

# Control pressure switch FF 142



## Control pressure switch FF 142

Pressure ranges up to 40 bar  
 Ample wiring room  
 Simple calibration  
 2 SPDT's  
 Acc. to EN 60947  
 Rigid enclosure  
 Degree of Protection IP 55  
 Scale with bar and psi values

### Applications

The FF 142 Series is a pressure switch which has been standardized in a wide variety of industrial, commercial and sea-going applications to monitor or control the pressure of liquid or gaseous media:

- Pipelines
- Containers
- Pressure vessels
- Apparatus
- Process technology
- Pneumatics and hydraulics
- Refrigeration and heating plants
- Lubrication systems
- Pump motors for water supply to dwellings

### Function description

Turning the setting knob Pmax. changes both the upper and the lower switch points. By turning the differential spindle Dp only, the lower switch point is adjusted, while the upper setting remains unchanged.

### Construction

The standard FF 142 series are fitted in insulation enclosures, made of ABS. Large clear scales ease exact adjustment of upper switch point and switching differential. They are marked both in bar and in psi units. Scales are connected to the frame of the device and remain in place, when the cover is removed. Ample wiring room simplifies wiring.

## Type overview

### FF 142-.. DAH

with Perbunan diaphragm, standard enclosure, suitable for oil, water, air etc.

| Order reference | Upper switch pt. adjustable | Pressure diff. adjustable | Lower switch pt. adjustable | Max. pressure (bar) | Standard setting (bar) | Part No.   |
|-----------------|-----------------------------|---------------------------|-----------------------------|---------------------|------------------------|------------|
| FF 142-6 DAH    | 0.2 ... 1.5                 | 0.12 ... 0.5              | 0.1                         | 5                   | 0,8 / 1                | 1090500004 |
| FF 142-8 DAH    | 1 ... 8                     | 0.4 ... 2.4               | 0.1                         | 10,5                | 4 / 5                  | 1090500003 |
| FF 142-9 DAH    | 2 ... 21                    | 0.8 ... 6                 | 0.1                         | 25                  | 10 / 12                | 1090500002 |

## Type overview

### FF 142-.. AAC

Pressure switch with stainless steel bellows, standard enclosure  
 Suitable for ammonia and other aggressive media

| Order reference | Upper switch pt. adjustable | Pressure diff. adjustable | Lower switch pt. adjustable | max. pressure (bar) | Standard setting (bar) | Part No.   |
|-----------------|-----------------------------|---------------------------|-----------------------------|---------------------|------------------------|------------|
| FF 142-3 AAC    | -0.4 ... 8                  | 0,6 ... 3                 | -1                          | 25                  | 2 / 4                  | 1090500001 |
| FF 142-5 AAC    | 2 ... 22                    | 2 ... 9                   | 0.1                         | 30                  | 12 / 16                | 1090500005 |
| FF 142-10 AAC   | 5 ... 40                    | 2 ... 10                  | 0.1                         | 50                  | 21 / 25                | 1090500009 |

# Control pressure switch FF 142



## Control pressure switch FFg 142

Pressure ranges up to 40 bar  
 Ample wiring room  
 Simple calibration  
 2 SPDT's  
 Acc. to EN 60947  
 Die-cast aluminum enclosure  
 Degree of protection IP 55  
 Scale with bar and psi values

### Type overview

#### FFg 142-.. DAH

with Perbunan diaphragm, silumin (die-cast aluminum) enclosure, suitable for oil, water, air etc.

| Order reference | Upper switch pt. adjustable | Pressure diff. adjustable | Lower switch pt. adjustable | Max. pressure (bar) | Standard setting (bar) | Part No.   |
|-----------------|-----------------------------|---------------------------|-----------------------------|---------------------|------------------------|------------|
| FFg 142-6 DAH   | 0.2 ... 1.5                 | 0.12 ... 0,5              | 0.1                         | 5                   | 0,8 / 1                | 1090500025 |
| FFg 142-8 DAH   | 1 ... 8                     | 0.4 ... 2.4               | 0.1                         | 10.5                | 4 / 5                  | 1090500026 |
| FFg 142-9 DAH   | 2 ... 21                    | 0.8 ... 6                 | 0.1                         | 25                  | 10 / 12                | 1090500027 |

### Type overview

#### FFg 142-.. AAC

Pressure switch with stainless steel bellows, silumin enclosure  
 Suitable for ammonia and other aggressive media

| Order reference | Upper switch pt. adjustable | Pressure diff. adjustable | Lower switch pt. adjustable | Max. pressure (bar) | Standard setting (bar) | Part No.   |
|-----------------|-----------------------------|---------------------------|-----------------------------|---------------------|------------------------|------------|
| FFg 142-3 AAC   | -0.4 ... 8                  | 0.6 ... 3                 | -1                          | 25                  | 2 / 4                  | 1090500028 |
| FFg 142-5 AAC   | 2 ... 22                    | 2 ... 9                   | 0.1                         | 30                  | 12 / 16                | 1090500029 |
| FFg 142-10 AAC  | 5 ... 40                    | 2 ... 10                  | 0.1                         | 50                  | 21 / 25                | 1090500030 |

### Technical Data FF 142 / FFg 142

| Technical Data FF 142 / FFg 142 acc. to EN 60947                             |       |
|--|-------|
| Rated operational current I <sub>e</sub> AC 1<br>U <sub>e</sub> =230 V (1~)  | 16 A  |
| Rated operational current I <sub>e</sub> AC 15<br>U <sub>e</sub> =230 V (1~) | 6 A   |
| Rated operational current I <sub>e</sub> DC 13<br>U <sub>e</sub> = 230 V DC  | 0,1 A |

| Technical Data FF 142 / FFg 142 acc. to EN 60947                             |      |
|--|------|
| Rated operational current I <sub>e</sub> AC 1<br>U <sub>e</sub> =400 V (3~)  | 10 A |
| Rated operational current I <sub>e</sub> AC 15<br>U <sub>e</sub> =400 V (3~) | 4 A  |

| Technical Data enclosure FF 142                      |                 |
|--|-----------------|
| Protection<br>Acc. to DIN 40050/IEC 529              | IP 55           |
| Resistance of vibration<br>0 up to 1000 Hz           | 4 g             |
| Ambient temperature range                            | -50° C...+70° C |
| Ambient temperature range<br>With perbunan diaphragm | -30° C...+70° C |
| Contacts   | 2 SPDT's        |
| Weight<br>Approx.                                    | ca. 0,8 kg      |

| Technical Data enclosure FFg 142                     |                 |
|--|-----------------|
| Protection<br>Acc. to DIN 40050/IEC 529              | IP 65           |
| Vibration resistance<br>0 up to 1000 Hz              | 4 g             |
| Ambient temperature range                            | -50° C...+70° C |
| Ambient temperature range<br>With perbunan diaphragm | -30° C...+70° C |
| Contacts   | 2 SPDT's        |
| Weight<br>Approx.                                    | ca. 1.2 kg      |

# Control pressure switch FF 142

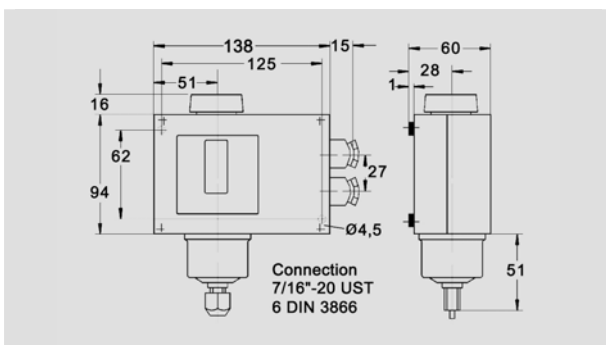


| Diaphragm media resistance FF 142 / FFg 142<br>Perbunan diaphragm  |                   |
|--|-------------------|
| Acetylene, Gasoline, Butane, Diesel, Natural gas, Petroleum, Ethylene glycol, Glycerol, Fuel oil, Urine, Carbon dioxide, Carbonic acid, Air, Mineral oils, Vegetable oil, Propane, Silicon oil, Nitrogen, Synthetic oils, Water, Distilled water, Hydrogen, Sea water, Steam | <b>resistance</b> |

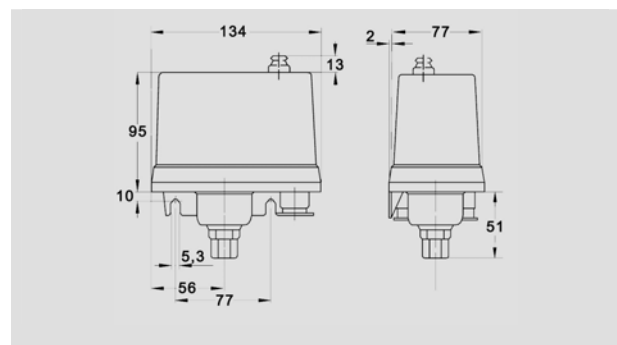
| Diaphragm media resistance FF 142 / FFg 142<br>Stainless steel bellows   |                   |
|--|-------------------|
| Acetone, Ammonia, Acetylene, Gasoline, Benzene, Butane, Butyl acetate, Butyl alcohol, Diesel, Dimethylbenzene, Natural gas, Petroleum, Ethylene glycol, Ethyl acetate, Glycerol, Fuel oil, Carbon dioxide, Carbonic acid, Cooling liquid, Air, Methyl chloride, Mineral oils, Ozone, Perchloroethylene, Vegetable oil, Phenolic acid, Propane, Oxygen, Sulfur dioxide, Nitrogen, Synthetic oils, Toluene, Trichlorethene, Water, Distilled water, Hydrogen, Sea water, Steam | <b>resistance</b> |

A detailed overview of diaphragm media resistance for all pressure switches can be found in the table on page 2.11

## Dimensions FF 142 / FFg 142

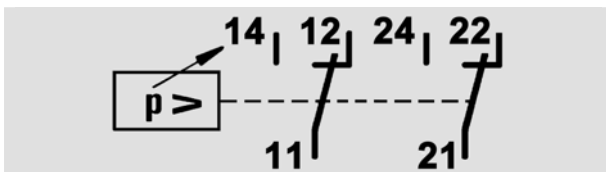


Control pressure switch **FF 142**



Control pressure switch **FFg 142**

## Circuit Diagrams FF 142 / FFg 142

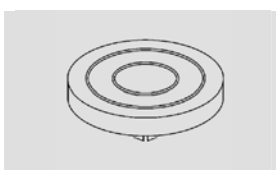


Pressure switch **FF 142 / FFg 142**

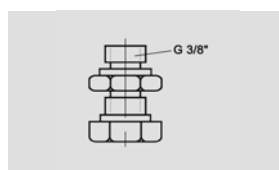
## Accessories Control pressure switch FF 142 / FFg 142

| Order reference | Description   | Weight in g | Part No    |
|-----------------|---|-------------|------------|
| H 124-88        | Blanking plugs and knobs<br>Plug 142                          | 4           | 1090401021 |
| R-AD 6          | Cable glands<br>Ermeto-steel connector, for Ø 6 mm steel tube | 100         | 1090501019 |
| R-AD 10-FN 43   | Ermeto- steel connector, for Ø 10 mm steel tube               | 100         | 1090401005 |
| H 124-114       | Gauge steel fitting Stahl, G 3/4" - G 1/2"                    | 180         | 1090501004 |
| H 124g-127      | Mounting plate  | 115         | 1090501006 |

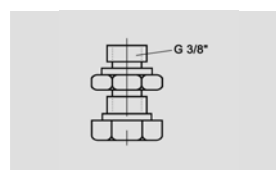
## Accessories Dimensions FF 142 / FFg 142



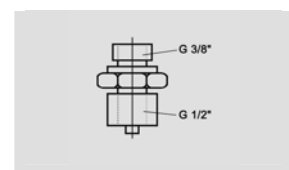
Blanking plug 142  
H 124-88



Ermeto-cable gland  
R-AD 6



Ermeto-cable gland  
R-AD 10-FN 43

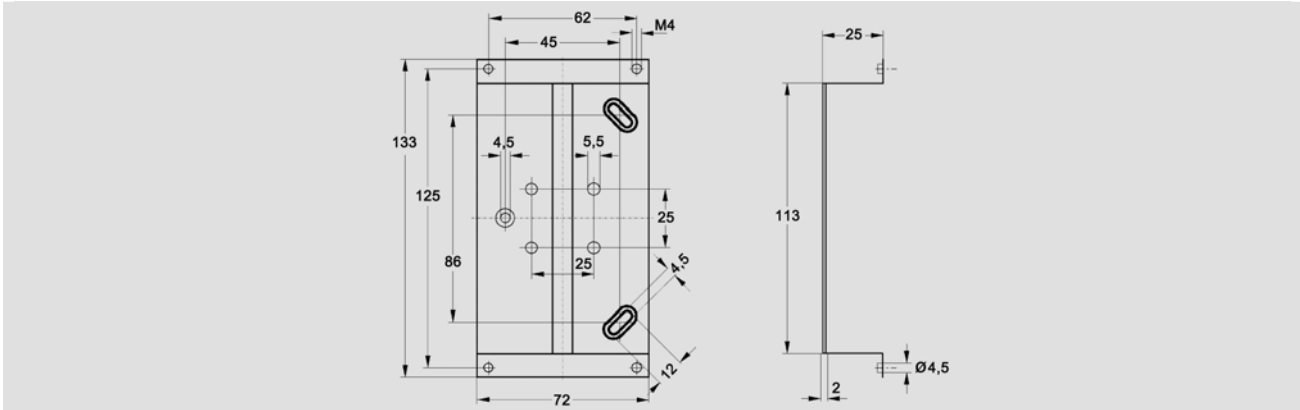


Gauge fitting  
H 124-114

# Control pressure switch FF 142



## Accessories Dimensions FF 142 / FFg 142



Mounting plate H 124g-127

## Pressure Diagrams FF 142 / FFg 142

