

## Clogging indicator Series

### ● Overview

The clogging transmitter is primarily used to monitor the clogging status of filter elements. By emitting an alarm signal, it alerts operators to clean or replace the filter elements in a timely manner, thereby ensuring the proper operation of the system and the safety of the equipment. It is widely utilized in hydraulic, lubrication, water treatment, compressed air, and other systems.

### ● APPLICATION

**1. Hydraulic system:** It can be installed at the inlet and outlet of the hydraulic pump inlet filter, return oil, and high-pressure filter. When the hydraulic system is in operation, the filter element intercepts contaminants, causing it to gradually clog and resulting in a pressure difference between the inlet and outlet. When the pressure difference reaches the set value of the signal transmitter, it will send a signal to prevent the system pressure loss from increasing or the pump body from being damaged due to filter element blockage.

**2. Lubricating oil system:** It is often used for monitoring the lubricating oil filter elements of equipment such as steam turbines, generators, and large motors. It can ensure the cleanliness of the lubricating oil, prevent impurities from entering components such as bearings and causing wear, and guarantee the lubrication effect and normal operation of the equipment.

**3. Water treatment system:** It is generally installed at the inlet and outlet of reverse osmosis filters and precision filters. It can monitor the clogging of filter elements, ensure the efficiency and quality of water treatment, and prevent the clogging of filter elements from affecting the water treatment effect, resulting in substandard effluent quality or operational failures of water treatment equipment.

**4. Compressed air system:** Used for monitoring the filter elements of compressed air filters. It can prevent the deterioration of compressed air quality due to filter element clogging, which affects the normal operation of pneumatic equipment. At the same time, it can also prevent the air compressor from being overloaded due to excessive back pressure, ensuring the stable operation of the compressed air system.

### ● INSTALLATION

1. Prioritize installation at the pressure difference measurement points at the inlet and outlet of the filter element, and ensure that the location is convenient for observation, operation and wiring, and is far away from vibration sources and high-temperature areas.

2. Ensure good sealing during installation to prevent leakage from affecting differential pressure detection. Threaded interfaces should be tightened as required, and flange connections should be aligned with the sealing surfaces.

3. Match the system medium, pressure and temperature parameters. The rated pressure and temperature of the transmitter must be higher than the system's working values to prevent damage.

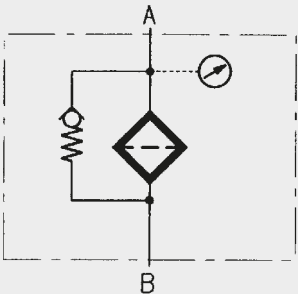
4. Electrical wiring must comply with the standards, distinguish the polarity of signal lines and power lines, keep away from strong electrical interference, and do a good job of waterproofing and dustproofing after wiring.

## ● MAINTENANCE

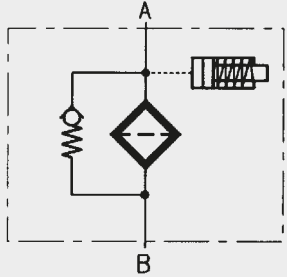
- 1.Regularly clean the transmitter housing and interfaces to remove oil stains and dust to prevent impurities from affecting the differential pressure sensing or signal transmission.
- 2.Calibrate the differential pressure setting value according to the system operation cycle (it is recommended to do so every 3 to 6 months) to ensure the accuracy of the alarm threshold, which can be verified through simulated differential pressure tests.
- 3.When an alarm signal occurs, first check if the filter element is truly clogged rather than if the signal transmitter is faulty to avoid misjudgment. If the transmitter has no signal or gives a false alarm, check whether the wiring and sensors are damaged.
- 4.Before restarting the system after a long period of downtime, first check the status of the transmitter to prevent the medium from solidifying or impurities from depositing, which may cause jamming. Replace it in time after reaching its service life (usually 2 to 5 years) to avoid aging and failure.

## Product specification

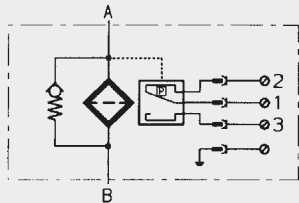
Pressure indicator

|                                                                                     |                    |                              |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------|------------------------------|---------------------------------------------------------------------------------------|
|  | Selection code     | B                            |  |
|                                                                                     | Product type       | Vacuum gauge indicator       |                                                                                       |
|                                                                                     | Pressure setting   | 0 bar to +10 bar             |                                                                                       |
|                                                                                     | Working pressure   | 7 bar                        |                                                                                       |
|                                                                                     | Temperature range  | -20 °C to +60 °C             |                                                                                       |
|                                                                                     | Connection thread  | G 1/8                        |                                                                                       |
|                                                                                     | Maximum torque     | 10 Nm                        |                                                                                       |
|                                                                                     | Applicable voltage | -                            |                                                                                       |
|                                                                                     | Applicable type    | Online detection of pressure |                                                                                       |
|                                                                                     | Product model      | FC 2.4 E.1                   |                                                                                       |

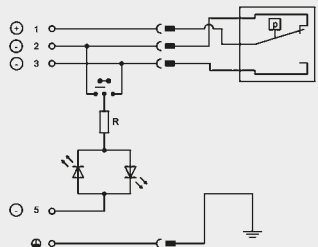
Pressure indicator

|                                                                                     |                    |                              |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------|------------------------------|---------------------------------------------------------------------------------------|
|  | Selection code     | BM                           |  |
|                                                                                     | Product type       | Visual (Automatic reset)     |                                                                                       |
|                                                                                     | Pressure setting   | 1.2 bar, 2.4 bar ±10%        |                                                                                       |
|                                                                                     | Working pressure   | 7 bar                        |                                                                                       |
|                                                                                     | Temperature range  | -10 °C to +100 °C            |                                                                                       |
|                                                                                     | Connection thread  | G 1/8                        |                                                                                       |
|                                                                                     | Maximum torque     | 10 Nm                        |                                                                                       |
|                                                                                     | Applicable voltage | -                            |                                                                                       |
|                                                                                     | Applicable type    | Online detection of pressure |                                                                                       |
|                                                                                     | Product model      | FC 1.2 EM.0                  |                                                                                       |

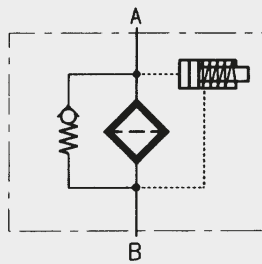
### Pressure indicator

|                                                                                   |                    |                              |                                                                                     |
|-----------------------------------------------------------------------------------|--------------------|------------------------------|-------------------------------------------------------------------------------------|
|  | Selection code     | C                            |  |
|                                                                                   | Product type       | Electrical indicator         |                                                                                     |
|                                                                                   | Pressure setting   | 1.2 bar, 2.4 bar ±10%        |                                                                                     |
|                                                                                   | Working pressure   | 40 bar                       |                                                                                     |
|                                                                                   | Temperature range  | -30 °C to +100 °C            |                                                                                     |
|                                                                                   | Connection thread  | G 1/8                        |                                                                                     |
|                                                                                   | Maximum torque     | 10 Nm                        |                                                                                     |
|                                                                                   | Applicable voltage | 230 V                        |                                                                                     |
|                                                                                   | Applicable type    | Online detection of pressure |                                                                                     |
|                                                                                   | Product model      | FC 2.4 C.1                   |                                                                                     |

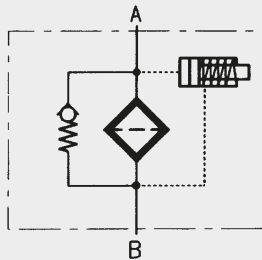
### Pressure indicator

|                                                                                    |                    |                                  |                                                                                      |
|------------------------------------------------------------------------------------|--------------------|----------------------------------|--------------------------------------------------------------------------------------|
|  | Selection code     | CL                               |  |
|                                                                                    | Product type       | Visual and electrical indicators |                                                                                      |
|                                                                                    | Pressure setting   | 1.2 bar, 2.4 bar ±10%            |                                                                                      |
|                                                                                    | Working pressure   | 40 bar                           |                                                                                      |
|                                                                                    | Temperature range  | -30 °C to +100 °C                |                                                                                      |
|                                                                                    | Connection thread  | G 1/8                            |                                                                                      |
|                                                                                    | Maximum torque     | 33 Nm                            |                                                                                      |
|                                                                                    | Applicable voltage | 24 V                             |                                                                                      |
|                                                                                    | Applicable type    | Online detection of pressure     |                                                                                      |
|                                                                                    | Product model      | FC 2.4 CL.1-LED                  |                                                                                      |

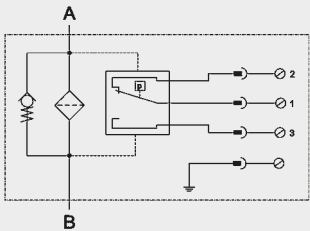
### Differential pressure indicator

|                                                                                     |                    |                                        |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------|----------------------------------------|---------------------------------------------------------------------------------------|
|  | Selection code     | EB                                     |  |
|                                                                                     | Product type       | Visual (Automatic reset)               |                                                                                       |
|                                                                                     | Pressure setting   | 2.4 bar, 3.4 bar ±10%                  |                                                                                       |
|                                                                                     | Working pressure   | 420 bar                                |                                                                                       |
|                                                                                     | Temperature range  | -30 °C to +100 °C                      |                                                                                       |
|                                                                                     | Connection thread  | 3/4 -16 UNF                            |                                                                                       |
|                                                                                     | Maximum torque     | 100 Nm                                 |                                                                                       |
|                                                                                     | Applicable voltage | -                                      |                                                                                       |
|                                                                                     | Applicable type    | Online differential pressure detection |                                                                                       |
|                                                                                     | Product model      | FC 3.4 EB.1                            |                                                                                       |

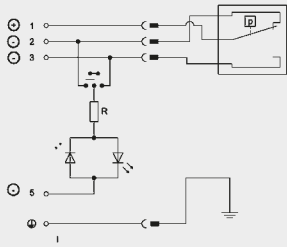
### Differential pressure indicator

|                                                                                     |                    |                                        |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------|----------------------------------------|---------------------------------------------------------------------------------------|
|  | Selection code     | E                                      |  |
|                                                                                     | Product type       | Visual (Manual reset)                  |                                                                                       |
|                                                                                     | Pressure setting   | 2.4 bar, 3.4 bar ±10%                  |                                                                                       |
|                                                                                     | Working pressure   | 420 bar                                |                                                                                       |
|                                                                                     | Temperature range  | -30 °C to +100 °C                      |                                                                                       |
|                                                                                     | Connection thread  | 3/4 -16 UNF                            |                                                                                       |
|                                                                                     | Maximum torque     | 100 Nm                                 |                                                                                       |
|                                                                                     | Applicable voltage | -                                      |                                                                                       |
|                                                                                     | Applicable type    | Online differential pressure detection |                                                                                       |
|                                                                                     | Product model      | FC 2.4 E.0                             |                                                                                       |

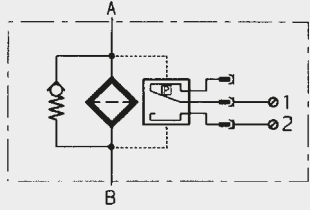
## Differential pressure indicator

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|-----------------------------------------------------------------------------------|--------------------|----------------------------------------|-------------------------------------------------------------------------------------|
|  | Selection code     | R                                      |  |
|                                                                                   | Product type       | Electrical indicator                   |                                                                                     |
|                                                                                   | Pressure setting   | 2.4 bar, 3.4 bar $\pm 10\%$            |                                                                                     |
|                                                                                   | Working pressure   | 210 bar                                |                                                                                     |
|                                                                                   | Temperature range  | -30 °C to +100 °C                      |                                                                                     |
|                                                                                   | Connection thread  | 3/4 -16 UNF                            |                                                                                     |
|                                                                                   | Maximum torque     | 100 Nm                                 |                                                                                     |
|                                                                                   | Applicable voltage | 24 V                                   |                                                                                     |
|                                                                                   | Applicable type    | Online differential pressure detection |                                                                                     |
|                                                                                   | Product model      | FC 2.4 R.0                             |                                                                                     |

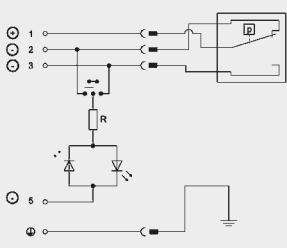
## Differential pressure indicator

|                                                                                    |                    |                                        |                                                                                      |
|------------------------------------------------------------------------------------|--------------------|----------------------------------------|--------------------------------------------------------------------------------------|
|  | Selection code     | RL                                     |  |
|                                                                                    | Product type       | Visual and electrical indicators       |                                                                                      |
|                                                                                    | Pressure setting   | 2.4 bar, 3.4 bar $\pm 10\%$            |                                                                                      |
|                                                                                    | Working pressure   | 210 bar                                |                                                                                      |
|                                                                                    | Temperature range  | -30 °C to +100 °C                      |                                                                                      |
|                                                                                    | Connection thread  | 3/4 -16 UNF                            |                                                                                      |
|                                                                                    | Maximum torque     | 100 Nm                                 |                                                                                      |
|                                                                                    | Applicable voltage | 24 V                                   |                                                                                      |
|                                                                                    | Applicable type    | Online differential pressure detection |                                                                                      |
|                                                                                    | Product model      | FC 3.4 RL.1                            |                                                                                      |

## Differential pressure indicator

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|-------------------------------------------------------------------------------------|--------------------|----------------------------------------|---------------------------------------------------------------------------------------|
|  | Selection code     | M                                      |  |
|                                                                                     | Product type       | Electrical indicator                   |                                                                                       |
|                                                                                     | Pressure setting   | 2.4 bar, 3.4 bar $\pm 10\%$            |                                                                                       |
|                                                                                     | Working pressure   | 420 bar                                |                                                                                       |
|                                                                                     | Temperature range  | -30 °C to +100 °C                      |                                                                                       |
|                                                                                     | Connection thread  | 3/4 -16 UNF                            |                                                                                       |
|                                                                                     | Maximum torque     | 100 Nm                                 |                                                                                       |
|                                                                                     | Applicable voltage | 24 V                                   |                                                                                       |
|                                                                                     | Applicable type    | Online differential pressure detection |                                                                                       |
|                                                                                     | Product model      | FC 2.4 M.0                             |                                                                                       |

## Differential pressure indicator

|                                                                                     |                    |                                        |                                                                                       |
|-------------------------------------------------------------------------------------|--------------------|----------------------------------------|---------------------------------------------------------------------------------------|
|  | Selection code     | ML                                     |  |
|                                                                                     | Product type       | Visual and electrical indicators       |                                                                                       |
|                                                                                     | Pressure setting   | 2.4 bar, 3.4 bar $\pm 10\%$            |                                                                                       |
|                                                                                     | Work pressure      | 420 bar                                |                                                                                       |
|                                                                                     | Temperature range  | -30 °C to +100 °C                      |                                                                                       |
|                                                                                     | Connection thread  | 3/4 -16 UNF                            |                                                                                       |
|                                                                                     | Maximum torque     | 100 Nm                                 |                                                                                       |
|                                                                                     | Applicable voltage | 24 V                                   |                                                                                       |
|                                                                                     | Applicable type    | Online differential pressure detection |                                                                                       |
|                                                                                     | Product model      | FC 3.4 ML.1                            |                                                                                       |