



## Differential Pressure Indicators

Reliable and continuous filter control



ENGINEERING YOUR SUCCESS.

# Indicators Series

DPI dp-Indicators

Max 450 bar



## Measuring critical system parameters is essential

**Reliable and continuous control of the filter in all applications**

The DPI range of filter condition indicators are designed for use in GMF and EPF filters. Maximum pressure 450 bar. A comprehensive range of high quality indicators for mobile, industrial and marine applications.



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**EMEA Product Information Centre**

**Free phone: 00 800 27 27 5374**

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

**US Product Information Centre**

**Toll-free number: 1-800-27 27 537**

[www.parker.com](http://www.parker.com)

## Product Features:

- The DPI range of filter condition indicators, designed for use in Parker GMF & EPF filters.
- Accurate visual, electronic or electrical filter condition feedback.
- Maximum pressure 450 bar.
- Mobile, industrial and marine applications.

# Indicators Series

DPI dp-Indicators

## Features & Benefits

FEATURES	ADVANTAGES	BENEFITS
Indicators fatigue tested to full pressure rating	Reliable indicators for heavy duty applications	Reliable and continuous control of the filter in all applications
Cartridge screw-in type indicators	Easy mounting	Reliable sealing, no leakage
Visual, electrical and electronic indicators available	Check element condition at a glance	Optimises element life, prevents bypassing
	Right style for the application	Match your system's electrical connections
Several indication settings	Optimized for each bypass setting	Right indicator for application
Visual indicator	Local monitoring of the element condition	Reliable low cost indicator
Electrical indicator with change-over switch	Option of Normally Open (N.O.) and Normally Closed (N.C.) function	Approved for low voltage and high voltage use including machine control systems and PLC's
Electronic indicators with visual indication	Thermal lockout (visual output: blue)	No false alarm because of low temperature oil
	Early warning (visual output: yellow)	Allows time to schedule element change
	Pre-alarm with digital output (visual output: orange)	Indicates upcoming element change
	Alarm with digital output (visual output: red)	Clear indication for element change
Highlighted alarm (visual output: blinking red)	Highlighted alarm (visual output: blinking red)	High impact alarm
	Continuous output electronic indicator	Monitor your equipment on-line

## Typical Applications

- Industrial equipment
- Mobile equipment
- Marine/offshore applications

### The Parker DPI Series Differential Pressure Indicators

The DPI range of filter condition indicators, are designed for use in GMF and EPF filters.

Ideal for giving accurate visual, electronic or electrical feedback of filter element condition, in order to facilitate effective maintenance and ensuring hydraulic systems, marine/mobile or industrial are protected from particulate contamination.



## Specification

**Maximum operating pressure:**  
450 bar

**Maximum differential pressure:**  
210 bar.

**Working temperature range:**  
Visual (DPIM3) and electrical (DPIT1)  
indicators: -20°C to +85°C

Electronic (DPIF) and continuous (DPIC)  
indicators: -20°C to +80°C

**Material of housing:**  
Brass

**Seals:**  
Fluoroelastomer

**Port thread:**  
SAE 08 (3/4 – 16 UNF-3A)

**Mounting torque:**  
max. 50 Nm

**The standard differential pressure settings (100%):**

1.2 bar ± 0.25 bar

2.5 bar ± 0.35 bar

3.5 bar ± 0.55 bar

5.0 bar ± 0.75 bar

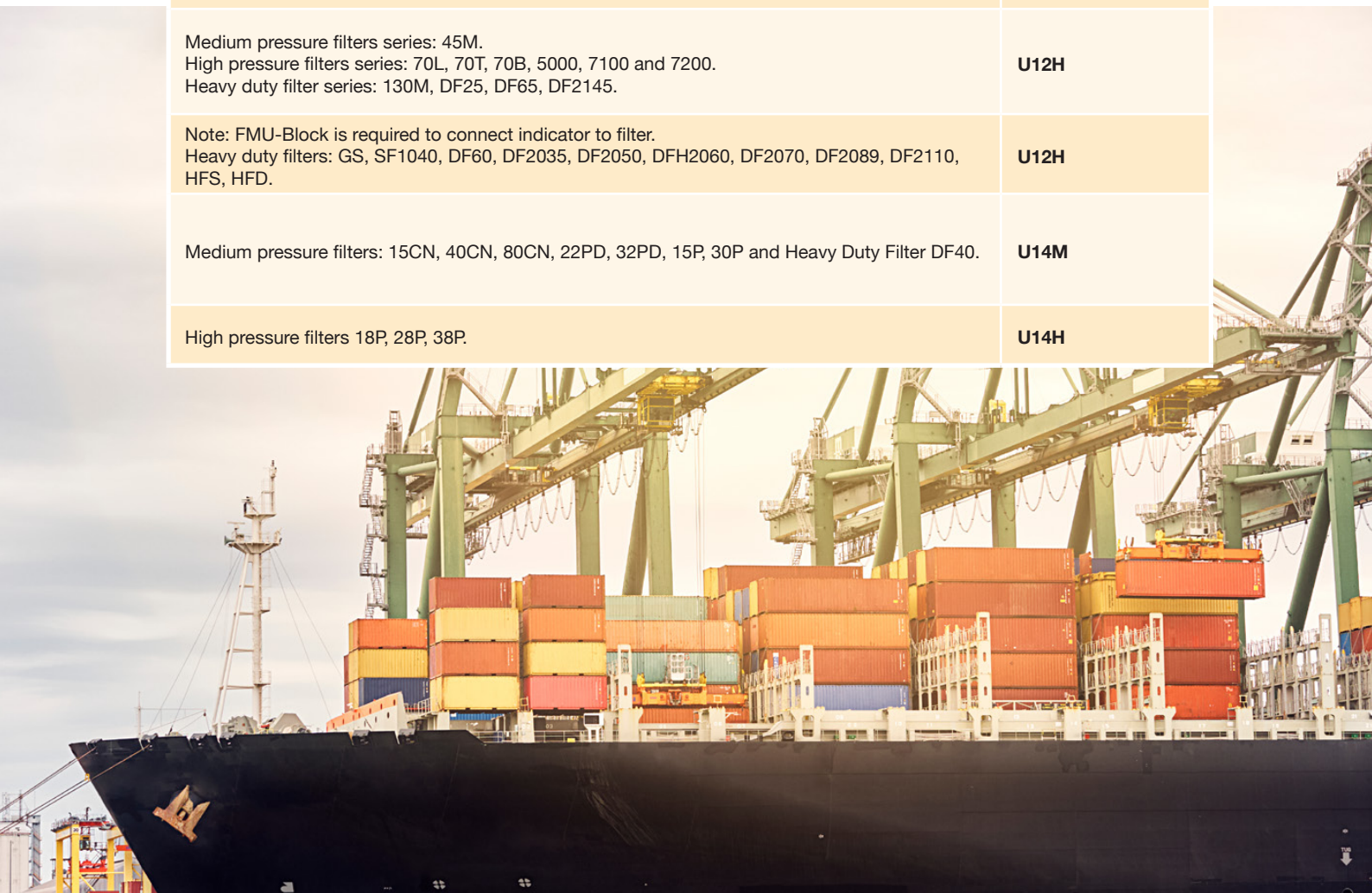
DPIF and DPIC indicators: accuracy ± 10% of FS  
(differential pressure values are optional).

## DPI dp-indicators come with SAE 08 thread and are used in EPF and GMF filters.

Other Parker filters continue to utilize Parker FMU indicators, see the table below. Please note that SAE 08 threaded indicators are not interchangeable with these U12H/U14M/U14H threaded indicators.

### FMU dp – INDICATORS ARE TYPICALLY USED WITH THE FOLLOWING FILTERS:

	PORT CODE
Medium pressure filters series: 45M. High pressure filters series: 70L, 70T, 70B, 5000, 7100 and 7200. Heavy duty filter series: 130M, DF25, DF65, DF2145.	<b>U12H</b>
Note: FMU-Block is required to connect indicator to filter. Heavy duty filters: GS, SF1040, DF60, DF2035, DF2050, DFH2060, DF2070, DF2089, DF2110, HFS, HFD.	<b>U12H</b>
Medium pressure filters: 15CN, 40CN, 80CN, 22PD, 32PD, 15P, 30P and Heavy Duty Filter DF40.	<b>U14M</b>
High pressure filters 18P, 28P, 38P.	<b>U14H</b>



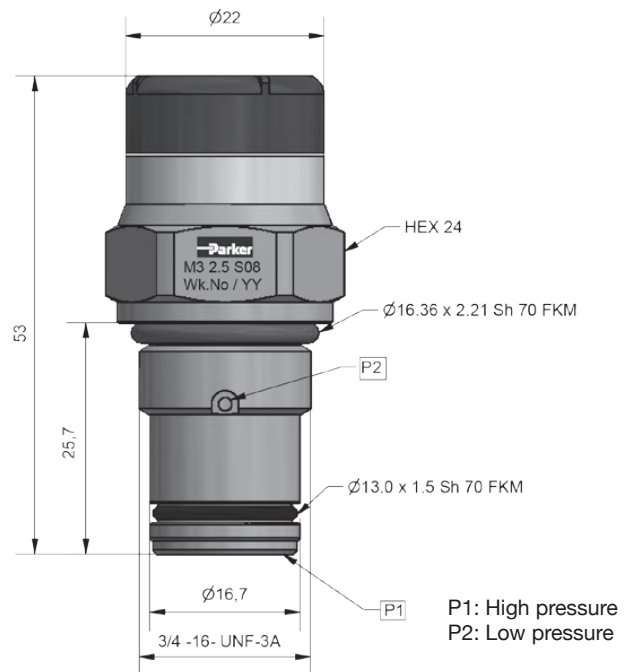
# DPIM3 VISUAL POP-UP INDICATOR

(autoreset)

Visual indicator shows the proper time to change a new filter element.



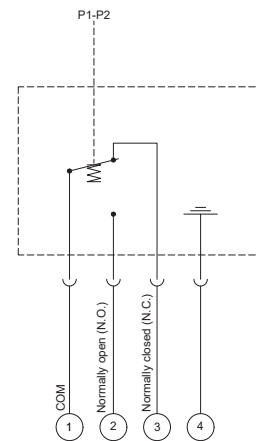
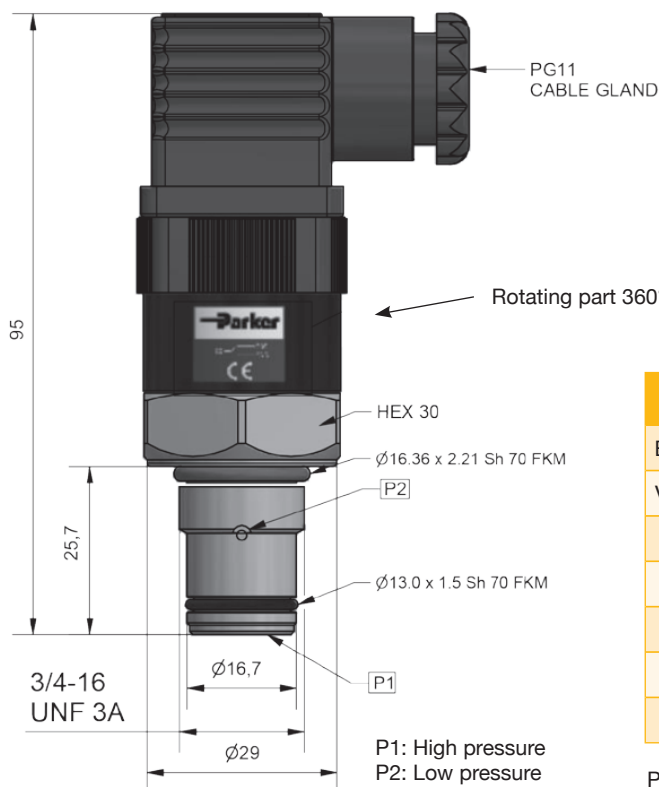
The colour turns from green to red when a new filter element needs to be changed.



# DPIT1 ELECTRICAL SPDT INDICATOR

Max. 250 Vac/dc

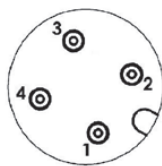
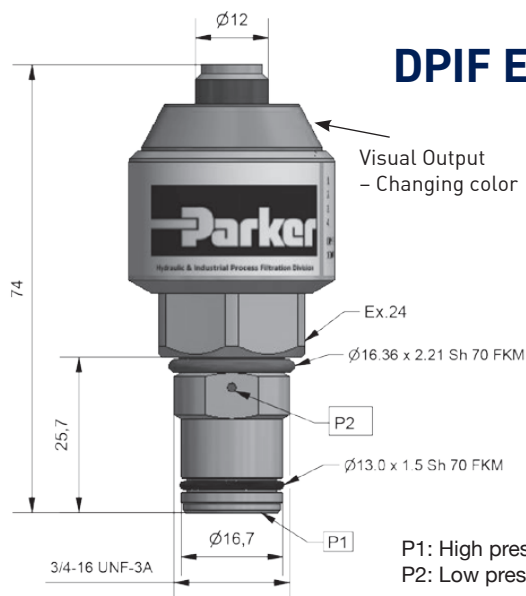
## SPDT ELECTRICAL CONTACTS



ELECTRICAL SPECIFICATIONS	
ELECTRICAL CONNECTOR	DIN 43650
VOLTAGE	LOAD
14 V dc	5 (4) A
30 V dc	4 (3) A
125 V ac	5 (3) A
250 V ac	3 (2) A
Min load 5V dc	160 mA

Protection degree: IP65  
CE marked

## DPIF ELECTRONIC-VISUAL INDICATOR



The power supply of the indicator must be provided by a dedicated voltage source and not by a distributed dc network. (refer to table 1 note G of EN 61326-1)

P1: High pressure  
P2: Low pressure

### ELECTRICAL SPECIFICATIONS

ELECTRICAL CONNECTOR	M12 4-POLE MALE
PIN 1	24 V±10%
PIN 3	0 V
PIN 4	Digital output 1 calibrated at 75%-Max Load 0,2A
PIN 2	Digital output 2 calibrated at 100%-Max Load 0,2A

### VISUAL OUTPUT

NORMAL FUNCTION IF  $T > T^*$  (TLO)

RANGE (%FS)	COLOR
0-50	Continuous GREEN - Normal working condition
50-75	Continuous YELLOW - Element to be changed in near future, spare element planned to be available.
75-100	Continuous ORANGE - Schedule for element change soon.
100-120	Continuous RED - Element needs to be changed.
>120	Blinking RED - Overdue

COLD CONDITION IF  $T < T^*$  (TLO)

RANGE (%FS)	Color
0-120	BLUE - Oil temperature below TLO temperature.

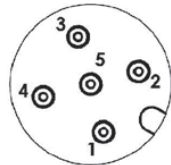
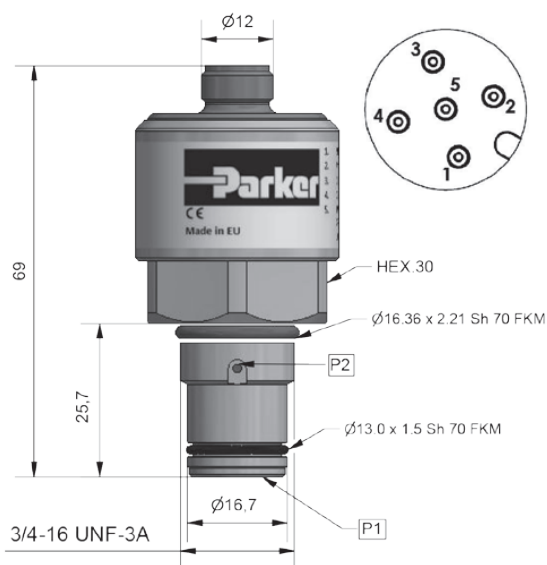
### MODEL CONFIG OUTPUT1 (75%) OUTPUT2 (100%)

DPIF1	PNP	N.O.	N.O.
DPIF3	PNP	N.C.	N.C.

### TECHNICAL SPECIFICATIONS

Thermal lockout (TLO) default	$T^* = +20^{\circ}\text{C}$ ; output remains normal if $T < T^*$ (TLO)
Time to activate	3 sec.
Protection degree	IP67

## DPIC CONTINUOUS OUTPUT ELECTRONIC INDICATOR



P1: High pressure  
P2: Low pressure

### ELECTRICAL SPECIFICATIONS

ELECTRICAL CONNECTOR	M12 5-pole male
PIN 1	24 V±10%
PIN 2	Analogue Output 4±20mA - see note1
PIN 3	Digital output 1 calibrated at 75%, Max Load 0.2A
PIN 4	Digital output 2 calibrated at 100%, Max Load 0.2A
PIN 5	0 V
Thermal lockout	$T^* = 20^{\circ}\text{C} \pm 2^{\circ}$ . Note: if $T < T^*$ : digital outputs remain normal, Analogue Output 3 mA
note1	If Input < 25%FS Analogue signal Output is constant 4mA

The power supply of the sensor must be provided by a dedicated voltage source and not by a distributed dc network. (refer to table 1 note G of EN 61326-1)

### TECHNICAL SPECIFICATIONS

Time to activate	3 sec.
Protection degree	IP67

### MODEL CONFIG OUTPUT1 (75%) OUTPUT2 (100%)

DPIC1	PNP	N.O.	N.O.
DPIC3	PNP	N.C.	N.C.

Available also as Atex version: II 3G Ex ec IIC T6 Gc

# Differential Pressure Indicators

## Product configurator

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

### Box 1

INDICATOR SERIES	CODE
Differential Pressure Indicator	DPI

### Box 6

MATERIAL INDICATOR HOUSING	CODE
Brass	M

### Box 2

INDICATOR TYPE	CODE
Visual pop-up indicator auto reset	M3
Electrical w/ DIN 43650 connector	T1
Electronic-visual, PNP, N.O.	F1
Electronic-visual, PNP, N.C.	F3
Continuous 4-20 mA, PNP, N.O.	C1
Continuous 4-20 mA, PNP, N.C.	C3

### Box 7

ELECTRICAL CONNECTOR	CODE
No connector (M3)	X
DIN connector DIN 43650 (T1)	DC
M12 - 4 pin male (F-type)	M4
M12 - 5 pin male (C-type)	M5

### Box 3

INDICATOR SETTING	CODE
1.2 bar	G
2.5 bar	K
3.5 bar	L
5.0 bar	M

### Box 8

OPTIONS	CODE
Standard	1
ATEX (C-type only)	Ex
Thermal lock-out other than 20°C (C- and F-type)	NN
Special	Snn

NN = TLO setting in °C, For example 30 means 30°C

Snn = S + consecutive numbering

If several options are selected those are shown in order listed above

### Box 4

SEAL MATERIAL	CODE
Fluoroelastomer	V

SEAL KIT	ORDERING CODE
Fluoroelastomer	930000298

### Box 5

THREAD CONNECTION	
SAE 08 (3/4 – 16 UNF-3A)	S08

### Cable options for DPIF and DPIC-models

CABLE	ORDERING CODE
M12 5-pole straight plug, 10m	SCK-400-10-45
M12 5-pole 90° angled plug, 10 m	SCK-400-10-55

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