

MPFILTRI®

PASSION TO PERFORM

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.

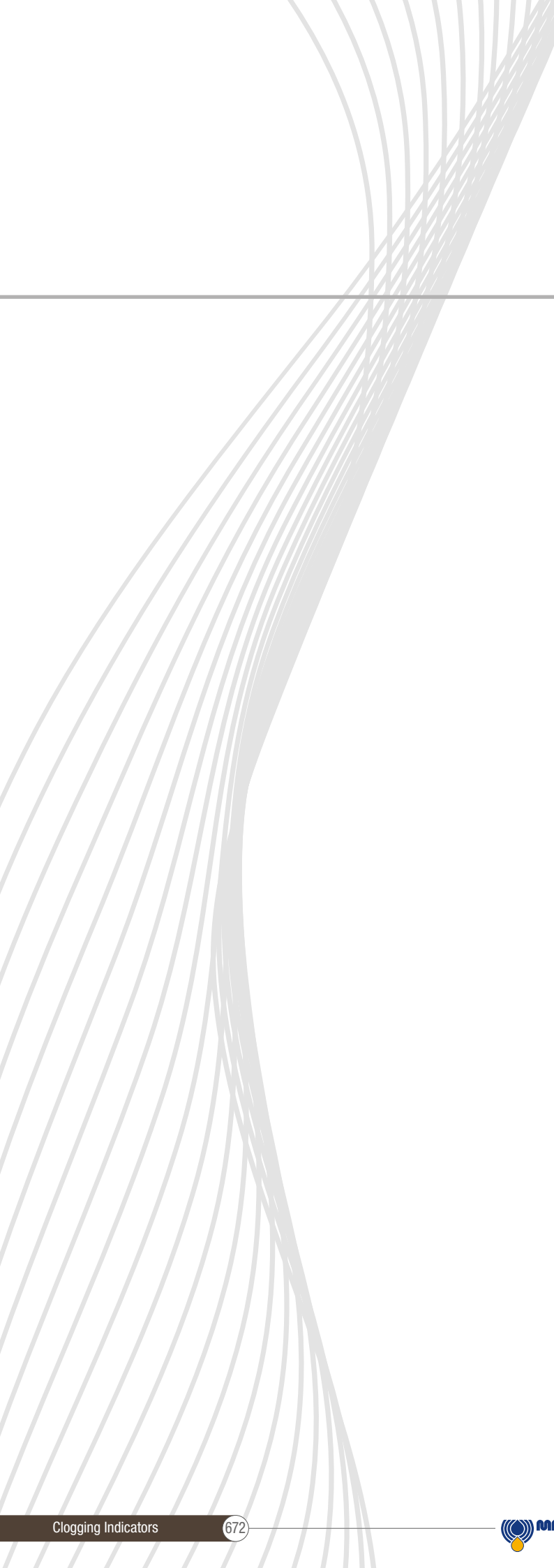
The indicator is set to alarm before the element becomes fully clogged.

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.

In the following pages you can find a reference guide about the types of clogging indicators available in the different families of MP Filtri's Hydraulic Filtration range of products.



DESIGNATION, ORDERING CODES & TECHNICAL DATA

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QUICK REFERENCE GUIDE

Ordering codes

Filter family	Filter series	Visual indicators	Electrical indicators	Electronic / Electrical-Visual indicators	
SUCTION FILTERS	ELIXIR® SFEX060-080-110-160	VVB20P01 VVS20P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
	With bypass valve 0.3 bar	<hr/> SF2 250 - 350 SF2 500 - 501 - 503 - 504 - 505 SF2 510 - 535 - 540	VVA20P01 VVR20P01	VEA21xA50P01	VLA21xA51P01 VLA21xA52P01 VLA21xA53P01 VLA21xA71P01
RETURN FILTERS	ELIXIR® RFEX060-080-110-160	BVA14P01 BVR14P01 BVP15HP01 BVQ15HP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
	With bypass 1.75 bar	<hr/> ELIXIR® RFEX060-080-110-160	BVA25P01 BVR25P01 BVP20HP01 BVQ20HP01	BEA20HA50P01 BEM20HA41P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01
	Without bypass	<hr/> MDH 250	BVA14P01 BVR14P01 BVP15HP01 BVQ15HP01 DVS12HP01	BEA15HA50P01 BEM15HA41P01 DES12HA10P01 DES12HA30P01 DES12HA80P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01
	With bypass 1.75 bar	<hr/> MDH 250	BVA25P01 BVR25P01 BVP20HP01 BVQ20HP01 DVS25HP01	BEA20HA50P01 BEM20HA41P01 DES25HA10P01 DES25HA30P01 DES25HA80P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01
	With bypass 3 bar	<hr/> MPFX MPTX MPF MPT MPH	BVA14P01 BVR14P01 BVP15HP01 BVQ15HP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01
	With bypass 1.75 bar	<hr/> MPFX MPTX MPF MPT	BVA25P01 BVR25P01 BVP20HP01 BVQ20HP01	BEA20HA50P01 BEM20HA41P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01
	With bypass 3 bar	<hr/> MPH	<hr/> MPH	<hr/> MPH	<hr/> MPH
	With bypass 2.5 bar	<hr/> MPLX	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20XX10P01 DEM20XX20P01 DEM20XX30P01 DEM20XX35P01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01 DTA20xF70P01
	With bypass 4.5 bar	<hr/> FRI	<hr/> FRI	<hr/> FRI	<hr/> FRI
	With bypass 2.4 bar	<hr/> FRI	<hr/> FRI	<hr/> FRI	<hr/> FRI

Filter family	Filter series	Visual indicators	Electrical indicators	Electronic / Electrical-Visual indicators	
RETURN / SUCTION FILTERS	MRSX 116 - 165 - 166 Suction line	VVB20P01 VVS20P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
	With bypass valve 2.5 bar	BVA25P01	BEA20HA50P01		
	MRSX 116 - 165 - 166 Return line	BVR25P01 BVP20HP01 BVQ20HP01	BEM20HA41P01 BET25HF10P01 BET25HF30P01 BET25HF50P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01	
	With bypass valve 2.5 bar		BEA20HA50P01 BEM20HA41P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01	
	LMP 124 MULTIPORT	BVP20HP01 BVQ20HP01 DVA20xP01 DVM20xP01	BET25HF10P01 BET25HF30P01 BET25HF50P01 DEA20xA50P01 DEM20XX10P01 DEM20XX20P01 DEM20XX30P01 DEM20XX35P01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01 DTA20xF70P01	
	Suction line	MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350	WB20P01 VVS20P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01
	Return line	MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350 MST 050 - 070 - 100 - 150	BVA14P01 BVR14P01 BVP15HP01 BVQ15HP01	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 DLE20xF50P01 DLE20xF50P01 DTA12xA70P01 DTA12xF70P01 DTA20xA70P01 DTA20xF70P01

QUICK REFERENCE GUIDE

Ordering codes

Filter family	Filter series	Visual indicators	Electrical indicators	Electronic / Electrical-Visual indicators
LOW & MEDIUM PRESSURE FILTERS	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	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01 DTA20xF70P01
HIGH PRESSURE FILTERS	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	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01 DTA50xF70P01
HIGH PRESSURE FILTERS	FMP 039 - 065 - 135 - 320 FHP 010 - 011 - 065 - 135 - 350 - 351 - 500 FMMX 050 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 DEM50xx10P01 DEM50xx20P01 DEM50xx30P01 DEM50xx35P01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01
	FMP 039 - 065 - 135 - 320 FHP 010 - 011 - 065 - 135 - 350 - 351 - 500 FMMX 050 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 DVA95xP01 DVM70xP01 DVM95xP01	DEA70xA50P01 DEA95xA50P01 DEM70xx10P01 DEM70xx20P01 DEM70xx30P01 DEM70xx35P01 DEM95xx10P01 DEM95xx20P01 DEM95xx30P01 DEM95xx35P01	DLA70xA51P01 DLA70xA52P01 DLA70xA71P01 DLA95xA51P01 DLA95xA52P01 DLA95xA71P01 DLE70xA50P01 DLE70xF50P01 DLE95xA50P01 DLE95xF50P01 DTA70xF70P01 DTA95xF70P01

Filter family	Filter series	Visual indicators	Electrical indicators	Electronic / Electrical-Visual indicators
STAINLESS STEEL HIGH PRESSURE FILTERS	With bypass valve 6 bar	FZH 012 - 040	DVZ50xP01	DEZ50xA50P01 DLZ50xA50P01 DLZ70xA50P01 DLZ95xA50P01
	Without bypass valve	FZH 012 - 040	DVZ70xP01 DVZ95xP01	DEZ70xA50P01 DEZ95xA50P01
	With bypass valve 6 bar	FZP 039 - 136 FZB 039 FZM 039 FZD 051	DVX50xP01 DVG50xP01	DEX50xA50P01 DLX50xA51P01 DLX50xA52P01
	Without bypass valve	FZP 039 - 136 FZB 039 FZM 039 FZD 010 - 021 - 051	DVX70xP01 DVG95xP01 DVG70xP01 DVG95xP01	DEX70xA50P01 DEX95xA50P01 DLX70xA51P01 DLX70xA52P01 DLX95xA51P01 DLX95xA52P01
FILTERS FOR POTENTIALLY EXPLOSIVE ATMOSPHERE	With bypass valve 6 bar	FMMX 050 FMM 050 - 150	DVA50xP01 DVM50xP01	DEH50xA48P01 DEH50xA49P01 DEH50xA70P01
	Without bypass valve	FMMX 050 FMM 050 - 150	DVA70xP01 DVA95xP01 DVM70xP01 DVM95xP01	DEH70xA48P01 DEH70xA49P01 DEH70xA70P01 DEH95xA48P01 DEH95xA49P01 DEH95xA70P01
	With bypass valve 6 bar	FZP 039 - 136	DVX50xP01 DVG50xP01	DEH50xA48P01 DEH50xA49P01 DEH50xA70P01
	Without bypass valve	FZP 039 - 136	DVX70xP01 DVG95xP01 DVG70xP01 DVG95xP01	DEH70xA48P01 DEH70xA49P01 DEH70xA70P01 DEH95xA48P01 DEH95xA49P01 DEH95xA70P01
	With bypass valve 6 bar	FZH 012 - 040	DVZ50xP01	
	Without bypass valve	FZH 012 - 040	DVZ70xP01 DVZ95xP01	

Suitable indicator types

V ACUUM 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.

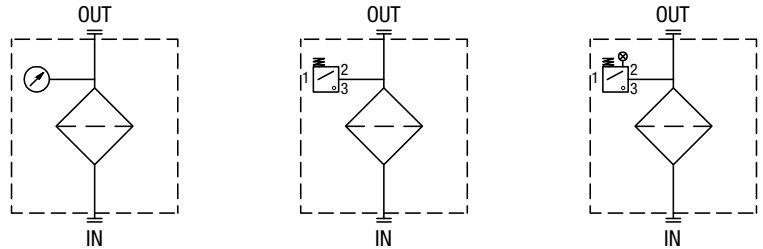
Standard items are produced with R 1/4" EN 10226 connection.

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

Vacuum indicators are identified in the Hydraulic Filtration catalogue and in the Quick Reference Guide table by the letter "V".

Example:

V VVB20P01



B BAROMETRIC INDICATORS

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

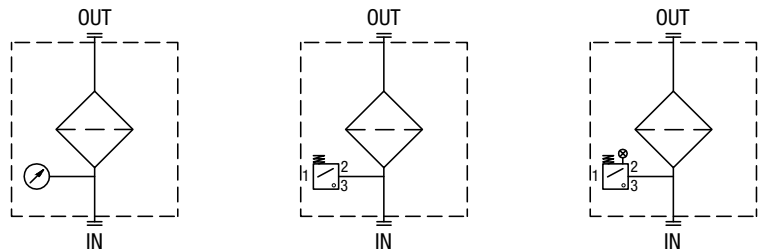
They measure the pressure upstream of the filter element.

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

Barometric indicators are identified in the Hydraulic Filtration catalogue and in the Quick Reference Guide table by the letter "B".

Example:

B BVA14P01



D 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).

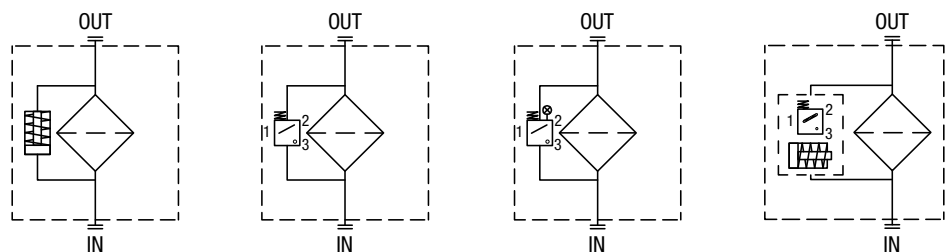
Standard items are produced with special connection G 1/2" size.

Also available in Stainless Steel models.

Differential indicators are identified in the Hydraulic Filtration catalogue and in the Quick Reference Guide table by the letter "D".

Example:

D DVA20xP01



Designation & Ordering code

VACUUM INDICATORS										
Series		Configuration example 1:								EX
VE Electrical vacuum indicator		VE	A	21	V	A	50	P01		
VL Electrical/Visual vacuum indicator		VL	B	21	A	A	71	P01		
VV Vacuum gauge		VV	R	20				P01		
Type VE - VL		Type VV		SF2	SFEX					
A Connection EN 10226 - R1/4"		A Axial connection EN 10226 - R1/4"		•	-					
B Connection EN 10226 - R1/8"		B Axial connection EN 10226 - R1/8"		-	•					
		R Radial connection EN 10226 - R1/4"		•	-					
		S Radial connection EN 10226 - R1/8"		-	•					
Vacuum setting		VE	VL	VV						
20 -0.16 bar		-	-	•						
21 -0.21 bar		•	•	-						
Seals		VEA - VLA	VEB - VLB							
A NBR		•	•							
V FPM		•	-							
Thermostat		VE	VL							
A Without		•	•							
Electrical connections		VE	VL							
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		-	•							
53 Connection EN 175301-803, transparent base with lamps 230 Vdc		-	•							
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc		-	•							
Option										
P01 MP Filtri standard										
Pxx Customized										
Certifications		VE	VL	VV						
Without		•	•	•						
EX ATEX certification		•	-	-						

Designation & Ordering code

BAROMETRIC INDICATORS

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

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

Pressure setting	BEA-BEM	BET	BLA	BVA-BVR	BVP-BVQ
14 1.4 bar	-	-	-	•	-
15 1.5 bar	•	-	•	-	-
20 2.0 bar	•	•	•	-	•
25 2.5 bar	-	•	-	•	-

Seals	BE	BLA	BVA-BVR	BVP-BVQ
H HNBR	•	•	-	•

Thermostat	BEA-BEM	BET	BLA
A Without	•	-	•
F With	-	•	-

Electrical connections	BEA	BEM	BET	BL
10 Connection AMP Superseal series 1,5	-	-	•	-
30 Connection Deutsch DT-04-2-P	-	-	•	-
41 Connection via four-core cable	-	•	-	-
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	-	-	-	•
53 Connection EN 175301-803, transparent base with lamps 230 Vdc	-	-	-	•
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	-	-	•

Option	BE	BL	BV
P01 MP Filtri standard	•	•	•
Pxx Customized	•	-	-

Certifications	BE	BL	BV
Without	•	•	•
EX ATEX certification	•	-	-

DIFFERENTIAL INDICATORS

Series	Configuration example 1:						
DE Electrical differential indicator	DE	M	20	H	F	50	P01
DL Electrical/Visual differential indicator	Configuration example 2:						
DT Electrical differential indicator	DL	E	20	V	A	71	P01
DV Visual differential indicator	Configuration example 3:						
	DT	A	20	H	F	70	P01
	Configuration example 4:						
	DV	M	20	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	-	•	-	S With automatic reset			
S Compact version	•	-	-				

Pressure setting	DE	DL	DT	DV
12 1.2 bar	•	•	•	•
20 2.0 bar	•	•	•	•
25 2.5 bar	•	-	-	•
40 4.0 bar	•	-	-	•
50 5.0 bar	•	•	•	•
70 7.0 bar	•	•	•	•
95 9.5 bar	•	•	•	•

Seals	DEA	DEM	DES	DL	DT	DVA	DVM	DVS
H HNBR	•	•	•	•	•	•	•	•
V FPM	•	•	-	•	•	•	•	-

Thermostat	DEA	DEM	DES	DLA	DLE	DT
A Without thermostat	•	•	•	•	•	-
F With thermostat	-	•	-	-	•	•

Electrical connections	DEA	DEM	DES	DLA	DLE	DT
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	-	-	-	•	-	-
80 Connection Stud #10-32 UNF	-	-	•	-	-	-

Option
P01 MP Filtri standard
Pxx Customized

DIFFERENTIAL INDICATOR PLUGS

Series	DEA	DEM	DES	DL	DT	DVA	DVM	DVS	Configuration example	
T2 Differential Indicator plug	•	•	-	•	•	•	•	-	T2	H
T4 Differential Indicator plug	-	-	•	-	-	-	-	•		

Seals	T2	T4
A NBR	-	•
H HNBR	•	-
V FPM	•	-

Designation & Ordering code

VACUUM INDICATORS

Series	Configuration example 1:							
VE Electrical vacuum indicator	VE	A	21	V	A	50	P01	EX
VL Electrical/Visual vacuum indicator	Configuration example 2:							
	VL	B	21	A	A	71	P01	
VV Vacuum gauge	Configuration example 3:							
	VV	R	20				P01	

Type VE - VL	Type VV
A Connection EN 10226 - R1/4"	A Axial connection EN 10226 - R1/4"
B Connection EN 10226 - R1/8"	B Axial connection EN 10226 - R1/8"
	R Radial connection EN 10226 - R1/4"
	S Radial connection EN 10226 - R1/8"

Vacuum setting	VE	VL	VV
20 -0.16 bar	-	-	•
21 -0.21 bar	•	•	-

Seals	VEA - VLA	VEB - VLB
A NBR	•	•
V FPM	•	-

Thermostat	VE	VL
A Without	•	•

Electrical connections	VE	VL
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	-	•
53 Connection EN 175301-803, transparent base with lamps 230 Vdc	-	•
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	•

Option
P01 MP Filtri standard
Pxx Customized

Certifications	VE	VL	VV
Without	•	•	•
EX ATEX certification	•	-	-

BAROMETRIC INDICATORS

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

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

Pressure setting	BEA-BEM	BET	BLA	BVA-BVR	BVP-BVQ
14 1.4 bar	-	-	-	•	-
15 1.5 bar	•	-	•	-	-
20 2.0 bar	•	•	•	-	•
25 2.5 bar	-	•	-	•	-

Seals	BE	BLA	BVP-BVQ
H HNBR	•	•	•

Thermostat	BEA-BEM	BET	BLA
A Without	•	-	•
F With	-	•	-

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

Option
P01 MP Filtri standard
Pxx Customized

Certifications	BE	BL	BV
Without	•	•	•
EX ATEX certification	•	-	-

DIFFERENTIAL INDICATORS

Series		Configuration example 1:						
DE Electrical differential indicator		DE	M	12	H	F	50	P01
DL Electrical/Visual differential indicator		Configuration example 2:						
		DL	E	20	V	A	71	P01
DT Electronic differential indicator		Configuration example 3:						
		DT	A	50	H	F	70	P01
DV Visual differential indicator		Configuration example 4:						
		DV	M	70	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
12 1.2 bar
20 2.0 bar
50 5.0 bar
70 7.0 bar
95 9.5 bar

Seals
H HNBR
V FPM

Thermostat	DEA	DEM	DLA	DLE	DT
A Without	•	•	•	•	-
F With thermostat	-	•	-	•	•

Electrical connections	DEA	DEM	DLA	DLE	DT
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

DIFFERENTIAL INDICATOR PLUGS

Series	Configuration example
T2 Differential indicator plug	T2 H

Seals
H HNBR
V FPM

Designation & Ordering code

VACUUM INDICATORS

Series	Configuration example 1:	VE	B	21	A	A	50	P01	P01
VE Electrical vacuum indicator	Configuration example 2:	VL	B	21	A	A	71	P01	
VL Electrical/Visual vacuum indicator	Configuration example 3:	VV	S	20					P01
VV Vacuum gauge									

Type VE - VL	Type VV
B Connection EN 10226 - R1/8"	B Axial connection EN 10226 - R1/8"
	S Radial connection EN 10226 - R1/8"

Vacuum setting	VE	VL	VV
20 -0.16 bar	-	-	•
21 -0.21 bar	•	•	-

Seals	VE	VL
A NBR	•	•

Thermostat	VE	VL
A Without	•	•

Electrical connections	VE	VL
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	-	•
53 Connection EN 175301-803, transparent base with lamps 230 Vdc	-	•
71 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	-	•

Option
P01 MP Filtri standard
Pxx Customized

Certifications	VE	VL	VV
Without	•	•	•
EX ATEX certification	•	-	-

BAROMETRIC INDICATORS

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

Type	BE	BL	BV
A Standard type	•	•	A Axial connection pressure gauge
M With wired electrical connection	•	-	R Radial connection pressure gauge
			P Visual indicator with automatic reset
			Q Visual indicator with manual reset

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

Seals	BE	BLA	BVA-BVR	BVP-BVQ
H HNBR	•	•	-	•

Thermostat	BEA-BEM	BLA	BV
A Without	•	•	-

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

Option
P01 MP Filtri standard
Pxx Customized

Certifications	BE	BL	BV
Without	•	•	•
EX ATEX certification	•	-	-

DIFFERENTIAL INDICATORS

Series		Configuration example 1:						
DE Electrical differential indicator		DE	M	12	H	F	50	P01
DL Electrical/Visual differential indicator		Configuration example 2:						
		DL	E	20	V	A	71	P01
DT Electronic differential indicator		Configuration example 3:						
		DT	A	12	H	F	70	P01
DV Visual differential indicator		Configuration example 4:						
		DV	M	20	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	
12	1.2 bar
20	2.0 bar
50	5.0 bar
70	7.0 bar
95	9.5 bar

Seals	
H	HNBR
V	FPM

Thermostat	DEA	DEM	DLA	DLE	DT
A Without	•	•	•	•	-
F With thermostat	-	•	-	•	•

Electrical connections	DEA	DEM	DLA	DLE	DT
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

DIFFERENTIAL INDICATOR PLUG

Series		Configuration example	
T2 Differential indicator plug		T2	H

Seals	
H	HNBR
V	FPM

CLOGGING INDICATORS LOW & MEDIUM PRESS. FILTERS

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

12 1.2 bar
20 2.0 bar
50 5.0 bar
70 7.0 bar
95 9.5 bar

Seals

H HNBR
V FPM

Thermostat

	DEA	DEM	DLA	DLE	DT
A Without	•	•	•	•	-
F With thermostat	-	•	-	•	•

Electrical connections

	DEA	DEM	DES	DLA	DLE	DT
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	-	-	-	•	-	-
80 Connection Stud #10-32 UNF	-	-	•	•	-	-

Option

P01 MP Filtri standard
Pxx Customized

DIFFERENTIAL INDICATOR PLUG

Series	DEA	DEM	DES	DL	DT	DVA	DVM	DVS	Configuration example	T2	H
T2 Differential Indicator plug	•	•	-	•	•	•	•	-			
T4 Differential Indicator plug	-	-	•	-	-	-	-	•			

Seals

	T2	T4
A NBR	-	•
H HNBR	•	-
V FPM	•	-

DIFFERENTIAL INDICATORS

Series		Configuration example 1:						
DE Electrical differential indicator		DE	M	12	H	F	50	P01
DL Electrical/Visual differential indicator		Configuration example 2:						
		DL	E	20	V	A	71	P01
DT Electronic differential indicator		Configuration example 3:						
		DT	A	12	H	F	70	P01
DV Visual differential indicator		Configuration example 4:						
		DV	M	20	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
12 1.2 bar
20 2.0 bar
50 5.0 bar
70 7.0 bar
95 9.5 bar

Seals
H HNBR
V FPM

Thermostat	DEA	DEM	DLA	DLE	DT
A Without	•	•	•	•	-
F With thermostat	-	•	-	•	•

Electrical connections	DEA	DEM	DLA	DLE	DT
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

DIFFERENTIAL INDICATOR PLUG

Series	Configuration example
T2 Differential indicator plug	T2 H

Seals
H HNBR
V FPM

CLOGGING INDICATORS

STAINLESS STEEL HIGH PRESSURE FILTERS

Designation & Ordering code

DIFFERENTIAL INDICATORS

Series					Configuration example 1:									
DE	Electrical differential indicator				DE	Z	50	H	A	50	P01			
DL	Electrical / Visual differential indicator				Configuration example 2:									
DV	Visual differential indicator				DL	X	70	V	A	52	P01			
Type					DE	DL	DV							
X	Standard type 420 bar				•	•	•							
Y	Optional type 420 bar				-	-	•							
Z	700 bar (only for FZH)				•	•	•							
Pressure setting														
12	1.2 bar													
20	2.0 bar													
50	5.0 bar													
70	7.0 bar													
95	9.5 bar													
Seals					DEX	DEZ	DL	DV						
H	HNBR				•	•	•	•						
V	FPM				•	•	•	•						
F	MFQ				-	•	-	-						
Thermostat					DEX	DEZ	DL	DV						
A	Without thermostat				•	•	•	-						
Electrical connections					DEX	DEZ		DL						
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				-	-	-	•						
											Option			
											P01 MP Filtri standard			
											Pxx Customized			

DIFFERENTIAL INDICATOR PLUG

Series		Configuration example	
X2	Differential indicator plug 420 bar	X2	H
X3	Differential indicator plug 700 bar (only for FZH)		
Seals			
H	HNBR		
V	FPM		
F	MFQ		

FILTERS FOR POTENTIALLY EXPLOSIVE ATMOSPHERE

Designation & Ordering code

DIFFERENTIAL INDICATORS

Series	Configuration example 1:						
DE Electrical differential indicator	DE	H	50	F	A	48	P01
DV Visual differential indicator	Configuration example 2:						
	DV	X	70	V	A	49	P01

Type	DE	DV
A With automatic reset	-	•
M With manual reset	-	•
H Hazardous area	•	-
X Standard type 420 bar	-	•
Y Optional type 420 bar	-	•

Pressure setting	DEH	DV
12 1.2 bar	-	•
20 2.0 bar	•	•
50 5.0 bar	•	•
70 7.0 bar	•	•
95 9.5 bar	-	•

Seals	DEH	DV
H HNBR	-	•
V FPM	•	•
F MFQ	•	-

Thermostat	DEH	DV
A Without	•	-

Electrical connections
48 Connection via three-core cable - fitting M20x1.5
49 Connection via four-core cable - fitting 1/2" NPT
70 Connection IEC 61076-2-101 D (M12)

Option
P01 MP Filtri standard
Pxx Customized

DIFFERENTIAL INDICATOR PLUG

Series	Configuration example	
T2 Differential indicator plug	X2	H
X2 Differential indicator plug 420 bar		
X3 Differential indicator plug 700 bar (only for FZH)		

Seals
H HNBR
V FPM
F MFQ

VACUUM INDICATORS

Technical data

VE*50	
Electrical Vacuum Indicator Connection: EN 175301-803	
R	Ordering code
EN 10226 - R1/4"	VE A 21 x A 50 P01 VE A 21 x A 50 P01 EX
EN 10226 - R1/8"	VE B 21 A A 50 P01 VE B 21 A A 50 P01 EX

A/F 27
Max tightening torque:
25 N·m

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- Contacts: Silver
- Seal: VEA: NBR/FPM
VEB: 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

- Certification: ATEX, IECEx
- Certification included in EX version

- CE certification
- Available Atex product: II 1GD Ex ia IIC Tx Ex ia IIIC Tx °C X

VL*51 - VL*52 - VL*53	
Electrical/Visual Vacuum Indicator 51: Connection EN 175301-803, transparent base with lamps 110 Vdc 52: Connection EN 175301-803, transparent base with lamps 24 Vdc 53: Connection EN 175301-803, transparent base with lamps 230 Vdc	
R	Ordering code
EN 10226 - R1/4"	VL A 21 x 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 polyamide
- Contacts: Brass - Polyamide
- Seal: VLA: NBR/FPM
VLB: 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 Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	
Connections	Indicator code
EN 10226 - R1/4"	VL A 21 x 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 polyamide
- Contacts: Silver
- Seal: VLA: NBR/FPM
VLB: 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 (black base)
- Resistive load: 0.4 A / 24 Vdc

VVA - VVB	
Axial Vacuum Gauge	
R	Ordering code
EN 10226 - R1/4"	VVA 20 P01
EN 10226 - R1/8"	VVB 20 P01
Hydraulic symbol	
Dial scale	
Conversion to SI units	
[cmHg]	[bar]
-12	-0.16
-18	-0.24
-76	-1.01
Materials - Case: Black plastic - Window: Clear plastic - Dial: White plastic - Pointer: Black plastic - Pressure connection: Cu-alloy - Pressure element: Bourdon tube Cu-alloy soft soldered, C type - Movement: Cu-alloy	
Technical data - Max working pressure: Steady: -0.7 bar Fluctuating: -0.6 bar Short time: -1.0 bar - Working temperature: Ambienti from -40 °C to +60 °C Fluid max + 60 °C Storage from -40 °C to +60 °C - Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB and 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 20 P01
EN 10226 - R1/8"	11	VVS 20 P01
Hydraulic symbol		
Dial scale		
Conversion to SI units		
[cmHg]	[bar]	
-12	-0.16	
-18	-0.24	
-76	-1.01	
Materials - Case: Black plastic - Window: Clear plastic - Dial: White plastic - Pointer: Black plastic - Pressure connection: Cu-alloy - Pressure element: Bourdon tube Cu-alloy soft soldered, C type - Movement: Cu-alloy		
Technical data - Max working pressure: Steady: -0.7 bar Fluctuating: -0.6 bar Short time: -1.0 bar - Working temperature: Ambienti from -40 °C to +60 °C Fluid max + 60 °C Storage from -40 °C to +60 °C - Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB and HFC according to ISO 2943 - Accuracy: Class 2.5 according to EN 13190 - Degree of protection: IP31 according to EN 60529		

BAROMETRIC INDICATORS

Dimensions

BEA*50	
Electrical Pressure Indicator Connection EN 175301-803	
Settings	Ordering code
1.5 bar ±10%	BE A 15 HA 50 P01 BE A 15 HA 50 P01 EX
2.0 bar ±10%	BE A 20 HA 50 P01 BE A 20 HA 50 P01 EX

A/F 27
Max tightening torque: 25 N·m

EN 10226 - R1/8"

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- 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
- Resistive load: 5 A / 14 Vdc
4 A / 30 Vdc
5 A / 125 Vac
4 A / 250 Vac

- CE certification
- Available Atex product: I M1 Ex ia I Ma
II 1GD Ex ia IIC Tx Ex ia IIIC Tx °C X

Certification: ATEX, IECEx
- Certification included in EX version

BEM*41	
Electrical Pressure Indicator Connection via four-core cable	
Settings	Ordering code
1.5 bar ±10%	BE M 15 HA 41 P01
2.0 bar ±10%	BE M 20 HA 41 P01

A/F 27
Max tightening torque: 25 N·m

EN 10226 - R1/8"

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- 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: IP67 according to EN 60529

Electrical data

- Electrical connection: Four-core cable
- Resistive load: 5 A / 14 Vdc
4 A / 30 Vdc
5 A / 125 Vac
4 A / 250 Vac

- CE certification
On request this indicator can be provided with main connectors in use for wirings.

BET*10	
Electrical Pressure Indicator Connection AMP Superseal series 1.5	
Settings	Ordering code
2.0 bar ±10%	BET 20 HF 10 P01
2.5 bar ±10%	BET 25 HF 10 P01

A/F 24
Max tightening torque: 30 N·m

EN 10226 - R1/8"

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- 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: AMP Superseal series 1.5
- Resistive load: 0.5 A / 48 Vdc
- Thermostat condition: Open up to 30 °C
- CE certification

BET*30	
Electrical Pressure Indicator Deutsch DT-04-2-P	
Settings	Ordering code
2.0 bar ±10%	BET 20 H F 30 P01
2.5 bar ±10%	BET 25 H F 30 P01

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- 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	
Electrical Pressure Indicator Connection EN 175301-803	
Settings	Ordering code
2.0 bar ±10%	BET 20 H F 50 P01
2.5 bar ±10%	BET 25 H F 50 P01

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- 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	
Electrical/Visual Pressure Indicator	
51: Connection EN 175301-803, transparent base with lamps 110 Vdc 52: Connection EN 175301-803, transparent base with lamps 24 Vdc 53: Connection EN 175301-803, transparent base with lamps 230 Vdc	
Settings	Ordering code
1.5 bar ±10%	BL A 15 H A xx P01
2.0 bar ±10%	BL A 20 H A xx P01

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Transparent polyamide
- 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	
Electrical/Visual Pressure Indicator Connection IEC 61076-2-101 D (M12), black base with lamps 24 Vdc	
Settings	Ordering code
1.5 bar $\pm 10\%$	BLA 15 HA 71 P01
2.0 bar $\pm 10\%$	BLA 20 HA 71 P01

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Base: Black polyamide
- 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 (black base)
- Resistive load: 0.4 A / 24 Vdc

BVA	
Axial Pressure Gauge	
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: Clear plastic
- Dial: Painted Steel
- Pointer: Black plastic
- Pressure connection: Brass
- Pressure element: Bourdon tube Cu-alloy soft soldered, C type

Technical data

- Max working pressure: Static: 7 bar
Fluctuating: 6 bar
Short time: 10 bar
- Working temperature: Ambient from -40 °C to +60 °C
Fluid max +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	
Radial Pressure Gauge	
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

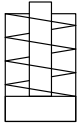
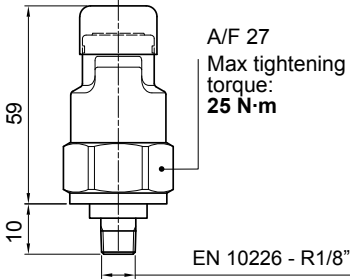
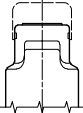
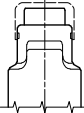
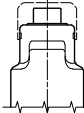
BV R 25 P01

Materials

- Case: Painted Steel
- Window: Clear plastic
- Dial: Painted Steel
- Pointer: Black plastic
- Pressure connection: Brass
- Pressure element: Bourdon tube Cu-alloy soft soldered, C type

Technical data

- Max working pressure: Static: 7 bar
Fluctuating: 6 bar
Short time: 10 bar
- Working temperature: Ambient from -40 °C to +60 °C
Fluid max +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 BVP - Automatic reset BVQ - Manual reset				
Setting	Ordering code			
1.5 bar ±10%	BV P 15 H P01 BV Q 15 H P01		Technical data - 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	
2.0 bar ±10%	BV P 20 H P01 BV Q 20 H P01			
A/F 27 Max tightening torque: 25 N·m		Signals		
EN 10226 - R1/8"				
		Absence of pressure (no indicator)	Presence of pressure (green button rises gradually)	
				Clogged filter element (red button risen)

DIFFERENTIAL INDICATORS

Dimensions

DEA*50	
Electrical Differential Indicator Connection: EN 175301-803	
Settings	Ordering code
1.2 bar ±10%	DE A 12 x A 50 P01
2.0 bar ±10%	DE A 20 x A 50 P01
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

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
IP69K according to ISO 20653

Electrical data

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

DEH*48	
Hazardous Area Electrical Differential Indicator Connection via three-core cable - fitting M20x1.5	
Settings	Ordering code
2.0 bar ±10%	DE H 20 x A 48 P01
5.0 bar ±10%	DE H 50 x A 48 P01
7.0 bar ±10%	DE H 70 x A 48 P01

Hydraulic symbol

Electrical symbol

Materials

- Body: AISI 316L
- Contacts: Rhodium
- Seal: FPM - MFQ

Technical data

- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -60 °C to +125 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC according to ISO 2943
- Temperature class: T4 (135 °C) and T6 (85 °C)
- Degree of protection: IP 66/67/68 according to EN 60529
- Connection type: Three-core cable, fitting M20x1.5
- Contact type: SPCO/SPDT (Hermetically sealed - Volt-free contacts)

Electrical data

- Connection via three-core cable - fitting M20x1.5
- Resistive Load: 830 mA / 24 Vdc - 180 mA / 110 Vac
- Electrical Ratings: $U_i = 30 \text{ Vdc} / I_i = 250 \text{ mA} / P_i = 1.3 \text{ W}$
- Available ATEX product: II 1 GD Ex ia IIC T6 Ga -60°C ≤ Ta ≤ 80°C
Ex ia IIC T4 Ga -60°C ≤ Ta ≤ 125°C
II 2 GD Ex db IIC T6* Gb Ex tb IIIC T85°C* Db
(Tamb : = -60°C to +70°C)* IP66/67
* alternative T/Class and ambients T4, T135°C
(Tamb = -60°C to +120°C)

Certification / Approvals: ATEX, IECEx, EAC TR CU, INMETRO
- Certification included as standard

DEH*49	
Hazardous Area Electrical Differential Indicator Connection via four-core cable - fitting 1/2" NPT	
Settings	Ordering code
2.0 bar ±10%	DE H 20 x A 49 P01
5.0 bar ±10%	DE H 50 x A 49 P01
7.0 bar ±10%	DE H 70 x A 49 P01

Hydraulic symbol

Electrical symbol

Materials

- Body: AISI 316L
- Contacts: Rhodium
- Seal: FPM - MFQ

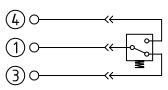
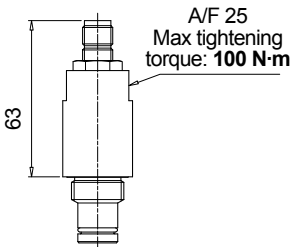

Technical data

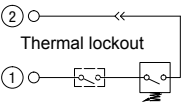
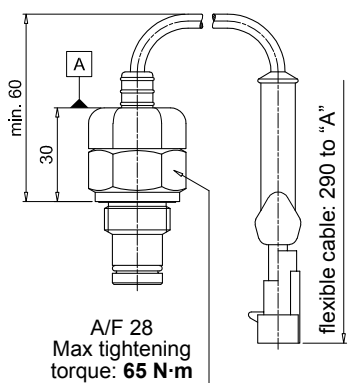
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -60 °C to +120 °C : ATEX, IECEx, EAC TR CU, INMETRO
From -60 °C to +105 °C : UL/CSA
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC according to ISO 2943
- Temperature class: T4 (135 °C) and T6 (85 °C)
- Degree of protection: IP 66/67/68 according to EN 60529
- Connection type: Four-core cable, fitting 1/2" NPT
- Contact type: SPCO/SPDT (Hermetically sealed - Volt-free contacts)

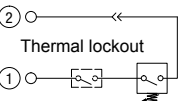
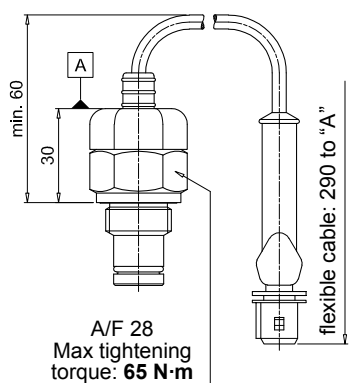
Electrical data

- Connection via four-core cable - fitting 1/2" NPT
- Resistive Load: 830 mA / 24 Vdc - 180 mA / 110 Vac
- Max voltage: 150 Vac/dc
- Power: 20 W
- Available ATEX product: II 1 GD Ex ia IIC T6 Ga -60°C ≤ Ta ≤ 80°C
Ex ia IIC T4 Ga -60°C ≤ Ta ≤ 125°C
II 2 GD Ex db IIC T6* Gb Ex tb IIIC T85°C* Db
(Tamb : = -60°C to +70°C)* IP66/67
* alternative T/Class and ambients T4, T135°C
(Tamb = -60°C to +120°C)

Certification / Approvals: ATEX, IECEx, EAC TR CU, 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		Hydraulic symbol	Materials
Hazardous Area Electrical Differential Indicator Connection IEC 61076-2-101 D (M12)			
Settings	Ordering code		
2.0 bar ±10%	DE H 20 x A 70 P01	Electrical symbol 	Technical data - Max working pressure: 420 bar - Proof pressure: 630 bar - Burst pressure: 1260 bar - Working temperature: From -60 °C to +80 °C - Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 - Temperature class: T6 (85 °C) - Degree of protection: IP 66/67 according to EN 60529 - Connection type: IEC 61076-2-101 D (M12) - Contact type: SPCO/SPDT (Hermetically sealed - Volt-free contacts)
5.0 bar ±10%	DE H 50 x A 70 P01		
7.0 bar ±10%	DE H 70 x A 70 P01		
		Electrical data - Connection IEC 61076-2-101 D (M12) - Resistive Load: 830 mA / 24 Vdc - 180 mA / 110 Vdc - Electrical Ratings: <i>I</i> _i = 30 Vdc <i>I</i> _l = 250 mA <i>P</i> _i = 1.3 W - Available ATEX product: II 1 GD Ex ia IIC T6 Ga -60°C ≤ Ta ≤ 80°C Ex ia IIC T4 Ga -60°C ≤ Ta ≤ 125°C II 2 GD Ex db IIC T6* Gb Ex tb IIIC T85°C* Db (Tamb = -60°C to +70°C)* IP66/67 * alternative T/Class and ambients T4, T135°C (Tamb = -60°C to +120°C)	
			
		- Certification / Approvals: ATEX, IECEx, EAC TR CU, INMETRO - Certification included as standard	

DEM*10		Hydraulic symbol	Materials
Electrical Differential Indicator Connection: AMP Superseal series 1.5			
Settings	Ordering code		
1.2 bar ±10%	DE M 12 x x 10 P01	Electrical symbol 	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
2.0 bar ±10%	DE M 20 x x 10 P01		
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		
		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 AMP Time junior			
Settings	Ordering code		
1.2 bar ±10%	DE M 12 x x 20 P01	Electrical symbol 	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
2.0 bar ±10%	DE M 20 x x 20 P01		
5.0 bar ±10%	DE M 50 x x 20 P01		
7.0 bar ±10%	DE M 70 x x 20 P01		
9.5 bar ±10%	DE M 95 x x 20 P01		
		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 Deutsch DT-04-2-P	
Settings	Ordering code
1.2 bar ±10%	DE M 12 x x 30 P01
2.0 bar ±10%	DE M 20 x x 30 P01
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

A/F 28
Max tightening torque: 65 N·m

flexible cable: 240 to "A"

Hydraulic symbol

Electrical symbol

Thermal lockout

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")

DEM*35	
Electrical Differential Indicator Deutsch DT-04-3-P	
Settings	Ordering code
1.2 bar ±10%	DE M 12 x x 35 P01
2.0 bar ±10%	DE M 20 x x 35 P01
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

A/F 28
Max tightening torque: 65 N·m

flexible cable: 240 to "A"

Hydraulic symbol

Electrical symbol

Thermal lockout

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")

DES*10	
Electrical Differential Indicator AMP Superseal series 1.5	
Settings	Ordering code
1.2 bar ±10%	DE S 12 H A 10 P01
2.5 bar ±10%	DE S 25 H A 10 P01
4.0 bar ±10%	DE S 40 H A 10 P01

A/F 19
Max tightening torque: 20 N·m

Hydraulic symbol

Electrical symbol

Materials

- Body: Brass
- Internal parts: Brass - Polyamide
- Contacts: Silver
- Seal: HNBR

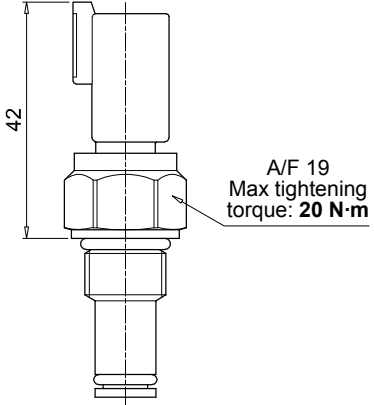
Technical data

- 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

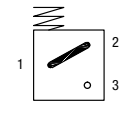
Electrical data

- Electrical connection: AMP Superseal series 1.5
- Resistive load: 0.2 A / 24 Vdc
- Switching type: Normally open contacts (NC on request)

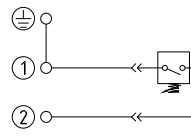
DES*30	
Electrical Differential Indicator Deutsch DT-04-2-P	
Settings	Ordering code
1.2 bar $\pm 10\%$	DE S 12 HA 30 P01
2.5 bar $\pm 10\%$	DE S 25 HA 30 P01
4.0 bar $\pm 10\%$	DE S 40 HA 30 P01



Hydraulic symbol



Electrical symbol



Materials

- Body: Brass
- Internal parts: Brass - Polyamide
- Contacts: Silver
- Seal: HNBR

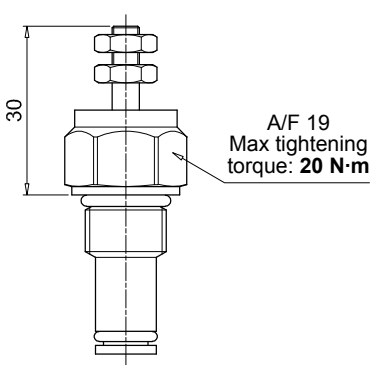
Technical data

- 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

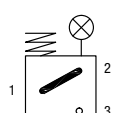
Electrical data

- Electrical connection: Deutsch DT-04-2-P
- Resistive load: 0.2 A / 24 Vdc
- Switching type: Normally open contacts (NC on request)

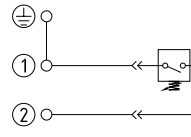
DES*80	
Electrical Differential Indicator Stud #10-32 UNF	
Settings	Ordering code
1.2 bar $\pm 10\%$	DE S 12 HA 80 P01
2.5 bar $\pm 10\%$	DE S 25 HA 80 P01
4.0 bar $\pm 10\%$	DE S 40 HA 80 P01



Hydraulic symbol



Electrical symbol



Materials

- Body: Brass
- Internal parts: Brass - Polyamide
- Contacts: Silver
- Seal: HNBR

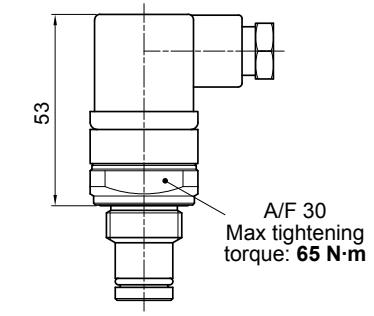
Technical data

- 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

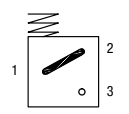
Electrical data

- Electrical connection: Stud #10-32 UNF
- Resistive load: 0.2 A / 24 Vdc
- Switching type: Normally open contacts (NC on request)

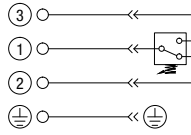
DEX*50	
Electrical Differential Indicator Connection: EN 175301-803	
Settings	Ordering code
1.2 bar $\pm 10\%$	DE X 12 x A 50 P01
2.0 bar $\pm 10\%$	DE X 20 x A 50 P01
5.0 bar $\pm 10\%$	DE X 50 x A 50 P01
7.0 bar $\pm 10\%$	DE X 70 x A 50 P01
9.5 bar $\pm 10\%$	DE X 95 x A 50 P01



Hydraulic symbol



Electrical symbol



Materials

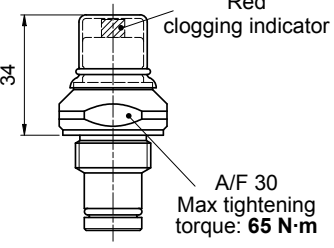
- Body: AISI 316L
- Base: Black polyamide
- Contacts: Silver
- Seal: HNBR - MFQ

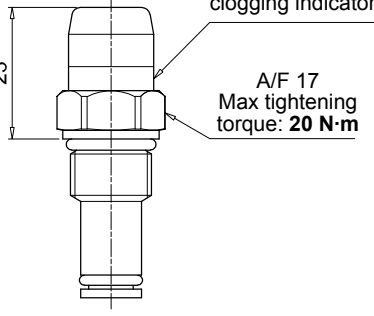
Technical data

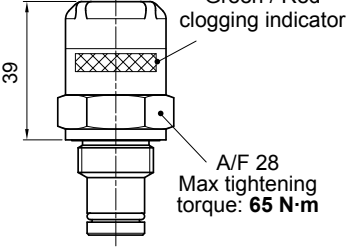
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25 °C to +110 °C
- Compatibility with fluids: Mineral oils, Synthetic fluids
HFA, HFB, HFC according to ISO 2943
- Degree protection: IP66 according to EN 60529
IP69K according to ISO 20653

Electrical data

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

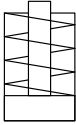
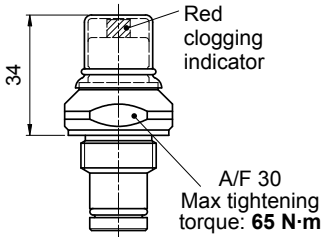
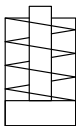
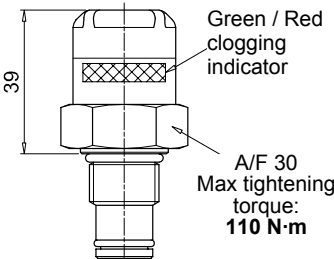
DVM		Hydraulic symbol	Materials
Visual Differential Indicator			
Settings	Ordering code		
1.2 bar ±10%	DV M 12 x P01	Technical data - Reset: Manual reset - Max working pressure: 420 bar - Proof pressure: 630 bar - Burst pressure: 1260 bar - Working temperature: From -25 °C to +110 °C - Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC according to ISO 2943 - Degree protection: IP65 according to EN 60529	
2.0 bar ±10%	DV M 20 x P01		
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		
			

DVS		Hydraulic symbol	Materials
Visual Differential Indicator			
Settings	Ordering code		
1.2 bar ±10%	DV S 12 H P01	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	
2.5 bar ±10%	DV S 25 H P01		
4.0 bar ±10%	DV S 40 H P01		
			

DVX		Hydraulic symbol	Materials
Visual Differential Indicator			
Settings	Ordering code		
1.2 bar ±10%	DV X 12 x P01	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	
2.0 bar ±10%	DV X 20 x P01		
5.0 bar ±10%	DV X 50 x P01		
7.0 bar ±10%	DV X 70 x P01		
9.5 bar ±10%	DV X 95 x P01		
			

DIFFERENTIAL INDICATORS

Dimensions

DVY		Hydraulic symbol		Materials - Body: AISI 316L - Internal parts: AISI 316L - Polyamide - Contacts: Silver - Seal: HNBR - MFQ
Visual Differential Indicator				
Settings	Ordering code			
1.2 bar ±10%	DV Y 12 x P01			
2.0 bar ±10%	DV Y 20 x P01			
5.0 bar ±10%	DV Y 50 x P01			
7.0 bar ±10%	DV Y 70 x P01			
9.5 bar ±10%	DV Y 95 x P01			
DVZ		Hydraulic symbol		Materials - Body: AISI 316L - Internal parts: AISI 316L - Polyamide - Contacts: Silver - Seal: HNBR - MFQ
Visual Differential Indicator				
Settings	Ordering code			
1.2 bar ±10%	DV Z 12 x P01			
2.0 bar ±10%	DV Z 20 x P01			
5.0 bar ±10%	DV Z 50 x P01			
7.0 bar ±10%	DV Z 70 x P01			
9.5 bar ±10%	DV Z 95 x P01			

PLUGS

Dimensions

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

Materials

- Body: Phosphatized steel
- Seal: HNBR / FPM

T4	
Differential Indicator plug	
Seal	Ordering code
NBR	T4 A

Materials

- Body: Anodized aluminium
- Seal: NBR

X2	
Differential Indicator plug 420 bar	
Seal	Ordering code
HNBR	X2 H
FPM	X2 F
MFQ	X2 Q

Materials

- Body: AISI 316L
- Seal: HNBR / FPM / MFQ

X3	
Differential Indicator plug 700 bar (only for FZH)	
Seal	Ordering code
HNBR	X3 H
FPM	X3 F
MFQ	X3 Q

Materials

- Body: AISI 316L
- Seal: HNBR / FPM / MFQ

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