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 increasing 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:

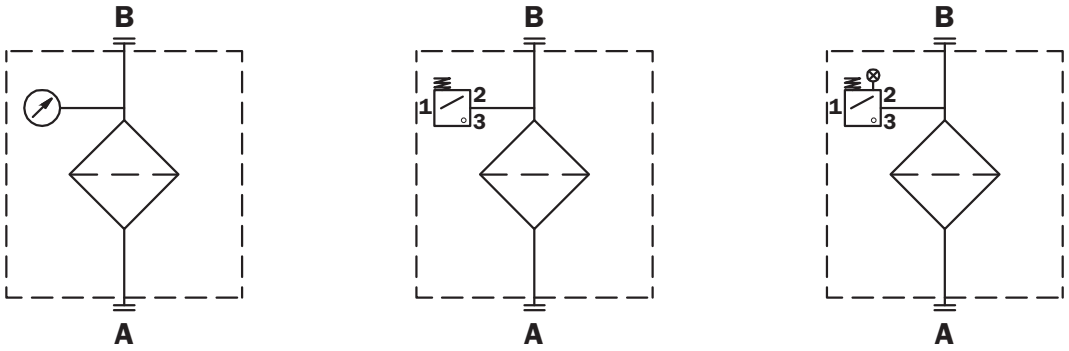
- **Vacuum switches and gauges**
- **Pressure switches and gauges**
- **Differential pressure indicators**

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

The electronic model (only available for differential type indicators) with warning signals (75% of clogging) and alarm (clogging).

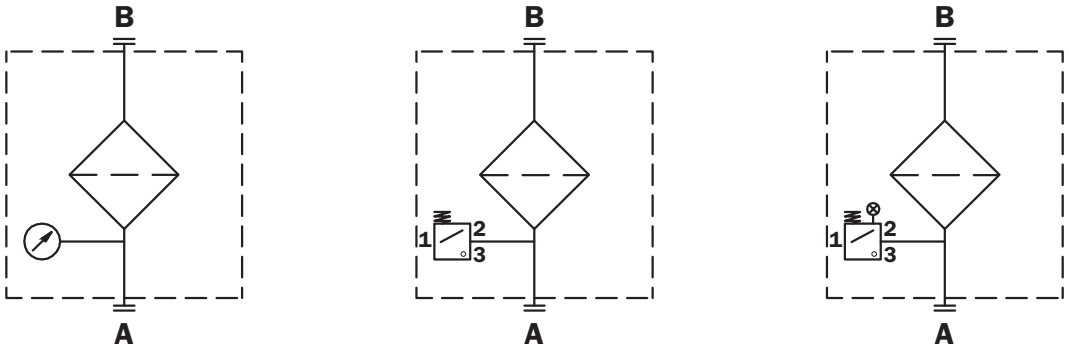
VACUUM INDICATORS

Vacuum indicators are used on the Suction line to check the efficency of the filter element.
They measure the pressure downstream of the filter element.
Standard items are produced with R 1/4" EN 10226 connection.
Available products with R 1/8" EN 10226 to be fitted on MPS series.



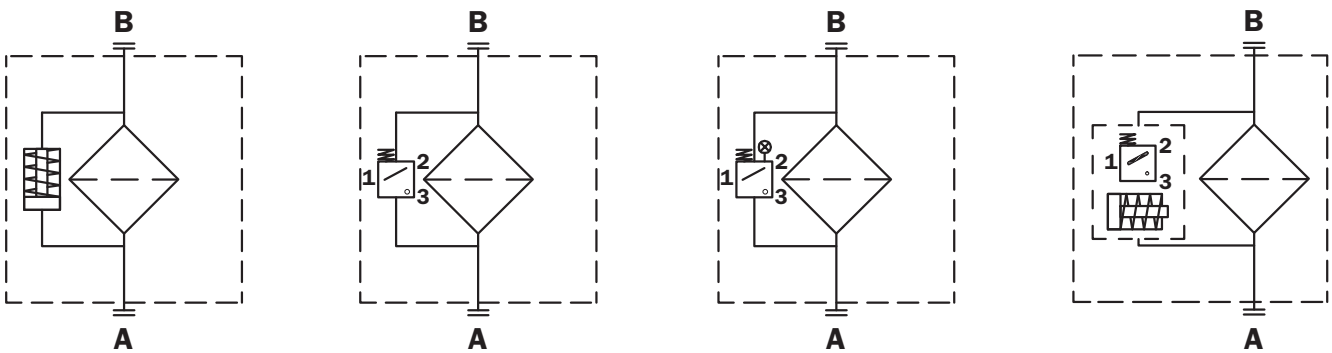
BAROMETRIC INDICATORS

Pressure indicators are used on the Return line to check the efficency of the filter element.
They measure the pressure upstream of the filter element.
Standard items are produced with R 1/8" EN 10226 connection.



DIFFERENTIAL INDICATORS

Differential indicators are used on the Pressure line to check the efficency 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.



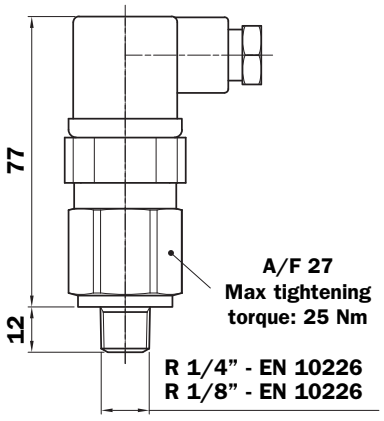
Quick reference guide

Filter series	VISUAL INDICATOR	ELECTRICAL INDICATOR	ELECTRICAL/VISUAL INDICATOR	ELECTRONIC INDICATOR
Suction filters				
SF2 250 - 251 - 350 SF2 500 - 501 - 502 - 503 - 504 - 505 SF2 510 - 535 - 540 FAS	VVA16P01 VVR16P01	VEA21AA50P01	VLA21AA51P01 VLA21AA52P01 VLA21AA53P01 VLA21AA71P01	
Return filters				
MPF - MPT with bypass 1,75 bar MPH with bypass 1,75 bar	BVA14P01 BVR14P01 BVP15HAP01 BVP15HMP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
MPF - MPT with bypass 3 bar MPH with bypass 2,5 bar FRI 255 RF2 250	BVA25P01 BVR25P01 BVP20HAP01 BVP20HMP01	BEA20HA50P01 BEM20HA41P01	BLA20HA51P01 BLA20HA52P01 BLA20HA53P01 BLA20HA71P01	
FRI 025 - 040 - 100 - 250 - 630 - 850	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20xAxxP01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01	DTA20xF70P01
Return/Suction filters				
MRSX 116 - 165 - 166 Suction line	VVB16P01 VVS16P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
MRSX 116 - 165 - 166 Return line	BVA25P01 BVR25P01 BVP20HAP01 BVP205HMP01	BEA25HA50P01 BEM25HA41P01 BET25HF10P01 BET25HF30P01 BET25HF50P01	BLA25HA51P01 BLA25HA52P01 BLA25HA53P01 BLA25HA71P01	
Spin-On filters				
MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350 Suction line	VVB16P01 VVS16P01	VEB21AA50P01	VLB21AA51P01 VLB21AA52P01 VLB21AA53P01 VLB21AA71P01	
MPS 050 - 070 - 100 - 150 MPS 200 - 250 - 300 - 350 MST 050 - 070 - 100 - 150 Return line	BVA14P01 BVR14P01 BVP15HAP01 BVP15HMP01	BEA15HA50P01 BEM15HA41P01	BLA15HA51P01 BLA15HA52P01 BLA15HA53P01 BLA15HA71P01	
MPS 051 - 071 - 101 - 151 MPS 301 - 351 MSH 050 - 070 - 100 - 150 In-line	DVA12xP01 DVM12xP01	DEA12xA50P01 DEM12xAxxP01	DLA12xA51P01 DLA12xA52P01 DLA12xA71P01 DLE12xA50P01 DLE12xF50P01	

Filter series	VISUAL INDICATOR	ELECTRICAL INDICATOR	ELECTRICAL/VISUAL INDICATOR	ELECTRONIC INDICATOR
Low Pressure In-Line filters				
LMP 110 - 112 - 116 - 118 - 119 LMP 120 - 122 - 123 LMP 210 - 211 LMP 400 - 401 - 430 - 431 LMP 900 - 901 - 950 - 951 LMD 400 - 401 - 431 - 951 With bypass valve	DVA20xP01 DVM20xP01	DEA20xA50P01 DEM20xAxxP01	DLA20xA51P01 DLA20xA52P01 DLA20xA71P01 DLE20xA50P01 DLE20xF50P01	DTA20xF70P01
LMP 110 - 112 - 116 - 118 - 119 LMP 120 - 122 - 123 LMP 210 - 211 LMP 400 - 401 - 430 - 431 LMP 900 - 901 - 950 - 951 LMD 400 - 401 - 431 - 951 MPD 250 - 251 Without bypass valve	DVA50xP01 DVM50xP01	DEA50xA50P01 DEM50xAxxP01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01	DTA50xF70P01
High Pressure In-Line filters				
FMP 039 - 065 - 135 - 320 FMM 050 FHP 010 - 011 - 065 - 135 - 320 - 500 FHB 050 - 135 - 320 FHM 006 - 007 - 010 - 050 - 135 - 320 - 500 FHF 325 FHD 021 - 051 - 326 - 333 With bypass valve	DVA50xP01 DVM50xP01	DEA50xA50P01 DEM50xAxxP01	DLA50xA51P01 DLA50xA52P01 DLA50xA71P01 DLE50xA50P01 DLE50xF50P01	DTA50xF70P01
FMP 039 - 065 - 135 - 320 FMM 050 FHP 010 - 011 - 065 - 135 - 320 - 500 FHB 050 - 135 - 320 FHM 006 - 007 - 010 - 050 - 135 - 320 - 500 FHF 325 FHD 021 - 051 - 326 - 333 Without bypass valve	DVA70xP01 DVM70xP01	DEA70xA50P01 DEM70xAxxP01	DLA70xA51P01 DLA70xA52P01 DLA70xA71P01 DLE70xA50P01 DLE70xF50P01	DTA70xF70P01
Stainless Steel High Pressure In-Line filters				
FZB 039 FZM 039 FZP 039 - 136 FZH 010 - 011 - 039 FZD 051 With bypass valve	DVX50xP01 DVY50xP01	DEX50xA50P01	DLX50xA51P01 DLX50xA52P01	
FZB 039 FZM 039 FZP 039 - 136 FZH 010 - 011 - 039 FZD 010 - 021 - 051 Without bypass valve	DVX70xP01 DVY70xP01	DEX70xA50P01	DLX70xA51P01 DLX70xA52P01	

VACUUM INDICATORS

VEA - VEB



Available connections:
R 1/4" EN 10226 (VEA21AA50P01)
R 1/8" EN 10226 (VEB21AA50P01)

Electrical Vacuum Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	NBR

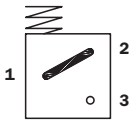
Technical data:

• Indicator type:	Electrical vacuum indicator
• Setting pressure:	-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 fluids in according to ISO 2943

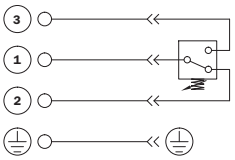
Electrical data:

• Resistive load:	5 A / 14 VDC 4 A / 30 VDC 5 A / 125 VAC 5 A / 250 VAC
• Electrical connections:	50 - EN 175301-803
• Protection degree:	IP 65 in according to EN 60529
• Available Atex product	II 1GD Ex ia IIC Tx Ex ia IIIC Tx°C X

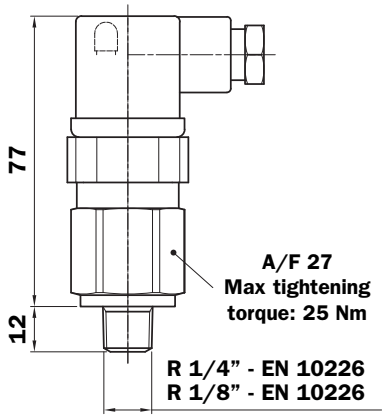
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



VLA - VLB



Available connections:
R 1/4" EN 10226 (VLA21AAxxP01)
R 1/8" EN 10226 (VLB21AAxxP01)

Electrical/Visual Vacuum Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	NBR

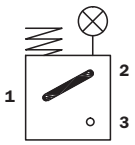
Technical data:

• Indicator type:	Electrical/Visual vacuum indicator
• Setting pressure:	-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 fluids in according to ISO 2943

Electrical data:

• Resistive load:	51: 0,8 A / 24 VDC 52: 0,2 A / 115 VDC 53: 4 A / 230 VDC
• Electrical connections:	51 - EN 175301-803 (24 VDC lamps) 52 - EN 175301-803 (110 VDC lamps) 53 - EN 175301-803 (230 VAC lamps)
• Protection degree:	IP 65 in according to EN 60529

HYDRAULIC SYMBOL



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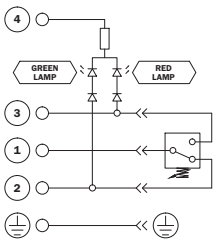
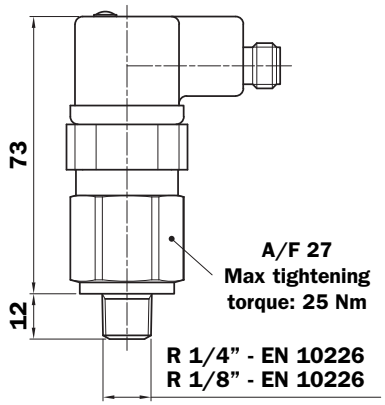


VLA - VLB



Available connections:
R 1/4" EN 10226 (VLA21AA71P01)
R 1/8" EN 10226 (VLB21AA71P01)

Electrical/Visual Vacuum Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	NBR

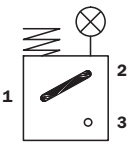
Technical data:

• Indicator type:	Electrical/Visual vacuum indicator
• Setting pressure:	-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 fluids in according to ISO 2943

Electrical data:

• Resistive load:	0,4 A / 24 VDC
• Electrical connections:	71 - M12 IEC 61076-2-101 (24 VDC lamps)
• Protection degree:	IP 65 in according to EN 60529

HYDRAULIC SYMBOL



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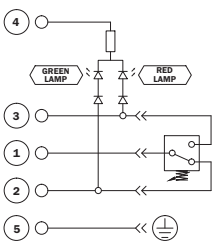
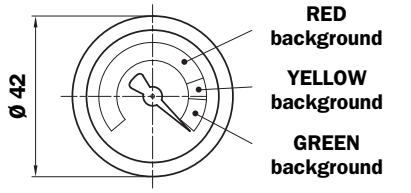
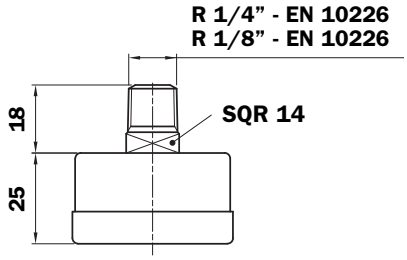


VACUUM INDICATORS

VVA - VVB





Available connections:
R 1/4" EN 10226 (VVA16P01)
R 1/8" EN 10226 (VVB16P01)

Axial Vacuum Gauge

Materials:

• Case:	Painted Steel
• Window:	Clear plastic
• Dial:	Painted Steel
• Pointer:	Painted Aluminium
• Pressure connection:	Brass
• Pressure element:	Bourdon tub Cu-alloy soft soldered

Technical data:

• Indicator type:	Axial vacuum gauge
• Max working pressure:	Static: 7 bar Fluctuating: 6 bar Short time: 10 bar
• Working temperature:	From -40°C to +60°C
• Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943
• Accuracy class:	cl. 2.5
• Protection degree:	IP 31 in according to EN 60529

HYDRAULIC SYMBOL

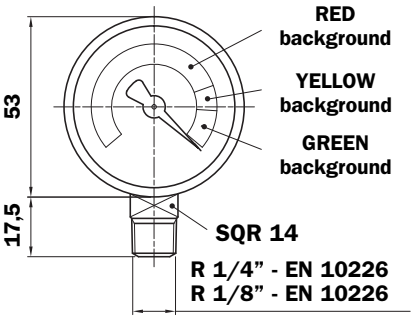
GRADUATED DISPLAY

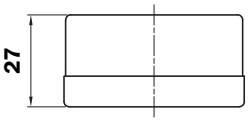
GREEN BACKGROUND
(from 0 to -12 cmHg)
Clean filter element

YELLOW BACKGROUND
(from -12 to -18 cmHg)
Warning

RED BACKGROUND
(from -18 to -76 cmHg)
Bypass

VVR - VVS





Available connections:
R 1/4" EN 10226 (VVR16P01)
R 1/8" EN 10226 (VVS16P01)

Radial Vacuum Gauge

Materials:

• Case:	Painted Steel
• Window:	Clear plastic
• Dial:	Painted Steel
• Pointer:	Painted Aluminium
• Pressure connection:	Brass
• Pressure element:	Bourdon tub Cu-alloy soft soldered

Technical data:

• Indicator type:	Radial vacuum gauge
• Max working pressure:	Static: 7 bar Fluctuating: 6 bar Short time: 10 bar
• Working temperature:	From -40°C to +60°C
• Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943
• Accuracy class:	cl. 2.5
• Protection degree:	IP 31 in according to EN 60529

HYDRAULIC SYMBOL

GRADUATED DISPLAY

GREEN BACKGROUND
(from 0 to -12 cmHg)
Clean filter element

YELLOW BACKGROUND
(from -12 to -18 cmHg)
Warning

REDBACKGROUND
(from -18 to -76 cmHg)
Bypass

Notes

Series VE	1	2	3	4	5	6	7
Example:	VE	A	21	A	A	50	P01

Series VL	1	2	3	4	5	6	7
Example:	VL	A	21	A	A	52	P01

Series VV	1	2	3	7
Example:	VV	A	16	P01

1 - Series

VE	Electrical indicator
VL	Electrical/Visual indicator
VV	Visual indicator

2 - Type

VE - VL series

A	R 1/4” EN 10226 connection
B	R 1/8” EN 10226 connection

VV series

A	Axial vacuumeter R 1/4” EN 10226 connection
B	Axial vacuumeter R 1/8” EN 10226 connection
R	Radial vacuumeter R 1/4” EN 10226 connection
S	Radial vacuumeter R 1/8” EN 10226 connection

3 - Setting pressure

VEA - VLA series

21	-0,21 bar

VVA - VVR series

16	-0,16 bar

4 - Seals (excluded for VV)

A	NBR
	On request

5 - Thermostat (excluded for VV)

A	Without thermostat

6 - Electrical connection (excluded for VV)

VEA series

50	EN 175301-803 connector

VLA series

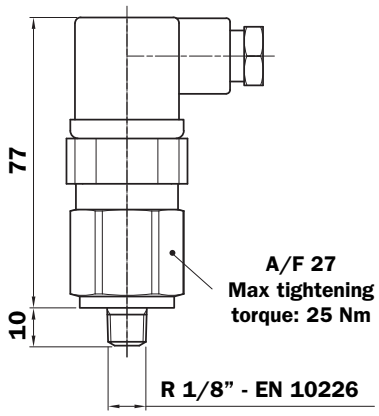
51	EN 175301-803 clear connector with 24 V lamps
52	EN 175301-803 clear connector with 110 V lamps
53	EN 175301-803 clear connector with 230 V lamps
71	M12 IEC 61076-2-101 clear connector with 24 V lamps

7 - Option

P01	MP Filtri standard
Pxx	Customer request

BAROMETRIC INDICATORS

BEA



Available setting:
1,5 bar ±10% (BEA15HA50P01)
2 bar ±10% (BEA20HA50P01)

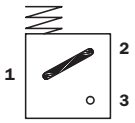
Electrical Pressure Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: NBR

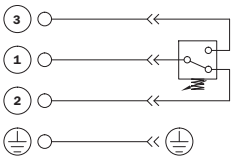
Technical data:
- Indicator type: Electrical pressure indicator
- Max working pressure: 40 bar
- Proof pressure: 60 bar
- Working temperature: From -25°C to +80°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 5 A / 14 VDC
  4 A / 30 VDC
  5 A / 125 VAC
  5 A / 250 VAC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529
- Available Atex product Ex II 1GD Ex ia IIC Tx Ex ia IIIC Tx°C X

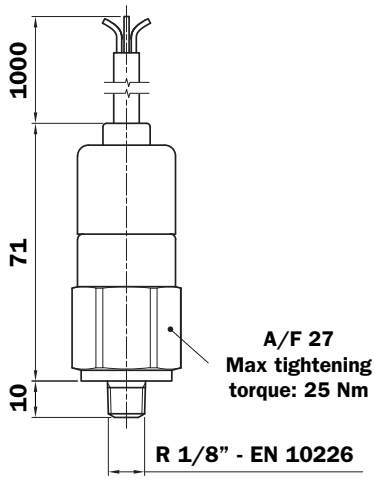
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BEM



Available setting:
1,5 bar ±10% (BEM15HA50P01)
2 bar ±10% (BEM20HA50P01)

Electrical Pressure Indicator

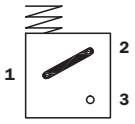
Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR

Technical data:
- Indicator type: Electrical pressure indicator
- 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 fluids in according to ISO 2943

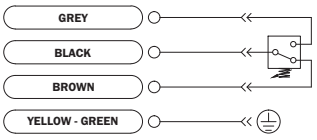
Electrical data:
- Resistive load: 5 A / 14 VDC
  4 A / 30 VDC
  5 A / 125 VAC
  5 A / 250 VAC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 67 in according to EN 60529

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

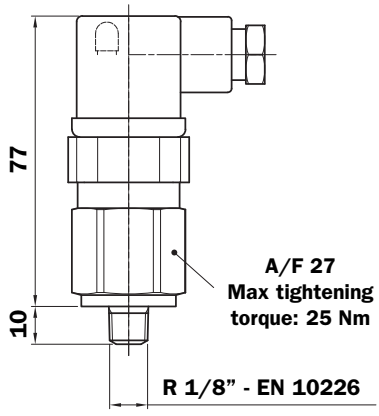
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BLA



Available setting:
1,5 bar ±10% (BLA15HAxxP01)
2 bar ±10% (BLA20HAxxP01)

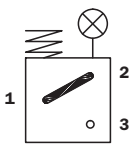
Electrical/Visual Pressure Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: NBR

Technical data:
- Indicator type: Electrical/Visual pressure indicator
- 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 fluids in according to ISO 2943

Electrical data:
- Resistive load: 51: 0,8 A / 24 VDC
  52: 0,2 A / 115 VDC
  53: 4 A / 230 VDC
- Electrical connections: 51 - EN 175301-803 (24 VDC lamps)
  52 - EN 175301-803 (110 VDC lamps)
  53 - EN 175301-803 (230 VAC lamps)
- Protection degree: IP 65 in according to EN 60529

HYDRAULIC SYMBOL



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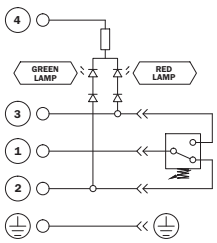
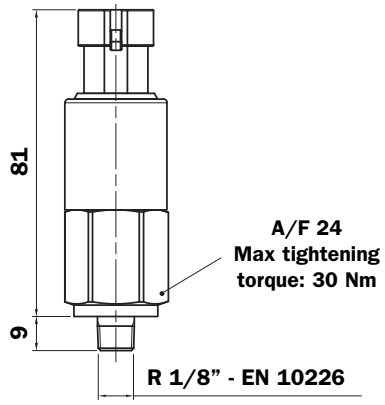


BAROMETRIC INDICATORS

BET



Available setting:
2,5 bar ±10% (BET25HF10P01)

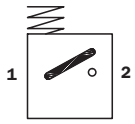
Electrical Pressure Indicator

Materials:
- Body: Brass
- Base - Ring: Nylon
- Contact: Silver
- Seals: HNBR

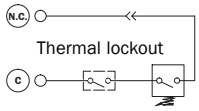
Technical data:
- Pressure switch type: Electrical pressure switch
- Pressure setting: 2,5 bar ±10%
- Working pressure: 10 bar
- Proof pressure: 15 bar
- Max working temperature: +100°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Electrical condition: Normally opened single contact
- Resistive load: 0,5 A / 48 VDC
- Electrical connections: 10 - AMP Superseal series 1,5
- Thermostat condition: Open up to 30°C
- CE certification
- Protection degree: IP 65 in according to EN 60529

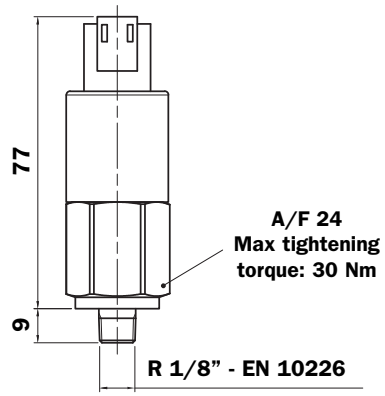
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BET



Available setting:
2,5 bar ±10% (BET25HF30P01)

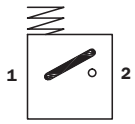
Electrical Pressure Indicator

Materials:
- Body: Brass
- Base - Ring: Nylon
- Contact: Silver
- Seals: HNBR

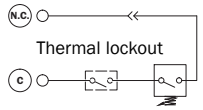
Technical data:
- Pressure switch type: Electrical pressure switch
- Pressure setting: 2,5 bar ±10%
- Working pressure: 10 bar
- Proof pressure: 15 bar
- Max working temperature: +100°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Electrical condition: Normally opened single contact
- Resistive load: 0,5 A / 48 VDC
- Electrical connections: 35 - Deutsch DT-04-3-P
- Thermostat condition: Open up to 30°C
- CE certification
- Protection degree: IP 65 in according to EN 60529

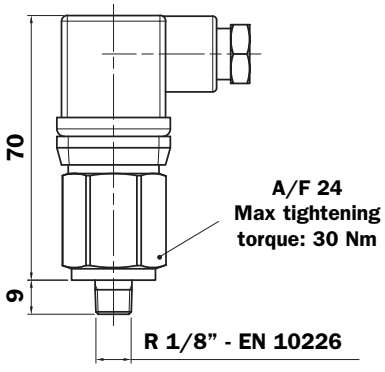
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



BET



Available setting:
2,5 bar ±10% (BET25HF50P01)

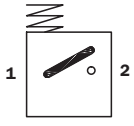
Electrical Pressure Indicator

Materials:
- Body: Brass
- Base - Ring: Nylon
- Contact: Silver
- Seals: HNBR

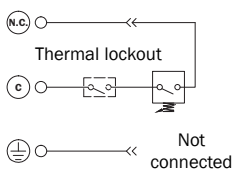
Technical data:
- Pressure switch type: Electrical pressure switch
- Pressure setting: 2,5 bar ±10%
- Working pressure: 10 bar
- Proof pressure: 15 bar
- Max working temperature: +100°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Electrical condition: Normally opened single contact
- Resistive load: 0,5 A / 48 VDC
- Electrical connections: 50 - EN 175301-803
- Thermostat condition: Open up to 30°C
- CE certification
- Protection degree: IP 65 in according to EN 60529

HYDRAULIC SYMBOL

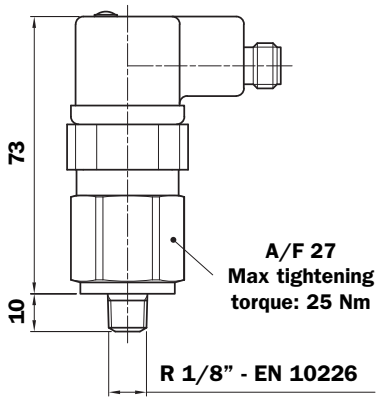


ELECTRICAL SYMBOL



BAROMETRIC INDICATORS

BLA



Available setting:
1,5 bar ±10% (BLA15HA71P01)
2 bar ±10% (BLA20HA71P01)

Electrical/Visual Pressure Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	NBR

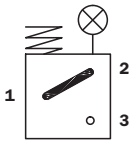
Technical data:

• Indicator type:	Electrical/Visual pressure indicator
• 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 fluids in according to ISO 2943

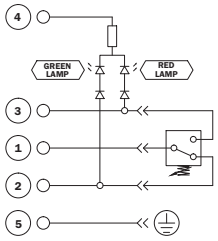
Electrical data:

• Resistive load:	0,4 A / 24 VDC
• Electrical connections:	7.1 - M12 IEC 61076-2-101 (24 VDC lamps)
• Protection degree:	IP 65 in according to EN 60529

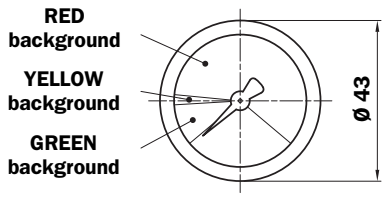
HYDRAULIC SYMBOL

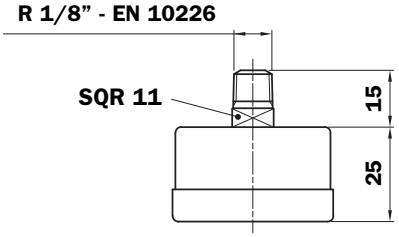


ELECTRICAL SYMBOL



BVA





Available setting:
1,4 bar ±10% (BVA14P01)
2,5 bar ±10% (BVA25P01)

Axial Pressure Gauge

Materials:

• Case:	Painted Steel
• Window:	Clear plastic
• Dial:	Painted Steel
• Pointer:	Painted Aluminium
• Pressure connection:	Brass
• Pressure element:	Bourdon tub cu-alloy soft soldered

Technical data:

• Indicator type:	Axial pressure gauge
• Max working pressure:	Static: 7 bar Fluctuating: 6 bar Short time: 10 bar
• Working temperature:	From -40°C to +60°C
• Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943
• Accuracy class:	cl. 2.5
• Protection degree:	IP 31 in according to EN 60529

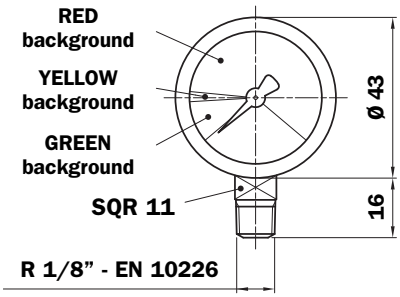
HYDRAULIC SYMBOL

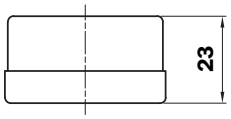
GRADUATED DISPLAY

BVA14P01
GREEN BACKGROUND (from 0 to 1,4 bar)
Clean filter element
YELLOW BACKGROUND (from 1,4 to 1,7 bar)
Warning
RED BACKGROUND (from 1,7 to 10 bar)
Bypass

BVA25P01
GREEN BACKGROUND (from 0 to 2,5 bar)
Clean filter element
YELLOW BACKGROUND (from 2,5 to 3 bar)
Warning
RED BACKGROUND (from 3 to 10 bar)
Bypass

BVR





Available setting:
1,4 bar ±10% (BVR14P01)
2,5 bar ±10% (BVR25P01)

Radial Pressure Gauge

Materials:

• Case:	Painted Steel
• Window:	Clear plastic
• Dial:	Painted Steel
• Pointer:	Painted Aluminium
• Pressure connection:	Brass
• Pressure element:	Bourdon tub cu-alloy soft soldered

Technical data:

• Indicator type:	Radial pressure gauge
• Max working pressure:	Static: 7 bar Fluctuating: 6 bar Short time: 10 bar
• Working temperature:	From -40°C to +60°C
• Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943
• Accuracy class:	cl. 2.5
• Protection degree:	IP 31 in according to EN 60529

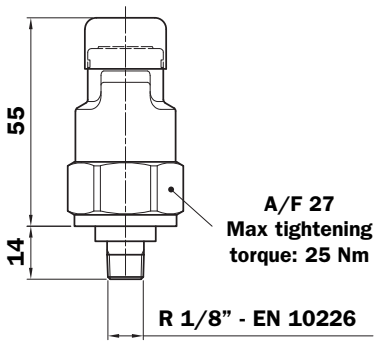
HYDRAULIC SYMBOL

GRADUATED DISPLAY

BVR14P01
GREEN BACKGROUND (from 0 to 1,4 bar)
Clean filter element
YELLOW BACKGROUND (from 1,4 to 1,7 bar)
Warning
RED BACKGROUND (from 1,7 to 10 bar)
Bypass

BVR25P01
GREEN BACKGROUND (from 0 to 2,5 bar)
Clean filter element
YELLOW BACKGROUND (from 2,5 to 3 bar)
Warning
RED BACKGROUND (from 3 to 10 bar)
Bypass

BVP - BVQ



Available setting:
1,5 bar ±10% (BVP15AP01 - BVQ15AP01)
2 bar ±10% (BVP20AP01 - BVQ20AP01)

Visual Pressure Indicator

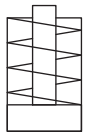
Materials:

• Body:	Brass
• Internal parts:	Nylon
• Seals:	NBR

Technical data:

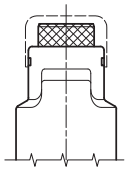
• Indicator type:	Visual pressure indicator
• Reset:	BVP - Automatic reset BVQ - Manual reset
• Max working pressure:	10 bar
• Proof pressure:	15 bar
• Working temperature:	From -25°C to +80°C
• Compatibility with fluids:	Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943
• Protection degree:	IP 45 in according to EN 60529

HYDRAULIC SYMBOL

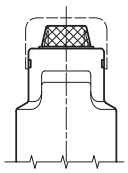


SIGNALS

GREEN BUTTON: INLET PRESSURE



RED BUTTON: CLOGGED FILTER ELEMENT



Notes

Series BE	1	2	3	4	5	6	7
	☐	☐	☐	☐	☐	☐	☐
Example:	**BE**	**A**	**20**	**H**	**A**	**50**	**P01**

Series BL	1	2	3	4	5	6	7
	☐	☐	☐	☐	☐	☐	☐
Example:	**BL**	**A**	**20**	**H**	**A**	**52**	**P01**

Series BV	1	2	3	4	7
	☐	☐	☐	☐	☐
Example:	**BV**	**P**	**20**	**H**	**P01**

Series BV	1	2	3	7
	☐	☐	☐	☐
Example:	**BV**	**A**	**14**	**P01**

1 - Series

BE	Electrical indicator
BL	Electrical/Visual indicator
BV	Visual indicator

2 - Type

BE series

A	Standard type
M	With wired connector

BL series

A	Standard type

BV series

A	Axial manometer
R	Radial manometer
P	Visual pressure indicator - Automatic reset
Q	Visual pressure indicator - Manual reset

3 - Setting pressure

BEA - BEM - BLA - BVP series

15	1,5 bar
20	2 bar

BVA - BVR series

14	1,4 bar
25	2,5 bar

4 - Seals (excluded for BVA - BVR)

H	HNBR
	On request

5 - Thermostat (excluded for BV)

A	Without thermostat

6 - Electrical connection (excluded for BV)

BEA series

50	EN 175301-803 connector

BEM series

41	Four core cable
	On request

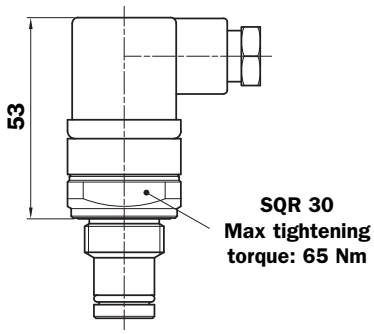
BLA series

51	EN 175301-803 clear connector with 24 V lamps
52	EN 175301-803 clear connector with 110 V lamps
53	EN 175301-803 clear connector with 230 V lamps
71	M12 IEC 61076-2-101 clear connector with 24 V lamps

7 - Option

P01	MP Filtri standard
Pxx	Customer request

DEA



Available setting:
1,2 bar ±10% (DEA12xA50P01)
2 bar ±10% (DEA20xA50P01)
5 bar ±10% (DEA50xA50P01)
7 bar ±10% (DEA70xA50P01)
9,5 bar ±10% (DEA95xA50P01)

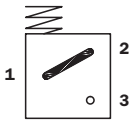
Electrical Differential Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

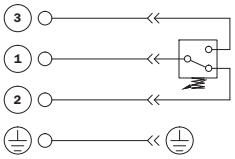
Technical data:
- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 0,2 A / 115 VDC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 66 in according to EN 60529 IP 69K in according to ISO 20653

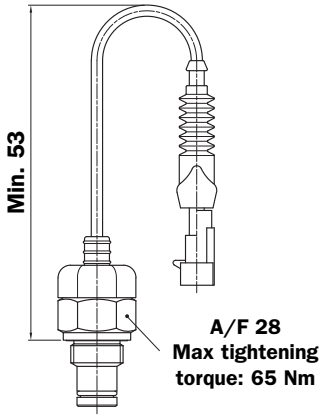
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
1,2 bar ±10% (DEM12xx10P01)
2 bar ±10% (DEM20xx10P01)
5 bar ±10% (DEM50xx10P01)
7 bar ±10% (DEM70xx10P01)
9,5 bar ±10% (DEM95xx10P01)

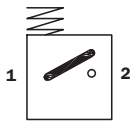
Electrical Differential Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

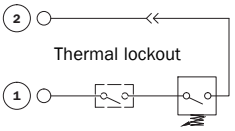
Technical data:
- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 0,2 A / 115 VDC
- Electrical connections: 10 - AMP Superseal series 1,5
- Switching type: Normally open contacts (N.C. on request)
- Thermal lockout: Normally open up to 30°C (F option)
- Protection degree: IP 66 in according to EN 60529

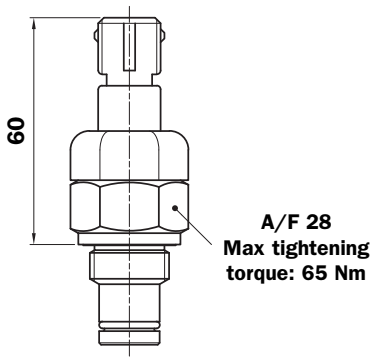
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
1,2 bar ±10% (DEM12xx20P01)
2 bar ±10% (DEM20xx20P01)
5 bar ±10% (DEM50xx20P01)
7 bar ±10% (DEM70xx20P01)
9,5 bar ±10% (DEM95xx20P01)

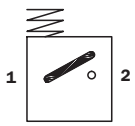
Electrical Differential Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

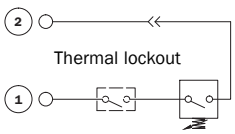
Technical data:
- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 0,2 A / 115 VDC
- Electrical connections: 20 - AMP Time junior
- Switching type: Normally open contacts (N.C. on request)
- Thermal lockout: Normally open up to 30°C (F option)
- Protection degree: IP 66 in according to EN 60529

HYDRAULIC SYMBOL

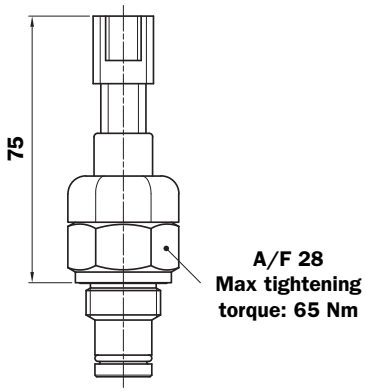


ELECTRICAL SYMBOL



DIFFERENTIAL INDICATORS

DEM



Available setting:
1,2 bar ±10% (DEM12xx30P01)
2 bar ±10% (DEM20xx30P01)
5 bar ±10% (DEM50xx30P01)
7 bar ±10% (DEM70xx30P01)
9,5 bar ±10% (DEM95xx30P01)

Electrical Differential Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	HNBR - FPM

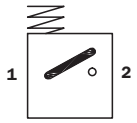
Technical data:

• Indicator type:	Electrical differential indicator
• 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 fluids in according to ISO 2943

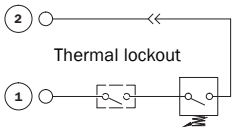
Electrical data:

• Resistive load:	0,2 A / 115 VDC
• Electrical connections:	30 - Deutsch DT-04-2-P
• Switching type:	Normally open contacts (N.C. on request)
• Thermal lockout:	Normally open up to 30°C (F option)
• Protection degree:	IP 66 in according to EN 60529

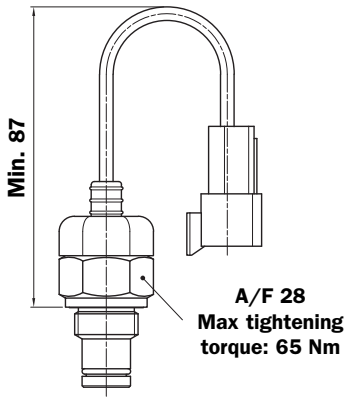
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DEM



Available setting:
1,2 bar ±10% (DEM12xx35P01)
2 bar ±10% (DEM20xx35P01)
5 bar ±10% (DEM50xx35P01)
7 bar ±10% (DEM70xx35P01)
9,5 bar ±10% (DEM95xx35P01)

Electrical Differential Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	HNBR - FPM

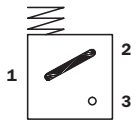
Technical data:

• Indicator type:	Electrical differential indicator
• 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 fluids in according to ISO 2943

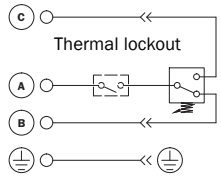
Electrical data:

• Resistive load:	0,2 A / 115 VDC
• Electrical connections:	35 - Deutsch DT-04-3-P
• Switching type:	SPDT contact
• Thermal lockout:	Normally open up to 30°C (F option)
• Protection degree:	IP 66 in according to EN 60529

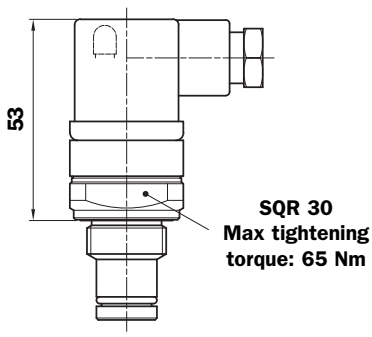
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLA



Available setting:
1,2 bar ±10% (DLA12xAxxP01)
2 bar ±10% (DLA20xAxxP01)
5 bar ±10% (DLA50xAxxP01)
7 bar ±10% (DLA70xAxxP01)
9,5 bar ±10% (DLA95xAxxP01)

Electrical/Visual Differential Indicator

Materials:

• Body:	Brass
• Internal parts:	Brass - Nylon
• Seals:	HNBR - FPM

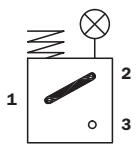
Technical data:

• Indicator type:	Electrical/Visual differential indicator
• 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 fluids in according to ISO 2943

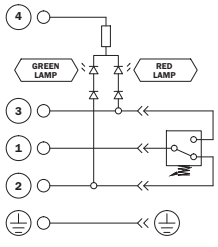
Electrical data:

• Resistive load:	51: 0,8 A / 24 VDC 52: 0,2 A / 115 VDC
• Electrical connections:	51 - EN 175301-803 (24 VDC lamps) 52 - EN 175301-803 (110 VDC lamps)
• Protection degree:	IP 66 in according to EN 60529 IP 69K in according to ISO 20653

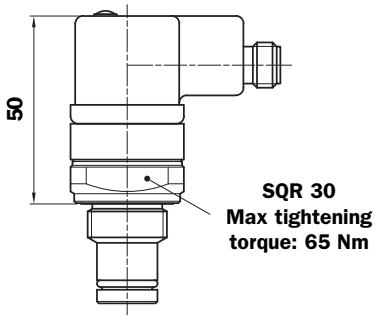
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLA



Available setting:
1,2 bar ±10% (DLA12xA71P01)
2 bar ±10% (DLA20xA71P01)
5 bar ±10% (DLA50xA71P01)
7 bar ±10% (DLA70xA71P01)
9,5 bar ±10% (DLA95xA71P01)

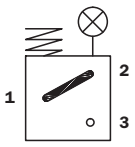
Electrical/Visual Differential Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

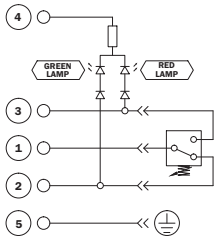
Technical data:
- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 0,4 A / 24 VDC
- Electrical connections: 71 - M12 IEC 61076-2-101 (24 VDC lamps)
- Protection degree: IP 65 in according to EN 60529 IP 69K in according to ISO 20653

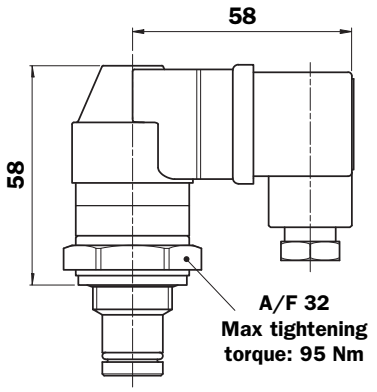
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLE



Available setting:
1,2 bar ±10% (DLE12VA50P01)
2 bar ±10% (DLE20VA50P01)
5 bar ±10% (DLE50VA50P01)
7 bar ±10% (DLE70VA50P01)
9,5 bar ±10% (DLE95VA50P01)

Electrical/Visual Differential Indicator

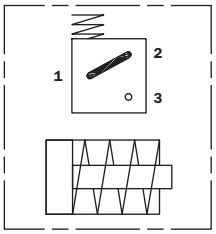
Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: FPM

Technical data:
- Indicator type: Electrical/Visual differential indicator
- 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 fluids in according to ISO 2943

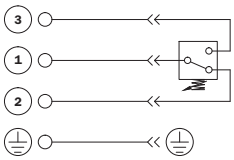
Electrical data:
- Resistive load: 5 A / 250 VAC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529

Available the connector with lamps

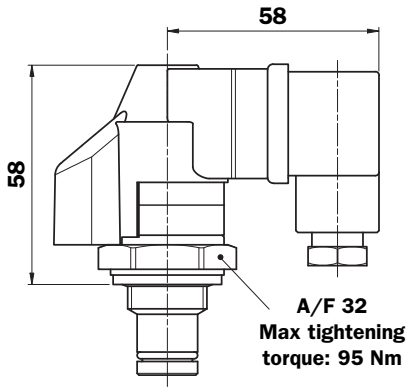
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLE



Available setting:
1,2 bar ±10% (DLE12VF50P01)
2 bar ±10% (DLE20VF50P01)
5 bar ±10% (DLE50VF50P01)
7 bar ±10% (DLE70VF50P01)
9,5 bar ±10% (DLE95VF50P01)

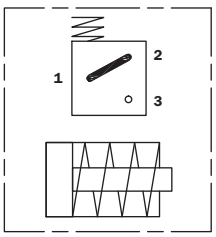
Electrical/Visual Differential Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: FPM

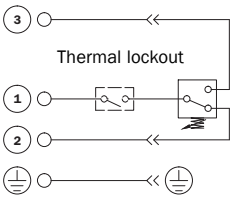
Technical data:
- Indicator type: Electrical/Visual differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 5 A / 250 VAC
- Thermal lockout setting: +30°C
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 65 in according to EN 60529

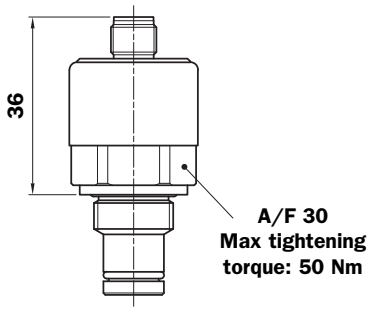
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DTA



Available setting:
1,2 bar ±10% (DTA12xF70P01)
2 bar ±10% (DTA20xF70P01)
5 bar ±10% (DTA50xF70P01)
7 bar ±10% (DTA70xF70P01)
9,5 bar ±10% (DTA95xF70P01)

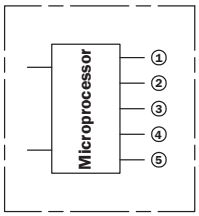
Electronic Differential Indicator

Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: NBR

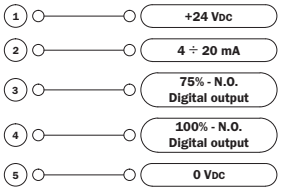
Technical data:
- Indicator type: Electronic differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Power supply: 24 VDC
- Analogue output: From 4 to 20 mA
- Thermal lockout: 30°C (all output signals stalled up to 30°C)
- Protection degree: IP 67 in according to EN 60529

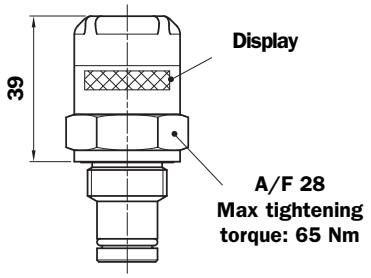
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DVA



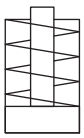
Available setting:
1,2 bar ±10% (DVA12xP01)
2 bar ±10% (DVA20xP01)
5 bar ±10% (DVA50xP01)
7 bar ±10% (DVA70xP01)
9,5 bar ±10% (DVA95xP01)

Visual Differential Indicator

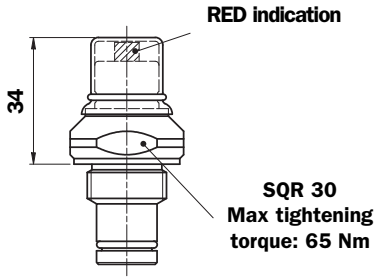
Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

Technical data:
- Indicator type: Visual differential indicator
- 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 fluids in according to ISO 2943

HYDRAULIC SYMBOL



DVM



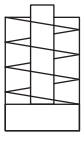
Available setting:
1,2 bar ±10% (DVM12xP01)
2 bar ±10% (DVM20xP01)
5 bar ±10% (DVM50xP01)
7 bar ±10% (DVM70xP01)
9,5 bar ±10% (DVM95xP01)

Visual Differential Indicator

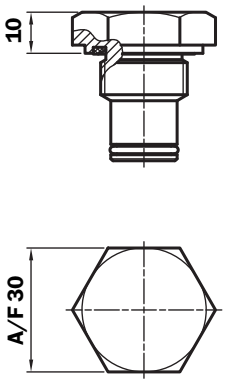
Materials:
- Body: Brass
- Internal parts: Brass - Nylon
- Seals: HNBR - FPM

Technical data:
- Indicator type: Visual differential indicator
- 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 fluids in according to ISO 2943

HYDRAULIC SYMBOL



T2



Indicator plug

Materials:

• Body:	Phosphated Steel
• Seals:	T2H (green): HNBR T2V (black): FPM T2E (purple): EPDM T2F (blue): MFQ

Ordering information DE - DL - DV

Series	1	2	3	4	5	6	7
DE							
Example:	**DE**	**A**	**20**	**H**	**A**	**50**	**P01**
DL							
Example:	**DL**	**A**	**20**	**H**	**A**	**52**	**P01**
DT							
Example:	**DT**	**A**	**20**	**H**	**F**	**70**	**P01**

Series	1	2	3	4	7
DV					
Example:	**DV**	**A**	**20**	**H**	**P01**

Series	1	4
T2		
Example:	**T2**	**F**

1 - Series

DE	Electrical indicator
DL	Electrical/Visual indicator
DT	Electronic indicator
DV	Visual indicator
T2	Indicator plug

2 - Type

DE series

A	Standard type
M	With wired connector

DL series

A	Standard type
E	Standard type for High power supply

DT series

A	Standard type

DV series

A	Automatic reset
M	Manual reset

3 - Setting pressure

12	1,5 bar
20	2 bar
50	5 bar
70	7 bar
95	9,5 bar

4 - Seals

H	HNBR
	On request

5 - Thermostat (excluded for DV)

A	Without thermostat
F	With thermostat (Normally open up to 30°C) Option available only for DEM-DTA series

6 - Electrical connection (excluded for BV)

DEA - DLE series

50	EN 175301-803 connector

DEM series

10	AMP Superseal series 1,5 (Normally open contacts)
20	AMP Timer Junior (Normally open contacts)
30	Deutsch DT-04-2-P (Normally open contacts)
35	Deutsch DT-04-3-P (Change over contacts)
	On request

DLX series

51	EN 175301-803 clear connector with 24 V lamps
52	EN 175301-803 clear connector with 110 V lamps
71	M12 IEC 61076-2-101 clear connector with 24 V lamps

DTA series

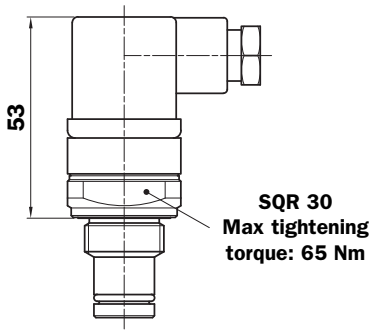
70	M12 IEC 61076-2-101 connector

7 - Option

P01	MP Filtri standard
Pxx	Customer request

STAINLESS STEEL DIFFERENTIAL INDICATORS

DEX



Available setting:
1,2 bar ±10% (DEX12xA50P01)
2 bar ±10% (DEX20xA50P01)
5 bar ±10% (DEX50xA50P01)
7 bar ±10% (DEX70xA50P01)
9,5 bar ±10% (DEX95xA50P01)

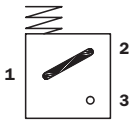
Electrical Differential Indicator

Materials:
- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: HNBR - MFQ

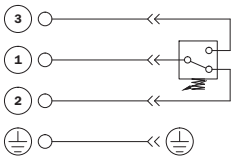
Technical data:
- Indicator type: Electrical differential indicator
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

Electrical data:
- Resistive load: 0,2 A / 115 VDC
- Electrical connections: 50 - EN 175301-803
- Protection degree: IP 66 in according to EN 60529 IP 69K in according to ISO 20653

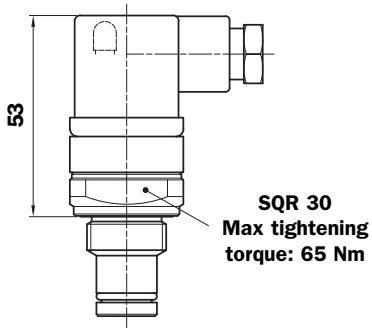
HYDRAULIC SYMBOL



ELECTRICAL SYMBOL



DLX



Available setting:
1,2 bar ±10% (DLX12xAxxP01)
2 bar ±10% (DLX20xAxxP01)
5 bar ±10% (DLX50xAxxP01)
7 bar ±10% (DLX70xAxxP01)
9,5 bar ±10% (DLX95xAxxP01)

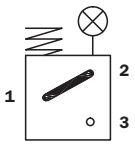
Electrical/Visual Differential Indicator

Materials:
- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: HNBR - MFQ

Technical data:
- Indicator type: Electrical differential indicator
- 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 fluids in according to ISO 2943

Electrical data:
- Resistive load: 51: 0,8 A / 24 VDC 52: 0,2 A / 115 VDC
- Electrical connections: 51 - EN 175301-803 (24 VDC lamps) 52 - EN 175301-803 (110 VDC lamps)
- Protection degree: IP 66 in according to EN 60529 IP 69K in according to ISO 20653

HYDRAULIC SYMBOL



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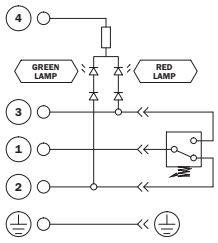
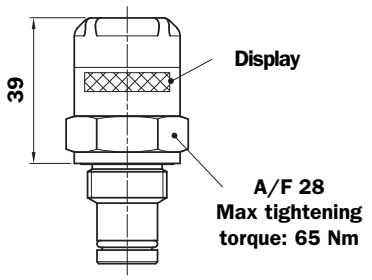


DVX



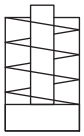
Available setting:
1,2 bar ±10% (DVX12xP01)
2 bar ±10% (DVX20xP01)
5 bar ±10% (DVX50xP01)
7 bar ±10% (DVX70xP01)
9,5 bar ±10% (DVX95xP01)

Visual Differential Indicator

Materials:
- Body: AISI 316L
- Internal parts: AISI 316L - Nylon
- Seals: HNBR - MFQ

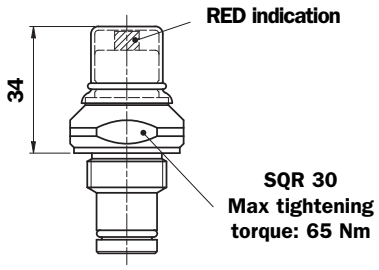
Technical data:
- Indicator type: Visual differential indicator with automatic reset
- Max working pressure: 420 bar
- Proof pressure: 630 bar
- Burst pressure: 1260 bar
- Working temperature: From -25°C to +110°C
- Compatibility with fluids: Mineral oils, Synthetic fluids HFA, HFB, HFC fluids in according to ISO 2943

HYDRAULIC SYMBOL



STAINLESS STEEL DIFFERENTIAL INDICATORS

DVY



Available setting:
1,2 bar ±10% (DVY12xP01)
2 bar ±10% (DVY20xP01)
5 bar ±10% (DVY50xP01)
7 bar ±10% (DVY70xP01)
9,5 bar ±10% (DVY95xP01)

Visual Differential Indicator

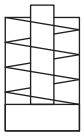
Materials:

• Body:	AISI 316L
• Internal parts:	AISI 316L - Aluminium
• Seals:	HNBR - MFQ

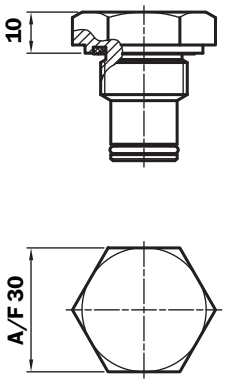
Technical data:

• Indicator type:	Visual differential indicator
• 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 fluids in according to ISO 2943

HYDRAULIC SYMBOL



X2



Indicator plug

Materials:

• Body:	Stainless Steel AISI316
• Seals:	T2H (green): HNBR T2V (black): FPM T2E (purple): EPDM T2F (blue): MFQ

Notes

Ordering information DE - DL - DV

Series	1	2	3	4	5	6	7
DE							
Example:	**DE**	**X**	**20**	**H**	**A**	**50**	**P01**

Series	1	2	3	4	5	6	7
DL							
Example:	**DL**	**X**	**20**	**H**	**A**	**52**	**P01**

Series	1	2	3	4	7
DV					
Example:	**DV**	**X**	**20**	**H**	**P01**

Series	1	4
X2		
Example:	**X2**	**F**

1 - Series

DE	Electrical indicator
DL	Electrical/Visual indicator
DV	Visual indicator
X2	Indicator plug

2 - Type

X	Standard type
Y	Optional type

3 - Setting pressure

12	1,5 bar
20	2 bar
50	5 bar
70	7 bar
95	9,5 bar

4 - Seals

H	HNBR
F	MFQ
	On request

5 - Thermostat (excluded for DV)

A	Without thermostat

6 - Electrical connection (excluded for DV)

DEX series

50	EN 175301-803 connector

DLA series

51	EN 175301-803 clear connector with 24 V lamps
52	EN 175301-803 clear connector with 110 V lamps
71	M12 IEC 61076-2-101 clear connector with 24 V lamps

7 - Option

P01	MP Filtri standard
Pxx	Customer request

Comparative table OLD - NEW code

VACUUM INDICATORS

Old code	New code
E0	VED20AA50P01
E0P01	VEB21AA50P01
E1	VEC20AA50P01
E1P01	VEA21AA50P01
E1P02	VEA21AA05P01
-	-
-	VVS16P01
VP01	VVR16P01
VOP01	VVA16P01
VSP01	VVB16P01

BAROMETRIC INDICATORS

Old code	New code
FE08H1AP01	BEA08HA50P01
FE08H1BP01	BLA08HA51P01
FE15H1AP01	BEA15HA50P01
FE15H1BP01	BLA15HA51P01
FE15H1DP01	BLA15HA53P01
FE15H1EP01	BEM15HA41P01
FE20H1AP01	BEA20HA50P01
FE20H1BP01	BLA20HA51P01
FE20H1CP01	BLA20HA52P01
FE20H1DP01	BLA20HA53P01
FE20H1EP01	BEM20HA41P01
FE25H1AP01	BEA25HA50P01
FE25H1BP01	BLA25HA51P01
VP15AAP01	BVP15HP01

Old code	New code
VP15AMP01	BVQ15HP01
VP20AAP01	BVP20HP01
VP20AMP01	BVQ20HP01
-	-
VRP01	BVA14P01
VR25P01	BVA25P01
V1P01	BVR14P01
-	BVR25P01

STAINLESS STEEL DIFFERENTIAL INDICATORS

Old code	New code
K7X1HP01	DLX50HA51P01
K8X1HP01	DLX70HA51P01
-	-
N7X	DEX50HA50P01
N7XEP01	DEX50EA50P01
N8X	DEX70HA50P01
N8XEP01	DEX70EA50P01

Old code	New code
VB6FP01	DVY20FP01
VB6HP01	DVY20HP01
VB7FP01	DVY50FP01
VB7HP01	DVY50HP01
VB7VP01	DVY50VP01
VB8EP01	DVY70EP01
VB8FP01	DVY70FP01
VB8HP01	DVY70HP01
-	-
1VX	DVX12HP01 - DVX12VP01
V6X	DVX20HP01 - DVX20VP01
V7X	DVX50HP01 - DVX50VP01
V7XE	DVX50EP01
V8X	DVX70HP01 - DVX70VP01
V8XE	DVX70EP01

DIFFERENTIAL INDICATORS

Old code	New code
1E	DLE12HA50P01 - DLE12VA50P01
E6	DLE20HA50P01 - DLE20VA50P01
E6E	DLE20EA50P01
E6H	DLE20HA50P01
E7	DLE50HA50P01 - DLE50VA50P01
E7E	DLE50EA50P01
E7H	DLE50HA50P01
E8	DLE70HA50P01 - DLE70VA50P01
E8E	DLE70EA50P01
E8H	DLE70HA50P01
E9	DLE95HA50P01 - DLE95VA50P01
E9E	DLE95EA50P01
E9H	DLE95HA50P01
-	-
J1	DLE12HF50P01 - DLE12VF50P01
J6	DLE20HF50P01 - DLE20VF50P01
J7	DLE50HF50P01 - DLE50VF50P01
J8	DLE70HF50P01 - DLE70VF50P01
J9	DLE95HF50P01 - DLE95VF50P01
-	-
KR21HP01	DLA12HA51P01
KR21VP01	DLA12VA51P01
KR31HP01	DLA30HA51P01
KR61HP01	DLA20HA51P01
KR61VP01	DLA20VA51P01
KR62HP01	DLA20HA52P01
KR62VP01	DLA20VA52P01
KR71HP01	DLA50HA51P01
KR71VP01	DLA50VA51P01
KR72HP01	DLA50HA52P01
KR72VP01	DLA50VA52P01
KR81HP01	DLA70HA51P01
KR81VP01	DLA70VA51P01
KR82HP01	DLA70HA52P01
KR91HP01	DLA95HA51P01
-	-
NE2HTP01	DTA12HF70P01
NE2VSP01	DTA12VF70P01
NE6HSP01	DTA20HF70P01
NE6HTP01	DTA20HF70P01
NE6VSP01	DTA20VF70P01
NE6VTP01	DTA20VF70P01
NE7HSP01	DTA50HF70P01
NE7HTP01	DTA50HF70P01
NE7VSP01	DTA50VF70P01
NE7VTP01	DTA50VF70P01
NE8HSP01	DTA70HF70P01
NE8HTP01	DTA70HF70P01
NE8VSP01	DTA70VF70P01
NE8VTP01	DTA70VF70P01
NE9VTP01	DTA95VF70P01

Old code	New code
NM6HA11P01	DEM20HA10P01
NM6HA31P01	DEM20HA30P01
NM6HA36P01	DEM20HA31P01
NM7HA11P01	DEM50HA10P01
NM7HA21P01	DEM50HA20P01
NM7HA31P01	DEM50HA30P01
NM7HA32P01	DEM50HA35P01
NM7HC32P01	DEM50HF35P01
NM7VA11P01	DEM50VA10P01
NM7VC11P01	DEM50VF10P01
NM8HA11P01	DEM70HA10P01
NM8HA31P01	DEM70HA30P01
NM8HA36P01	DEM70HA32P01
-	-
NR2HP01	DEA12HA50P01
NR2VP01	DEA12VA50P01
NR6EP01	DEA20EA50P01
NR6HP01	DEA20HA50P01
NR6VP01	DEA20VA50P01
NR7HP01	DEA50HA50P01
NR7VP01	DEA50VA50P01
NR8EP01	DEA70EA50P01
NR8HP01	DEA70HA50P01
NR8VP01	DEA70VA50P01
NR9HP01	DEA95HA50P01
NR9VP01	DEA95VA50P01
-	-
U3HP01	DVM30HP01
U6HP01	DVM20HP01
U6VP01	DVM20VP01
U7HP01	DVM50HP01
U7VP01	DVM50VP01
U8VP01	DVM70VP01
-	-
1V	DVA12HP01 - DVA12VP01
V6	DVA20HP01 - DVA20VP01
V6E	DVA20EP01
V6H	DVA20HP01
V7	DVA50HP01 - DVA50VP01
V7E	DVA50EP01
V7H	DVA50HP01
V8	DVA70HP01 - DVA70VP01
V8E	DVA70EP01
V9	DVA95HP01 - DVA95VP01
V9E	DVA95EP01
-	-
Z2HP01	DVM12HP01
Z2VP01	DVM12VP01
Z6EP01	DVM20EP01
Z6HP01	DVM20HP01
Z6VP01	DVM20VP01
Z7HP01	DVM50HP01
Z7VP01	DVM50VP01
Z7XHP01	DVY70HP01
Z8EP01	DVM70EP01
Z8HP01	DVM70HP01
Z8VP01	DVM70VP01
Z9HP01	DVM95HP01