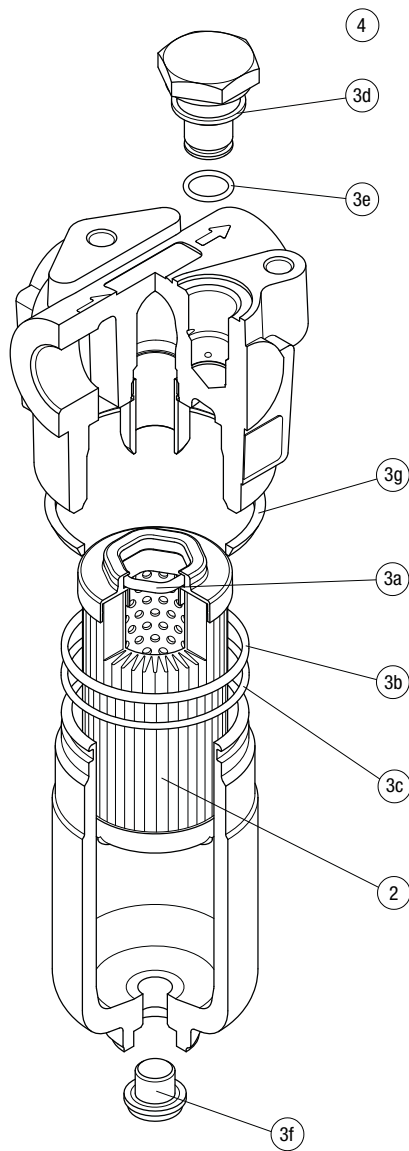
Execution P03



FMMX 050 SPARE PARTS

Order number for spare parts

FMMX 050



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.	Q.ty: 1 pc.
Filter series	Filter element	Seal Kit code number	Indicator connection plug
FMMX 050	See order table	NBR	NBR
		FPM	FPM
		02050864	T2H
		02050865	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.

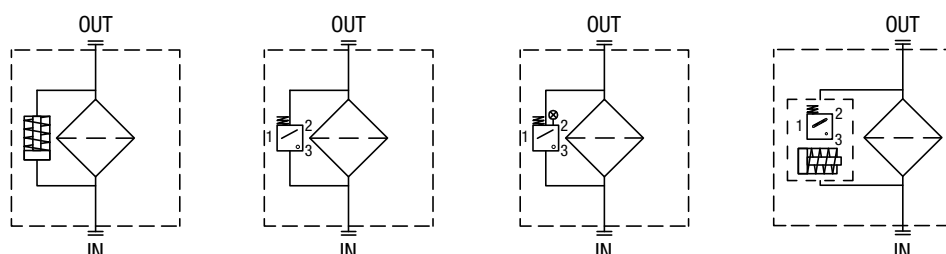
Suitable indicator types

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).

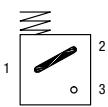
Standard items are produced with special connection G 1/2" size.

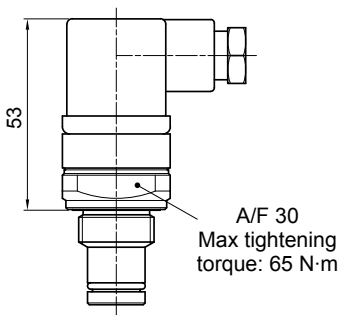
Also available in Stainless Steel models.



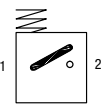
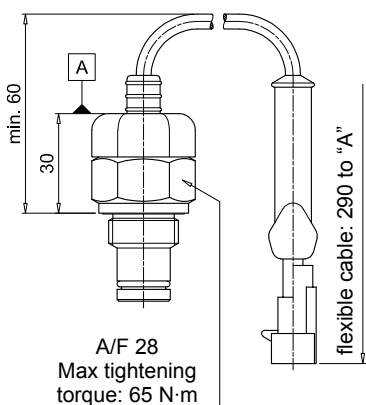
Quick reference guide

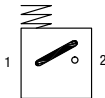
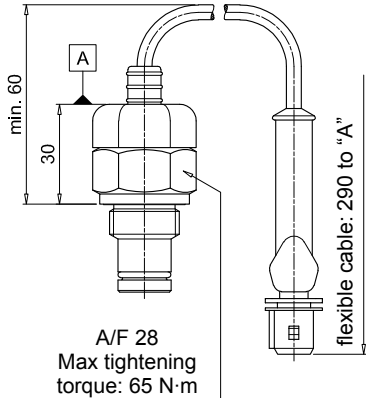
Filter family	Filter series	Visual indicators	Electrical indicators	Electrical / Visual indicators	
HIGH PRESSURE FILTERS	With bypass valve 6 bar	FMP 039 - 065 - 135 - 320		DEA50xA50P01	
		FHP 010 - 011 - 065 - 135 - 350 - 351 - 500		DEM50XX10P01	DLA50xA51P01
		FMMX 050		DEM50XX20P01	DLA50xA52P01
		FMM 050 - 150	DVA50xP01	DEM50XX30P01	DLA50xA71P01
		FHA 051		DEM50XX35P01	
		FHM 006 - 007 - 010 - 050 - 065 - 135 - 320 - 500	DVM50xP01		DLE50xA50P01
		FHB 050 - 135 - 320		DTA50xF70P01	DLE50xF50P01
		FHF 325			
	FHD 021 - 051 - 326 - 333		DEA70xA50P01 DEA95xA50P01		
	Without bypass valve	FMP 039 - 065 - 135 - 320		DEM70XX10P01	DLA70xA51P01
		FHP 010 - 011 - 065 - 135 - 350 - 351 - 500		DEM70XX20P01	DLA70xA52P01
		FMMX 050		DEM70XX30P01	DLA70xA71P01
		FMM 050 - 150	DVA70xP01	DEM70XX35P01	
		FHA 051	DVA95xP01	DEM95XX10P01	DLA95xA51P01
		FHM 006 - 007 - 010 - 050 - 065 - 135 - 320 - 500	DVM70xP01	DEM95XX20P01	DLA95xA52P01
		FHB 050 - 135 - 320	DVM95xP01	DEM95XX30P01	DLA95xA71P01
FHF 325			DEM95XX35P01	DLE70xA50P01	
FHD 021 - 051 - 326 - 333		DTA70xF70P01 DTA95xF70P01	DLE70xF50P01 DLE95xA50P01 DLE95xF50P01		

DEA*50		Hydraulic symbol 	Materials - Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM		
Electrical Differential Indicator				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	
Settings	Ordering code				Electrical data - Electrical connection: EN 175301-803 - Resistive load: 0.2 A / 115 Vdc
5.0 bar ±10%	DE A 50 x A 50 P01				
7.0 bar ±10%	DE A 70 x A 50 P01				
9.5 bar ±10%	DE A 95 x A 50 P01				



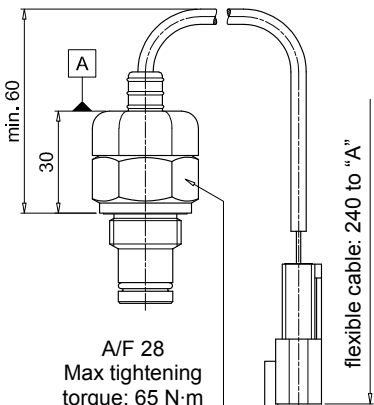
A/F 30
Max tightening torque: 65 N·m

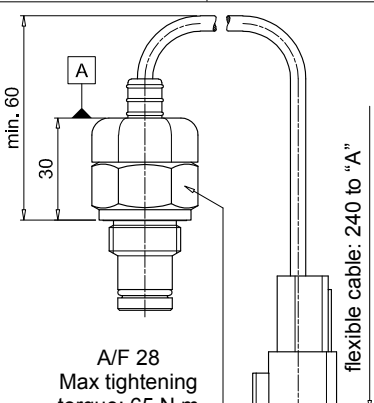
DEM*10		Hydraulic symbol	Materials	
Electrical Differential Indicator				
Settings	Ordering code		- Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM	
5.0 bar ±10%	DE M 50 x x 10 P01			
7.0 bar ±10%	DE M 70 x x 10 P01			
9.5 bar ±10%	DE M 95 x x 10 P01			
		Technical data		
		- 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")		

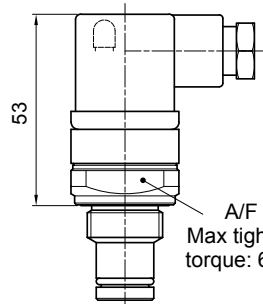
DEM*20		Hydraulic symbol	Materials	
Electrical Differential Indicator				
Settings	Ordering code		- Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM	
5.0 bar $\pm 10\%$	DE M 50 x x 20 P01			
7.0 bar $\pm 10\%$	DE M 70 x x 20 P01			
9.5 bar $\pm 10\%$	DE M 95 x x 20 P01			
		Technical 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")		

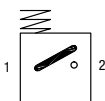
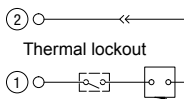
DIFFERENTIAL INDICATORS

Dimensions

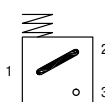
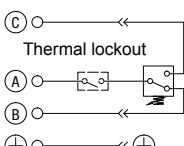
DEM*30	
Electrical Differential Indicator	
Settings	Ordering code
5.0 bar ±10%	DE M 50 x x 30 P01
7.0 bar ±10%	DE M 70 x x 30 P01
9.5 bar ±10%	DE M 95 x x 30 P01
	

DEM*35	
Electrical Differential Indicator	
Settings	Ordering code
5.0 bar ±10%	DE M 50 x x 35 P01
7.0 bar ±10%	DE M 70 x x 35 P01
9.5 bar ±10%	DE M 95 x x 35 P01
	

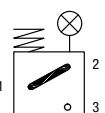
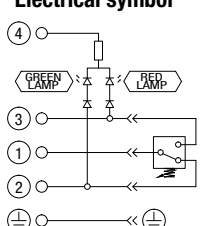
DLA*51 - DLA*52	
Electrical/Visual Differential Indicator	
Settings	Ordering code
5.0 bar ±10%	DL A 50 x A xx P01
7.0 bar ±10%	DL A 70 x A xx P01
9.5 bar ±10%	DL A 95 x A xx P01
	

Hydraulic symbol	
	
Electrical symbol	
	

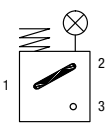
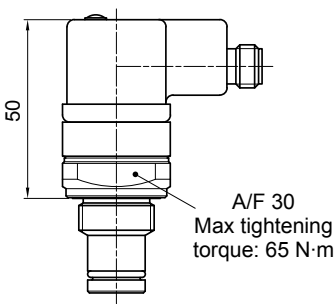
Materials	
- Body:	Brass
- Base:	Black polyamide
- Contacts:	Silver
- Seal:	HNBR - FPM
Technical data	
- Max working pressure:	420 bar
- Proof pressure:	630 bar
- Burst pressure:	1260 bar
- Working temperature:	From -25 °C to +110 °C
- Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection:	IP66 according to EN 60529
Electrical data	
- Electrical connection:	Deutsch DT-04-2-P
- 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")

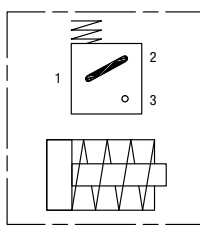
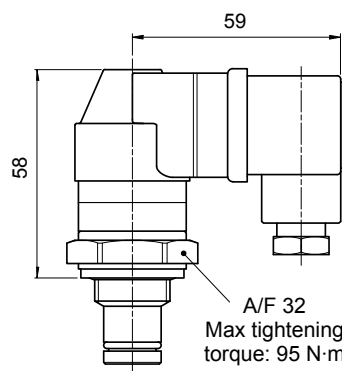
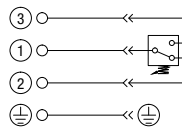
Hydraulic symbol	
	
Electrical symbol	
	

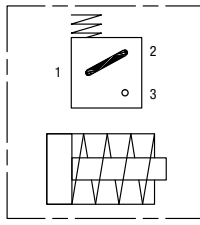
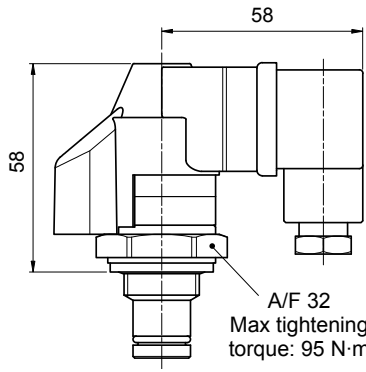
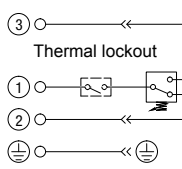
Materials	
- Body:	Brass
- Base:	Black polyamide
- Contacts:	Silver
- Seal:	HNBR - FPM
Technical data	
- Max working pressure:	420 bar
- Proof pressure:	630 bar
- Burst pressure:	1260 bar
- Working temperature:	From -25 °C to +110 °C
- Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943
- Degree protection:	IP66 according to EN 60529
Electrical data	
- Electrical connection:	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")

Hydraulic symbol	
	
Electrical symbol	
	

Materials	
- Body:	Brass
- Base:	Transparent 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 IP69K according to ISO 20653
Electrical data	
- Electrical connection:	EN 175301-803
- Type	51 52
- Lamps	24 Vdc 110 Vdc
- Resistive load:	1 A / 24 Vdc 1 A / 110 Vdc

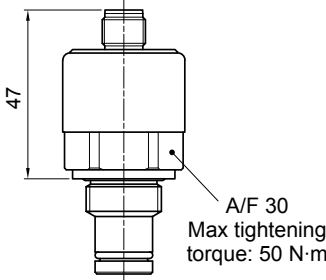
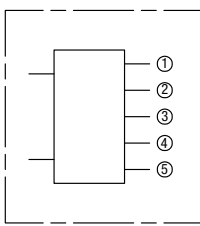
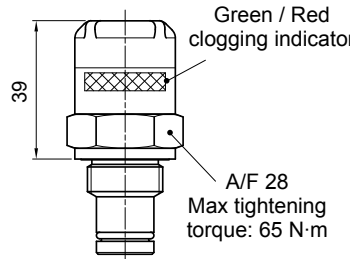
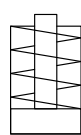
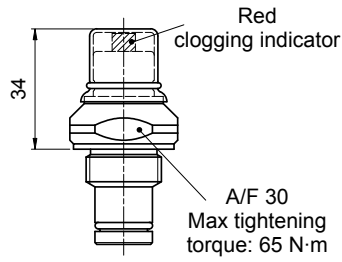
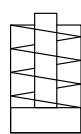
DLA*71		Hydraulic symbol	Materials
Electrical/Visual Differential Indicator			
Settings	Ordering code		- Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM
5.0 bar $\pm 10\%$	DL A 50 x A 71 P01		
7.0 bar $\pm 10\%$	DL A 70 x A 71 P01		
9.5 bar $\pm 10\%$	DL A 95 x A 71 P01		
		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		Hydraulic symbol	Materials
Electrical/Visual Differential Indicator			
Settings	Ordering code		- Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM
5.0 bar $\pm 10\%$	DL E 50 x A 50 P01		
7.0 bar $\pm 10\%$	DL E 70 x A 50 P01		
9.5 bar $\pm 10\%$	DL E 95 x A 50 P01		
		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 symbol 	Electrical data - Electrical connections: EN 175301-803 - Resistive load: 5 A / 250 Vac - Available the connector with lamps

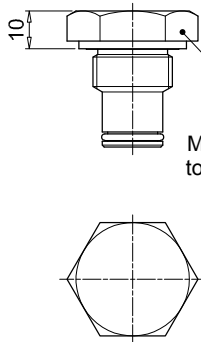
DLE*F50		Hydraulic symbol	Materials
Electrical/Visual Differential Indicator			- Body: Brass - Base: Black polyamide - Contacts: Silver - Seal: HNBR - FPM
Settings	Ordering code	Technical data	
5.0 bar $\pm 10\%$	DL E 50 x F 50 P01	- Max working pressure: 420 bar	
7.0 bar $\pm 10\%$	DL E 70 x F 50 P01	- Proof pressure: 630 bar	
9.5 bar $\pm 10\%$	DL E 95 x F 50 P01	- 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 symbol	Electrical data
			- Electrical connections: EN 175301-803 - Resistive load: 5 A / 250 Vac - Thermal lockout setting: +30 °C

DIFFERENTIAL INDICATORS

Dimensions

DTA*70 Electrical Differential Indicator <table><tr><th>Settings</th><th>Ordering code</th></tr><tr><td>5.0 bar ±10%</td><td>DT A 50 x x 70 P01</td></tr><tr><td>7.0 bar ±10%</td><td>DT A 70 x x 70 P01</td></tr><tr><td>9.5 bar ±10%</td><td>DT A 95 x x 70 P01</td></tr></table> 		Settings	Ordering code	5.0 bar ±10%	DT A 50 x x 70 P01	7.0 bar ±10%	DT A 70 x x 70 P01	9.5 bar ±10%	DT A 95 x x 70 P01	Hydraulic symbol  Electrical symbol <table><tr><td>①</td><td>○</td><td>+24 Vdc</td></tr><tr><td>②</td><td>○</td><td>4 ÷ 20 mA</td></tr><tr><td>③</td><td>○</td><td>75% - N.O. Digital output</td></tr><tr><td>④</td><td>○</td><td>100% - N.O. Digital output</td></tr><tr><td>⑤</td><td>○</td><td>0 Vdc</td></tr></table>	①	○	+24 Vdc	②	○	4 ÷ 20 mA	③	○	75% - N.O. Digital output	④	○	100% - N.O. Digital output	⑤	○	0 Vdc	Materials - Body: - Internal parts: - Contacts: - Seal: Brass Brass - Polyamide Silver HNBR - FPM Technical data - Max working pressure: - Proof pressure: - Burst pressure: - Compatibility with fluids: - Degree protection: 420 bar 630 bar 1260 bar Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 IP67 according to EN 60529 Electrical data - Electrical connection: - Power supply: - Analogue output: - Thermal lockout: IEC 61076-2-101 D (M12) 24 Vdc From 4 to 20 mA 30 °C (all output signals stalled up to 30 °C)
Settings	Ordering code																									
5.0 bar ±10%	DT A 50 x x 70 P01																									
7.0 bar ±10%	DT A 70 x x 70 P01																									
9.5 bar ±10%	DT A 95 x x 70 P01																									
①	○	+24 Vdc																								
②	○	4 ÷ 20 mA																								
③	○	75% - N.O. Digital output																								
④	○	100% - N.O. Digital output																								
⑤	○	0 Vdc																								
DVA Visual Differential Indicator <table><tr><th>Settings</th><th>Ordering code</th></tr><tr><td>5.0 bar ±10%</td><td>DV A 50 x P01</td></tr><tr><td>7.0 bar ±10%</td><td>DV A 70 x P01</td></tr><tr><td>9.5 bar ±10%</td><td>DV A 95 x P01</td></tr></table> 		Settings	Ordering code	5.0 bar ±10%	DV A 50 x P01	7.0 bar ±10%	DV A 70 x P01	9.5 bar ±10%	DV A 95 x P01	Hydraulic symbol 	Materials - Body: - Internal parts: - Contacts: - Seal: Brass Brass - Polyamide Silver HNBR - FPM Technical data - Reset: - Max working pressure: - Proof pressure: - Burst pressure: - Working temperature: - Compatibility with fluids: - Degree protection: Automatic reset 420 bar 630 bar 1260 bar From -25 °C to +110 °C Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 IP65 according to EN 60529															
Settings	Ordering code																									
5.0 bar ±10%	DV A 50 x P01																									
7.0 bar ±10%	DV A 70 x P01																									
9.5 bar ±10%	DV A 95 x P01																									
DVM Visual Differential Indicator <table><tr><th>Settings</th><th>Ordering code</th></tr><tr><td>5.0 bar ±10%</td><td>DV M 50 x P01</td></tr><tr><td>7.0 bar ±10%</td><td>DV M 70 x P01</td></tr><tr><td>9.5 bar ±10%</td><td>DV M 95 x P01</td></tr></table> 		Settings	Ordering code	5.0 bar ±10%	DV M 50 x P01	7.0 bar ±10%	DV M 70 x P01	9.5 bar ±10%	DV M 95 x P01	Hydraulic symbol 	Materials - Body: - Internal parts: - Contacts: - Seal: Brass Brass - Polyamide Silver HNBR - FPM Technical data - Reset: - Max working pressure: - Proof pressure: - Burst pressure: - Working temperature: - Compatibility with fluids: - Degree protection: Manual reset 420 bar 630 bar 1260 bar From -25 °C to +110 °C Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 IP65 according to EN 60529															
Settings	Ordering code																									
5.0 bar ±10%	DV M 50 x P01																									
7.0 bar ±10%	DV M 70 x P01																									
9.5 bar ±10%	DV M 95 x P01																									

T2	
Indicator plug	
Seal	Ordering code
HNBR	T2 H
FPM	T2 V



A/F 30
Max tightening
torque: 65 N·m

Materials

- Body: Phosphatized steel
- Seal: HNBR / FPM

DIFFERENTIAL INDICATORS

Designation & Ordering code

DESIGNATION & ORDERING CODE - DIFFERENTIAL INDICATORS

Series	Configuration example 1:						
DE Electrical differential indicator	DE	M	50	H	F	35	P01
DL	Configuration example 2:						
Electrical / Visual differential indicator	DE	H	50	F	A	70	P01
DT	Configuration example 3:						
Electrical differential indicator	DL	E	70	V	A	50	P01
DV	Configuration example 4:						
Visual differential indicator	DT	A	50	H	F	70	P01
Configuration example 5:							
	DV	M	95	V			P01

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	-	•	-	

Pressure setting	DEA	DEM	DLA	DLE	DT	DV
50 5 bar	•	•	•	•	•	•
70 7 bar	•	•	•	•	•	•
95 9.5 bar	•	•	•	•	•	•

Seals	DEA	DEM	DLA	DLE	DT	DV
F MFQ	-	-	-	-	-	-
H HNBR	•	•	•	•	•	•
V FPM	•	•	•	•	•	•

Thermostat	DEA	DEM	DLA	DLE	DT	DV
A Without thermostat	•	•	•	•	-	-
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	-	•	-	-	-	-
48 Connection via three-core cable - fitting M20x1.5	-	-	-	-	-	-
49 Connection via four-core cable - fitting 1/2" NPT	-	-	-	-	-	-
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 Indicator plug	T2	H
Seals		
H HNBR		
V FPM		