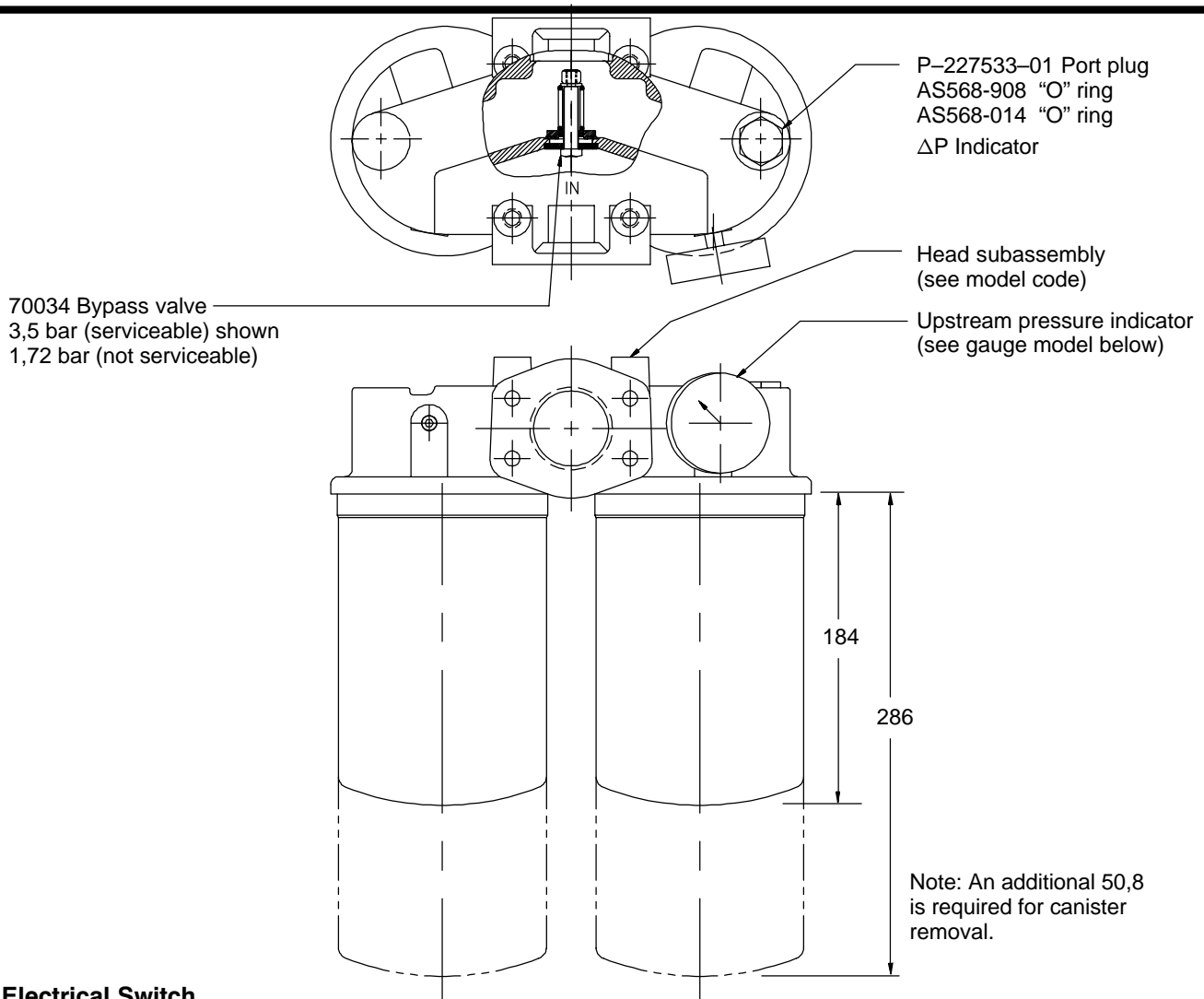


Vickers®

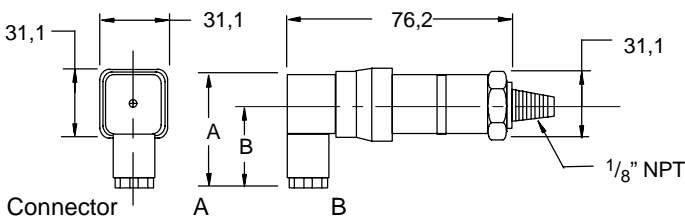
Service Data Filters

High Performance/Low Pressure Filter Flows to 454 L/min Pressure to 14 bar M022 Series



Electrical Switch

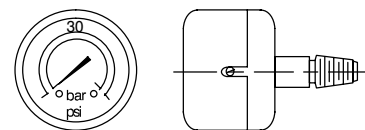
Switch 1,2 bar Brad Harrison	P-234117-01
Switch 2,4 bar Brad Harrison	P-234118-01
Switch 1,2 bar DIN	P-233051-01
Switch 2,4 bar DIN	P-233573-01



Connector	A	B
DIN 43650	48,2	34,9
Brad Harrison	59,2	45,7

Gauge

P-232965-01 0-4 bar color coded
P-232974-01 0-14 bar

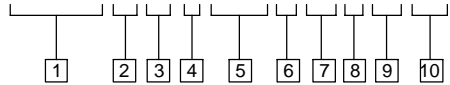


Eaton Hydraulics, Incorporated
14615 Lone Oak Road
Eden Prairie, MN 55344
U.S.A.



Housing Sub Assembly Model Code

M022 1 D 3 KN 1 B 2 R 05



1 Filter series
M022

2 Element collapse rating
1 – 10 bar

3 Port option
C – G 1¹/₄" to ISO 228
E – 1¹/₂" SAE 4-bolt split flange Code 61 with M12

4 Valve option
3 – Bypass set at 1,75 ± 0,21 bar
4 – Bypass set at 3,5 ± 0,35 bar

5 Indicator type (first designator)
Differential pressure indicators
C – Electrical/visual ΔP 1,0 ± 0,3 bar
D – Electrical/visual ΔP 2,5 ± 0,35 bar
F – Electrical/visual ΔP 1,0 ± 0,3 bar thermal lockout 38° C
G – Electrical/visual ΔP 2,5 ± 0,35 bar thermal lockout 38° C
J – No ΔP indicator plug and seal
K – Visual ΔP indicator with 1,0 ± 0,3 bar (15 ± 4 PSID) actuation & thermal lockout 38° C
L – Visual ΔP indicator with 2,5 ± 0,35 bar actuation & thermal lockout 38° C
M – Visual ΔP indicator w/ 2,5 ± 0,35 bar thermal lockout 38° C and surge control

5 Indicator type (first designator) (con't.)
Q – Electrical Δ P switch with 1,0 ± 0,3 bar actuation
R – Electrical Δ P switch w/ 2,5 ± 0,35 bar actuation
X – Electrical/visual ΔP 1,0 ± 0,3 bar thermal lockout 38° C) & surge control
Y – Electrical/visual ΔP 2,5 ± 0,35 bar thermal lockout 38° C & surge control

Upstream pressure indicators for H022

- 1 - No indicator – pipe plug installed
- 2 - 0 to 14 bar pressure gauge
- 4 - 0 to 4 bar pressure gauge
- 6 - Electrical switch, 1,24 bar - Brad Harrison
- 7 - Electrical switch, 2,5 bar - Brad Harrison
- 8 - Electrical switch, 1,24 bar - DIN 43650
- 9 - Electrical switch, 2,5 bar - DIN 43650

Second designator
(Electrical receptacle style)
B – 5 pin Brad Harrison (41512)
H – DIN 43650 or Hirschman receptacle (GSA plug) 3 poles plus ground
N – No receptacle – Use with (J, K, L)

6 Brackets
1 – No bracket (order P–233052–01)

7 Seal material
B – Buna–N

8 Canister length mm
1 – 184
2 – 286
NOTE: Water removal element only available in length 2.
S50 -Head sub-assembly only (No element, bowl or indicator)

9 Element construction
R – R–pak (3,5,10 & 20)
W - W-Pak, Water Removal (grade 10)

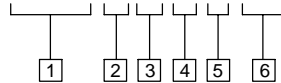
10 Fluid cleanliness ratings

Code	Target fluid cleanliness level	Element construction
03	16/14/12	R-Pak
05	18/16/14	R-Pak
10	20/18/15	R-Pak W-Pak
20	22/19/16	R-Pak

NOTE: Filter head is furnished with two ports drilled, tapped and plugged for gage or switch option.
NOTE: Plugged ΔP port machined for indicators.

Element Model Code

V021 1 B 2 R 05



1 Filter element
V021 – For use with M021, M022, M023 & OFRS60 series filters
W021 – Water removal element for use with M021, M022, M023 & OFRS60 series filters

2 Element collapse rating
1 – 10 bar

3 Seal material
B – Buna–N

4 Canister length mm
1 – 184
2 – 286
NOTE: Water removal element only available in length 2.

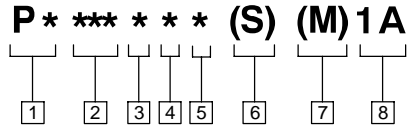
5 Element construction
R – R–pak (3,5,10 & 20)
W - W-Pak, Water Removal (grade 10)

6 Fluid cleanliness ratings

Code	Target fluid cleanliness level	Element construction
03	16/14/12	R-Pak
05	18/16/14	R-Pak
10	20/18/15	R-Pak W-Pak
20	22/19/16	R-Pak

The table above assumes limited ingress and a single pass of pump flow through the element. For more detailed information, please consult Vickers Guide to Systemic Contamination Control or contact your local Vickers Distributor.

Differential Pressure Indicator Model Code



1 Style option

PV – Visual
PE – Electrical
PD – Electrical/Visual

2 Actuation pressure option

015 – $1 \pm 0,3$ bar
035 – $2,4 \pm 0,35$ bar
070 – $4,8 \pm 0,5$ bar
(not an option with 330/340 filters)
090 – $6,2 \pm 0,7$ bar
(330/340 filters only)
100 – $6,9 \pm 0,85$ bar

3 Thermal lockout option

N – No thermal lockout
T – Thermal lockout
standard TLO= $80 \pm 20^\circ$ F
($27 \pm 11^\circ$ C)

4 Seal option

1 – Buna-N
2 – Viton

5 Receptacle option

B – 5-pin Brad Harrison (41512)
(not an option with visual indicator)
H – Hirschman (DIN 43650)
(not an option with visual indicator)
N – No receptacle (use with visual indicator)

6 Surge control option

None – No surge control
S – Surge control
(not an option with 330/340 filters)

7 Filter series option

None – Standard
M – 330/340 Filters only

8 Revision level

1A – Original design series (1) and
revision (A)

