

Model Code: Standard Clogging Indicators

VR 2 D . X /-V-L24

Category

- VMF = Return line (*static*) indicator; connection G 1/8
- VR = Return line (*static*) indicator; connection G 1/2
- VM = Differential pressure indicator; up to 3000 psi (210 bar) operating pressure
- VD = Differential pressure indicator; up to 6000 psi (420 bar) operating pressure
- VL = Differential pressure indicator; up to 360 psi (25 bar) operating pressure

Pressure setting

- 1 = 15 psi (1 bar) (*optional, for use in lube applications*) - (not available with all types- Consult HYDAC)
- 2 = 29 psid (2 bar) (*standard, for use on return line filters*)
- 5 = 72 psid (5 bar) (*standard, for use on pressure filters, except DFDK & DFZ*)
- 8 = 116 psid (8 bar) (*standard, on DFDK & DFZ filters*) - (not available with all types- Consult HYDAC)

Type

- B = Visual pop-up with automatic reset
- BF = Visual, mobile applications
- BM = Visual pop-up with manual reset
- C = Electrical switch
- CD = Electrical switch with Deutsch plug (*DT 04-2P*)
- D = Electric switch and Visual (*light - 24 VDC, 110 VAC*)
- E = Pressure gauge, horizontal (*static only*)
- ES = Pressure gauge, vertical
- F = Pressure switch, mobile applications
- FD = Pressure switch with Deutsch plug (*DT 04-2P*), mobile applications
- GC = Electronic analog (*4-20 mA or 1-10 V*) / pressure switch 75% and 100% trips (*VD & VR only*)
- GW = Electronic analog (*4-20 mA or 1-10 V*) / pressure switch 75% and 100% trips & bypass monitoring (*VL only*)
- J = Electric switch - Brad Harrison 5-pin mini connector
- J4 = Electric switch - Brad Harrison 4-pin micro connector
- LE = Electric pressure switch / visual pop-up button with 100% switching contact
- LEM = Electric pressure switch / visual pop-up button with 100% switching contact and M12x1 plug, mobile applications
- LZ = Electric pressure switch / visual pop-up button with 75% and 100% switching contact
- M = Electrical, ground switching
- UE = Vacuum pressure gauge, horizontal
- UF = Vacuum switch

Modification Number

- X = The latest version is always supplied

Supplementary Details

- T100 = Lockout below 100°F (VM, VD – types C, D, J and J4 only)
- 30C = Cold start suppression of switching outputs up to 30°C ±5°C
(*only for C, D, LZ indicators; DC voltage supply only – max. 24 Volt; C and D indicators only for VD and VM; on D and LZ indicators, contacts must be wired N/O only*)
- L... = Light with corresponding voltage (*24, 48, 110, 230 Volt*)] only for type “D”
- LED = 2 LEDs up to 24 Volt
- OE = N/C function
- SO135 = Indicator suitable for PLC controls (*Gold-Crosspoint contacts*)
- W = Suitable for oil/water emulsions (HFA, HFC)
- V = Fluorocarbon elastomer (FKM), suitable for phosphate esters (HFD-R) and biodegradable oils (*must be specified for type “GW”*)
Nitrile (NBR) is standard. Ethylene propylene (EPDM, code EPR) available upon request.
- 2M0 = Two contacts (*male*), 2-pin Deutsch connector, no connector cable
- 2M20 = Two contacts (*male*), 2-pin Deutsch connector, 200 mm connector cable

Supplementary Details for “GC” type

- SP = Analog signal: output 1-10 V] if SP or SQ are not specified “current sink” model supplied
- SQ = Analog signal: output 4-20 mA (*current source*)
- 113 = N/O function - pressure peak suppression up to 10 sec.
Cold start suppression of switching outputs (*PNP technique, positive switching*) up to 25°C] **Must be specified!**
Others on request
- 123 = N/C function - pressure peak suppression up to 10 sec.
Cold start suppression of switching outputs (*PNP technique positive switching*) up to 25°C
- 30C = Cold start suppression of switching outputs up to 30°C (*other temperatures on request*)
- LED = 3 LED's (*green, yellow, red*) in terminal box
- PF = Floating switching outputs (due to relay in the plug)

Supplementary Details to “GW” type

- 113 = N/O function - pressure peak suppression up to 10 sec.
Cold start suppression of switching outputs (*PNP technique positive switching*) up to 25°C] **Must be specified!**
Others on request
- 123 = N/C function - pressure peak suppression up to 10 sec.
Cold start suppression of switching outputs (*PNP technique positive switching*) up to 25°C

Supplementary Details for “LZ” type

- AV = Plug and connector to AUDI, VW specification
- BO = Plug and connector to BMW, Opel, Ford specification
- BO-LED= Same as BO, but with progressive LED strip
- CN = Electrical connection, 1 connector DIN 43651 with 3 LEDs (to CNOMO specification NF E 48-700)
- DB = Electrical connection, 1 connector to DIN 43651 with 3 LEDs (to Daimler-Benz and BMW specification)
- D4C = Plug and connector to Daimler-Chrysler specification with cold start suppression 30 °C

Supplementary Details to “ATEX” type

- 2GC = For visual indicator type “B” with ATEX certificate
- 2GBC = For electrical indicator type “C” with ATEX certificate (*the switch used in the indicator is a passive component according to EN 50020 and can therefore be used in intrinsically safe circuits as simple apparatus in accordance with EN 60079-14*)
- 2GEXDIIC = For electrical indicator suitable for use in Zone 1 (Category 2), gas atmosphere, Category d (Flameproof Enclosure), Explosive subdivision IIC to ATEX directive
- EX2G = Ex-protection type for the return line indicator type “C”

Supplementary Details for “UL” and “CSA” approval

- cRUus = For electrical differential indicator type “C” and “D” with UL Underwriter’s Recognition
- CSA = For electrical return line indicator type “C” with CSA approval

Notes: 1. Old style indicators for filters HF2P / HF3P / HF4P - pre 2008 (Example **Model Code: B2210BHF**), contact HYDAC for further information.

2. VMF indicators of type B, LE, LZ, and C I-EX2G, must include “V” at the end of the Model Code if Fluorocarbon elastomer (FKM) seals are required. All other VMF indicators come with Fluorocarbon elastomer (FKM) seals as a standard (*no Supplementary Detail required*).