

















## Pressure Wave Switches



### Series D3

- Snap-action Switch
- Pressure/Vacuum Version
- Birotit Version
- Self-cleaning Contacts

### Pressure Wave Switch

The compressed volume of air inside the signal sensor is transferred via a connecting hose to the pressure wave switch. The diaphragm in the switch is deflected by the rise in pressure thus closing (or opening) the electrical contact.

### Series D3

- if the pneumatic system is separated from the electrical
- the pressure wave is converted to a linear movement
- the switching principle functions with a snap-action switch
- a defined condition in regard to the contact pressure is maintained
- the operating pressure can be regulated between 2 to 5 mbar by means of an adjusting screw
- 3 different types are available for selection

### Model Selection

#### D3-P

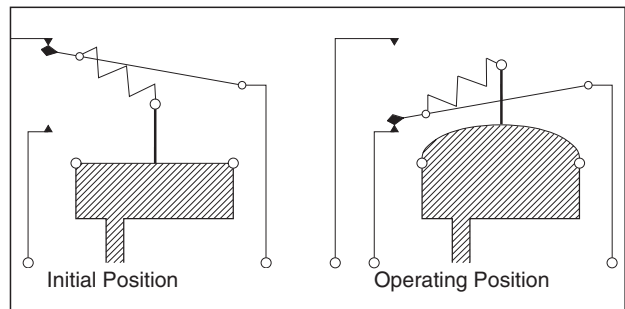
- the pressure wave activates a snap-action switch
  - switch changeover is guaranteed.
- An equalisation of atmospheric fluctuations or temperature is provided by a valve orifice for our profiles (up to 3500 cm<sup>3</sup>)

#### D3-V

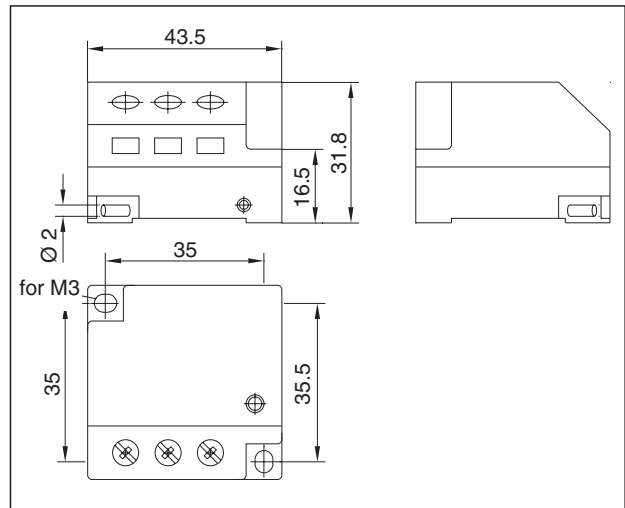
- vacuum activates a snap-action switch
- sealed model
- without pressure equalising orifice.

#### D3-PB

- pressure wave activates the changeover switch
- sealed orifice



Switching Principle





## Accessories for Pressure Wave Systems

### DWSO-Plug Socket DWH-Cover DW-Tube Fittings

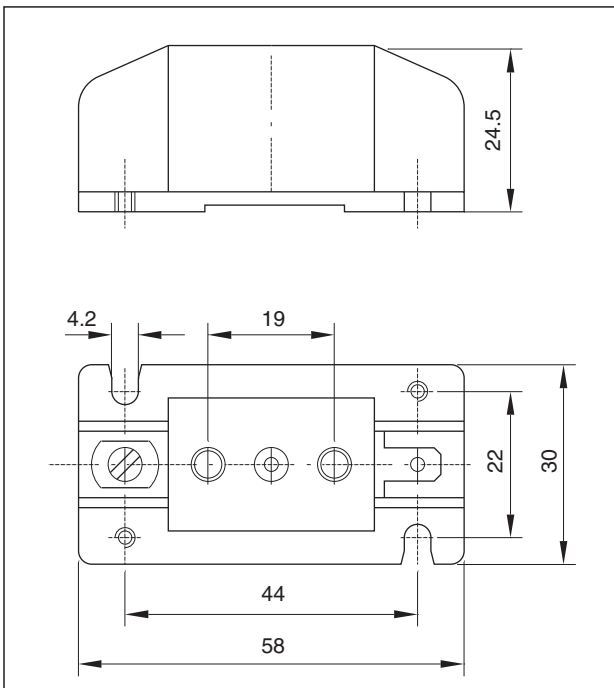
- Space-saving Assembly
- AMP Faston-plug



#### DWSO-Plug Socket

- space-saving and productive assembly of DW 10 and DW 10s
- spring mounted plug socket.
- easy accessible connecting terminals
- possible connection of tabs 6.3 mm

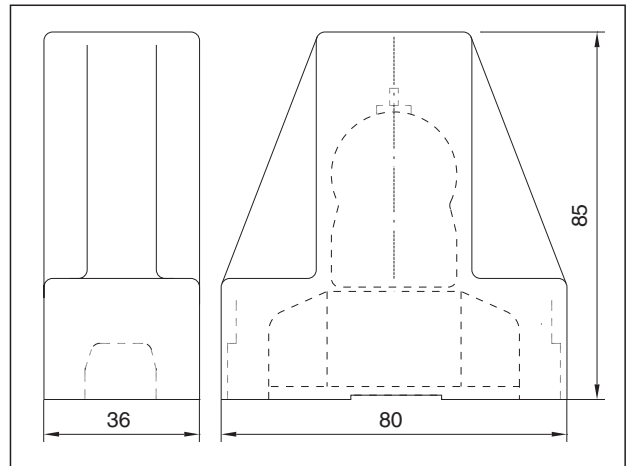
#### Dimension Sheet



#### DWH-Cover

- protection against accidental contact and protection of the DW-Switch
- can be used for DW 10 with DWSO, DW20s
- the electrical supply cable can be on one or both sides

#### Dimension Sheet



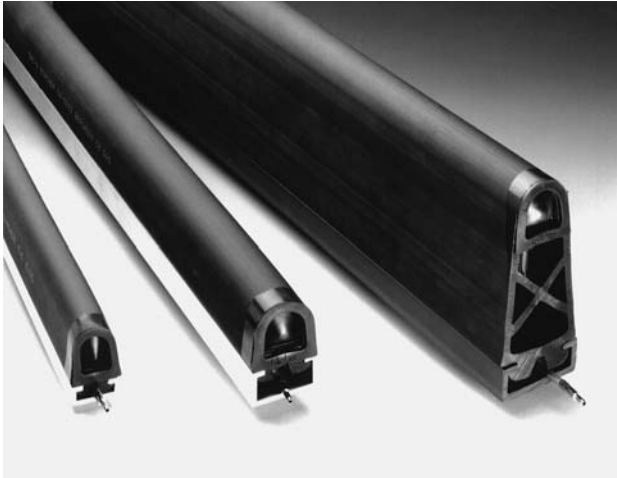
#### Order Information

e. g. DWSO  
DW-Plug Socket

e. g. DWH  
DW-Cover



## DW-Pressure Wave Sensors



### DWS- DWS-ALU/-PVC Contact Rails

- Can be manufactured in any length
- Available in various materials

### Pressure Wave Profiles

Deformation of the sensor (rubber profile, pressure socket, pressure button) causes the immediate compression of an air volume inducing a pressure wave impulse. This passes through the connecting hose to the DW-Switch.

### DWS-Profiles

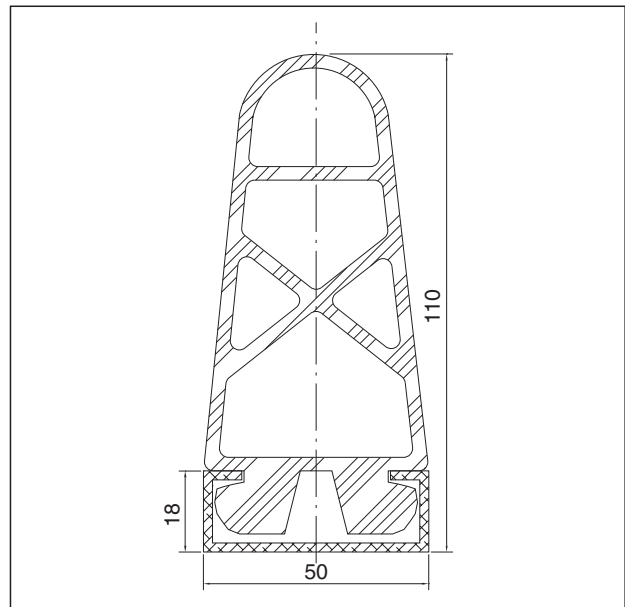
Switching Strips Type DWS

- are simple and robust sensors
- can be used in numerous applications

### Model Selection

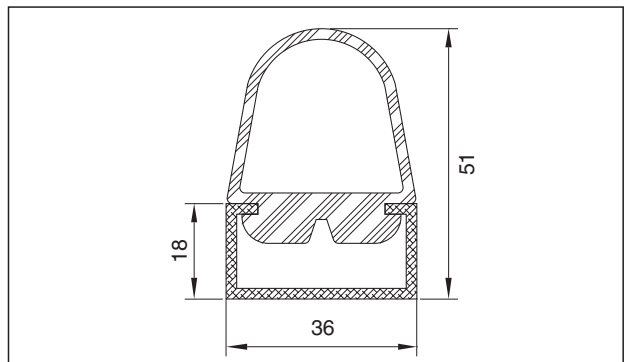
#### DWS-X

|                      |                     |
|----------------------|---------------------|
| Material             | PVC red and black   |
| Air Cross-section    | 550 mm <sup>2</sup> |
| Deformation Distance | 50 mm               |
| Weight               |                     |
| with fixing rail     | 2.65 kg/m           |
| without fixing rail  | 2.15 kg/m           |
| Fixing Rail          | Hard-PVC black      |
| Allowable Length     | 6 m                 |



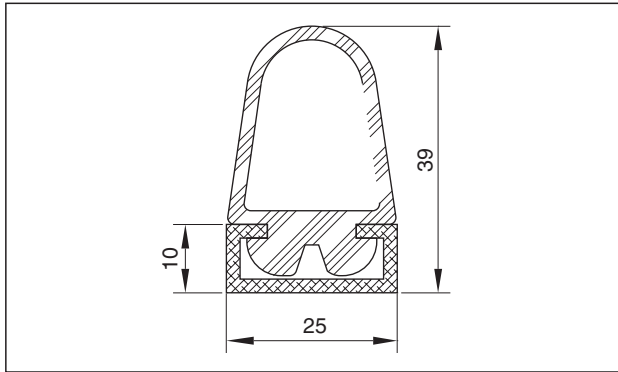
#### DWS-A

|                      |                     |
|----------------------|---------------------|
| Material             | PVC black, MVQ grey |
| Air Cross-section    | 550 mm <sup>2</sup> |
| Deformation Distance | 20 mm               |
| Weight               |                     |
| with fixing rail     | 1.3 kg/m            |
| without fixing rail  | 0.8 kg/m            |
| Allowable Length     | 6 m                 |



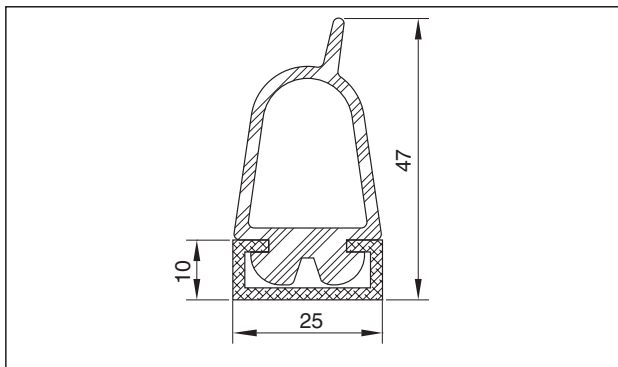
## DWS-B

|                      |                     |
|----------------------|---------------------|
| Material             | PVC black, MVQ grey |
| Air Cross-section    | 400 mm <sup>2</sup> |
| Deformation Distance | 15 mm               |
| Weight               |                     |
| with fixing rail     | 0.75 kg/m           |
| without fixing rail  | 0.42 kg/m           |
| Allowable Length     | 6 m                 |



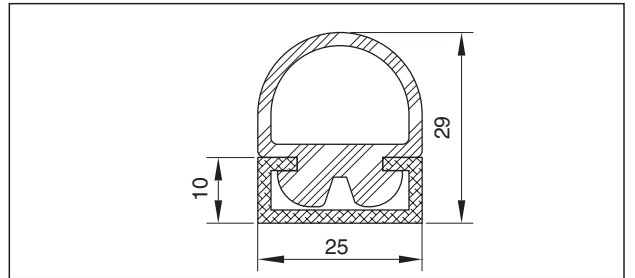
## DWS-Bs

|                      |                     |
|----------------------|---------------------|
| Material             | PVC black, MVQ grey |
| Air Cross-section    | 400 mm <sup>2</sup> |
| Deformation Distance | 15 mm               |
| Weight               |                     |
| with fixing rail     | 0.78 kg/m           |
| without fixing rail  | 0.46 kg/m           |
| Allowable Length     | 6 m                 |



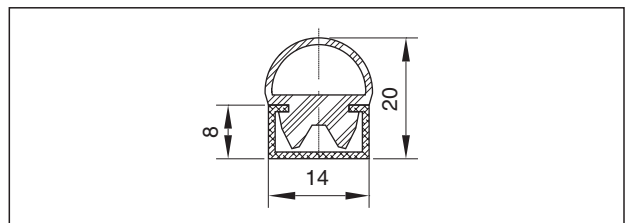
## DWS-C

|                      |                     |
|----------------------|---------------------|
| Material             | PVC black, MVQ grey |
| Air Cross-section    | 180 mm <sup>2</sup> |
| Deformation Distance | 10 mm               |
| Weight               |                     |
| with fixing rail     | 0.66 kg/m           |
| without fixing rail  | 0.33 kg/m           |
| Allowable Length     | 6 m                 |



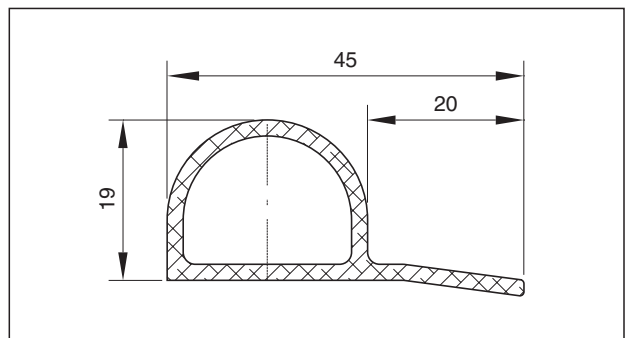
## DWS-D

|                      |                     |
|----------------------|---------------------|
| Material             | PVC black, MVQ grey |
| Air Cross-section    | 77 mm <sup>2</sup>  |
| Deformation Distance | 5 mm                |
| Weight               |                     |
| with fixing rail     | 0.27 kg/m           |
| without fixing rail  | 0.14 kg/m           |
| Allowable Length     | 6 m                 |



## DWS-P

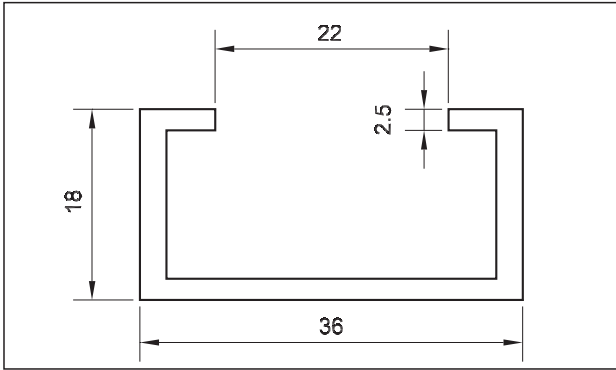
|                      |                     |
|----------------------|---------------------|
| Material             | PVC black           |
| Air Cross-section    | 213 mm <sup>2</sup> |
| Deformation Distance | 15 mm               |
| Weight               | 0.3 kg/m            |
| Allowable Length     | 6 m                 |



## Model Selection Alu-Rails

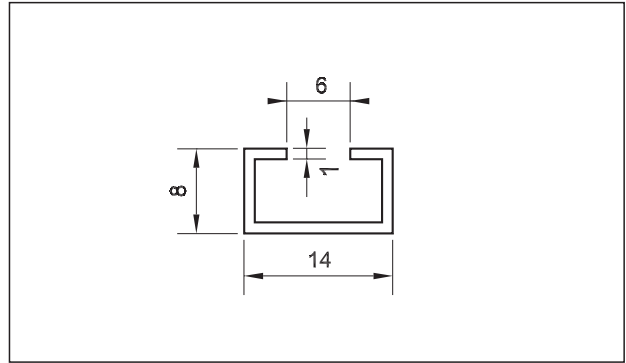
### AP-1

Material Alu (AlMgSi05)  
Weight 0.54 kg/m  
Application DWS-A



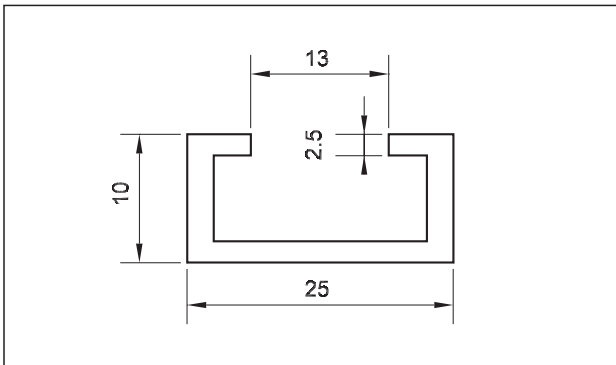
### DWSALUD

Material Alu (AlMgSi05)  
Weight 0.32 kg/m  
Application DWS-D



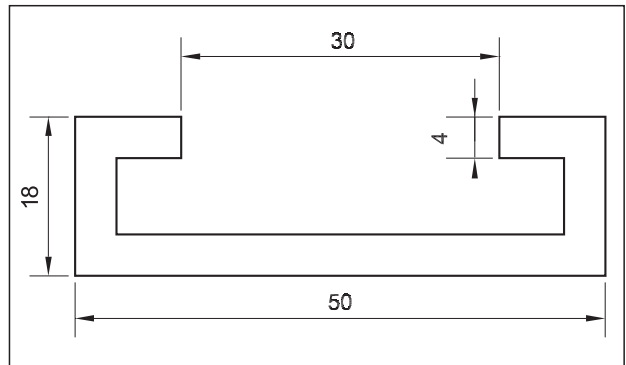
### AP-2

Material Alu (AlMgSi05)  
Weight 0.32 kg/m  
Application DWS-B/-Bs/-B2s/-C



### DWSPVCX

Material PVC  
Weight 0.24 kg/m  
Application DWS-X





## DW-Pressure Wave Sensors

### Ground Contact Sensors DGU

- Easily Fitted
- Standardised Lengths



### Ground Contact Sensors DGU

The DGU-Ground Contact Sensor acts as a signal transmitter for pressure wave control systems and are ideally suited as control signal transmitters in automatic door and gate opening systems.

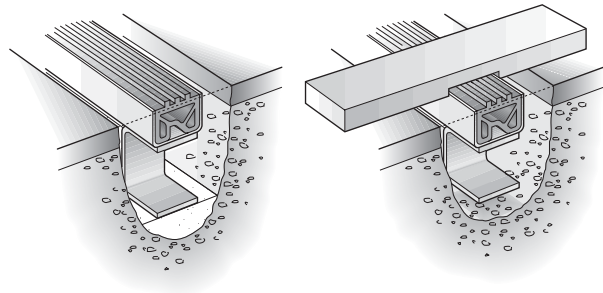
The main characteristics are:

- can be fitted in ground
- a galvanised rolled steel U-channel is used as a support
- allows the use of all types of vehicles
- 2 tons per wheel must not be exceeded
- is very robust

### Installation

During installation care should be taken that:

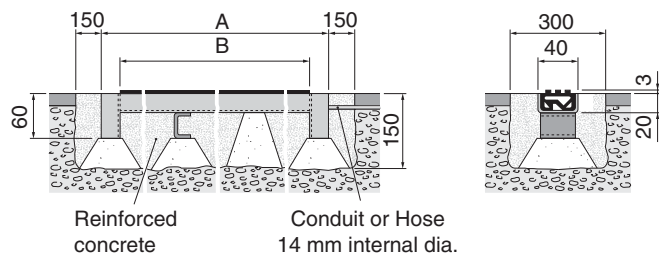
- the steel channel base is flush with the ground
- only the ribbed part of the rubber profile projects above the surface
- before setting in the concrete, place shims under the channel base
- the connecting cable is not removed from the steel frame



### Types

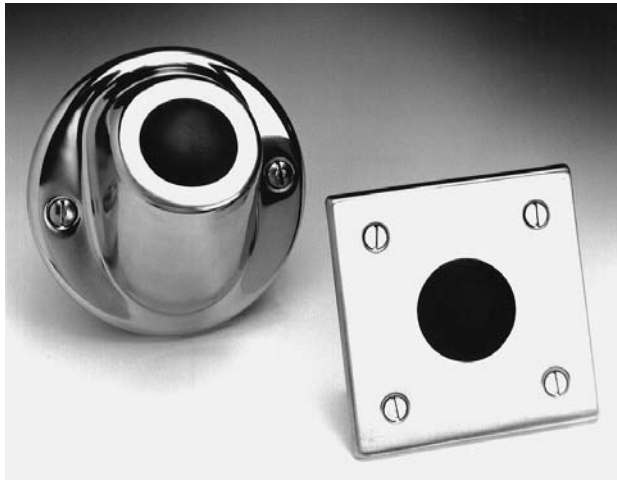
The DGU-Ground Contact Sensor is available in six standardised lengths.

Standard Overall Length A mm  
 540 1040 1540 2040 3040 6040  
 Standard Effective Length B mm  
 500 1000 1500 2000 3000 6000





## DW-Pressure Wave Sensors



### Foot/Hand Operated Button DT.. Tubular Profile DWSL

- Waterproof Construction
- Simple Installation

### General

This type of sensor is ideally suited as

- command sensors in door and gate opening systems
- for applications in sanitary areas

Electrical switching can be controlled in damp or hazardous locations simply and securely

### Function

When the sensor is operated

- it is compressed in accordance with the operating force
- the air in the hollow interior is compressed
- an over-pressure is induced
- the pressure wave passes through the connecting hose to the switch

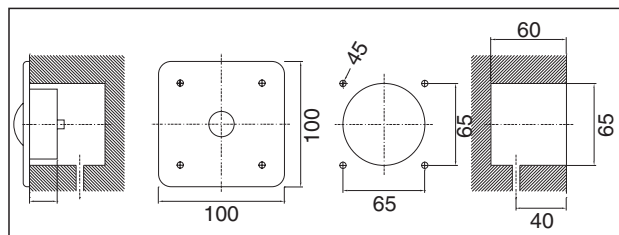
### Model Selection

#### Foot Button DTFU

#### Hand Button DTFUW

- visible plate manufactured from chrome nickel steel
- black rubber button

The model DTFUW is a Hand Operated Button and has a special soft push-button.

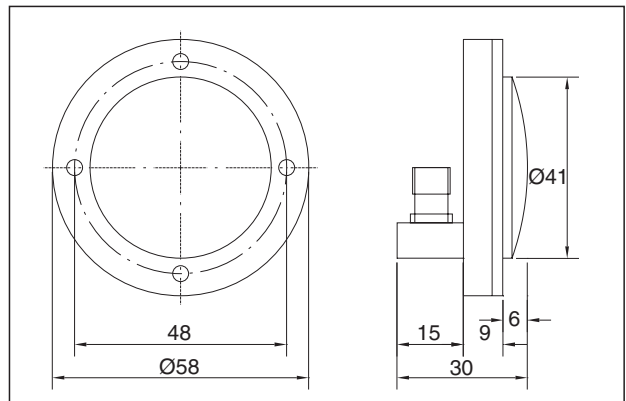


Dimension Sheet

Drilling Plan

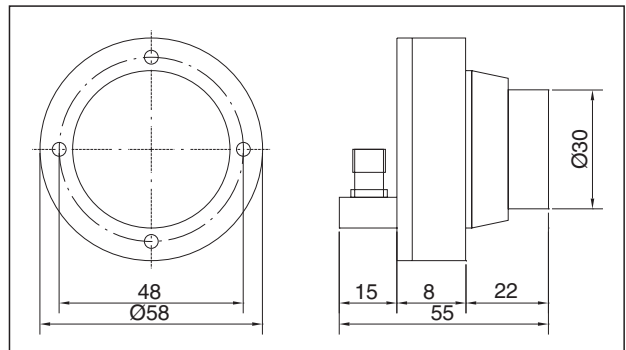
### Push-button DTW

- the model DTWR has a red rubber button
- the model DTWB has a blue rubber button



### Push-button DTH

- hermetically sealed construction
- DTHB has a blue push-button





## DW-Pressure Wave Sensors



### DGD Pressure Sensitive Cell

- High Mechanical Load Capacity
- Small Overall Height
- Fast Response

### General

DGD-Pressure Sensitive Cells act as pressure transmitter units for pressure wave control systems.

When the DGD-Pressure Sensitive Cell is compressed, the air volume inside is also immediately compressed and induces a pressure wave impulse.

DGD-Pressure Sensitive Cells have the following characteristics:

- small Overall Height
- fast Response
- very small travel/high pressure
- high Mechanical Load Capacity

### Instructions

When installing the Pressure Sensitive Cell the following should be observed:

- the moving part of the system must return mechanically to its initial position
- the Pressure Sensitive Cell must only be fixed on one side
- the choice of DW-Switches is dependent on the pressure level

### Application Examples

