design	**Ø38 x 108mm** **Ø38 x 122mm**	
DW34 G½"A	pressure range	**-1 to +600bar**
DW35 G¼"A	pressure range	**-1 to +600bar**
DW36 G⅛"	pressure range	**-1 to +1bar**

- ✓ **flush-mounted membrane**
- ✓ **pressure ranges between -1 and +600bar**
- ✓ **data logging function**
- ✓ **analog output with adjustable start and end point**
- ✓ **on/off delay seperately adjustable**
- ✓ **test function - simulation of the adjusted switching functions in a pressure-free state**
- ✓ **peak hold function for the display**
- ✓ **automatic self-test: overload, wire breakage, and sensor function**

intelligent pressure sensor
membrane keyboard, USB interface

description

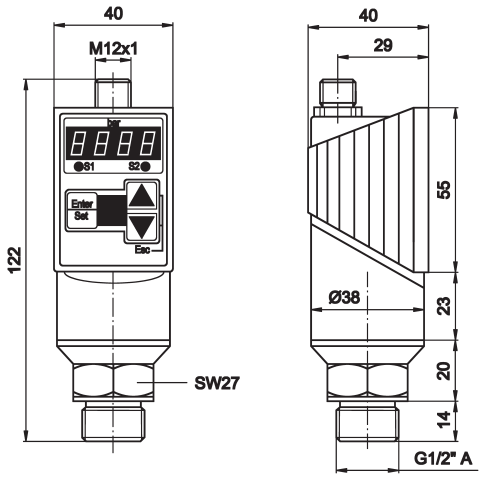
ipf electronic's pressure sensors offer a high level of operating comfort.
The DW34 series has a 1/2 inch connection with a flush-mounted membrane and can be used for pressures up to 600bar. The media touching parts of the sensor are made of stainless steel.
The **DW35** is differed from an other sensing element connection. It comes with a 1/4 inch connection with an outside thread and can also be used up to +600bar. Like the **DW34** series the media touching parts of the **DW35** are also made of stainless steel.
The **DW36** pressure sensor is suitable for low and negative pressure measurements. This sensor has a 1/8 inch connection. Its pressure sensing element is made of ceramic and is used in a range of –1 bar to +1 bar.
All devices with a 4-pin connection have 2 outputs. Although output 1 relates to a freely-programmable switching output, for output 2 a selection can be made between an analog output, a switching output or an alarm output.
Devices with a 8-pin connection have both 2 switching outputs and an analog output available.
Among other things, the switching points, release positions, output logic and time delay can be programmed via the membrane keyboard.
For dynamic measurements, the display and the analog output are equipped with an adjustable damping action.
Following installation, the sensor body can be rotated by 350° and the sensor display can be rotated by 180° by means of the software.
The pressure sensors have an optical interface with which, in addition, all adjustment parameters can be adjusted and changed via a PC or notebook.
The test function offers a simple and quick possibility to check the function of the device and/or the analyses which have been switched on. In connection with this, each pressure value of the pressure range can be "simulated" through the operating buttons or by operating the PC. The device behaves as if the actual pressure were available.

application examples

- ▶ pressure monitoring for hydraulic aggregates
- ▶ vacuum checking for vacuum lifters
- ▶ compressor controls

ipf electronic gmbh Kalver Straße 27 D-58515 Lüdenscheid Fon +49 (0) 2351 / 9365-0 Fax +49 (0) 2351 / 936519 www.ipf-electronic.com E-Mail: info@ipf-electronic.com
Subject to alteration! Version: April 2010

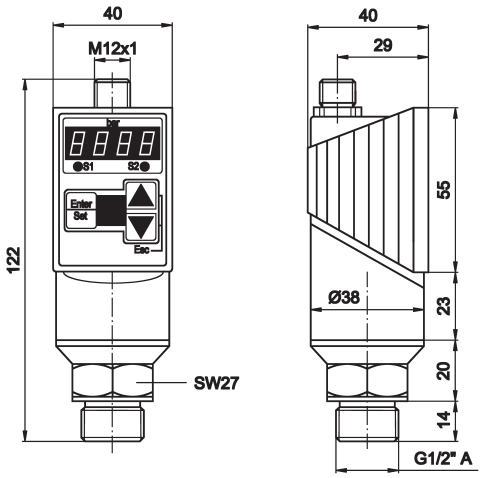
article-no.	**DW34311K**	**DW34311D**	**DW34311F**	**DW343114**
operating range	**-1 ... +10bar**	**10bar**	**50bar**	**100bar**
connection	**4-pin**	**4-pin**	**4-pin**	**4-pin**
article-no.	**DW34312K**	**DW34312D**	**DW34312F**	**DW343124**
operating range	**-1 ... +10bar**	**10bar**	**50bar**	**100bar**
connection	**8-pin**	**8-pin**	**8-pin**	**8-pin**



TECHNICAL DATA

version	flush-mounted stainless steel membrane G½" A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2msec
output signal	pnp / analog (current output) / alarm output - see wiring diagram on page 8
operating voltage	12 ... 32V DC
output current (max. load)	1A
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
on/off delay	0 ... 20sec, on- and off-delayed
adjustment range	switch-point: 1 ... 100% of the accumulated value / release position: 0 ... 99% of the accumulated value
repeat accuracy	< ±0.1% of the accumulated value
analog output	0/4 ... 20mA and/or 20 ... 0/4 mA
burden	max. R_L [Ω] = (U_b-8V)/20mA
error recognition	in case of line break, overload, measurement error
rise time	5msec (10 ... 90% of the accumulated value)
damping adjustable	0 ... 20sec
linearity deviation	max. ±0.25% of P_n
sampling frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7 segment LED
damping (display)	0 ... 20sec
short-circuit protection	+
reverse polraity protection	+
housing material	PA6.6, polyester
sensor head material	stainless steel
design	Ø38x122mm
operating temperature	-20 ... +80°C
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)
system of protection (EN 60529)	IP65
connection	M12-connector - 4-pin / 8-pin - see above
connection accessories	e.g. M12-cable socket - **VK205325** (4-wire) / **VK205A25** (8-wire) - 2m, straight, PUR
connection (sensing element)	G½" A (outside thread) / SW27 / flush-mounted stainless steel membrane
interface	opto-adaptor on USB + software **AD000011**
mounting accessories (clip)	**AY000060**

article-no.	**DW34311G**	**DW343116**	**DW343117**
operating range	**200bar**	**400bar**	**600bar**
connection	**4-pin**	**4-pin**	**4-pin**
article-no.	**DW34312G**	**DW343126**	**DW343127**
operating range	**200bar**	**400bar**	**600bar**
connection	**8-pin**	**8-pin**	**8-pin**

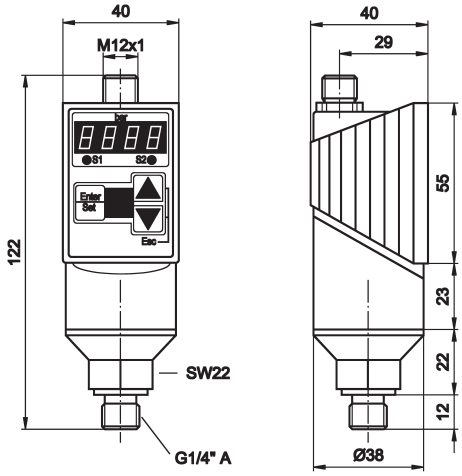


TECHNICAL DATA

version	flush-mounted stainless steel membrane G½" A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2msec
output signal	pnp / analog (current output) / alarm output - see wiring diagram on page 8
operating voltage	12 ... 32V DC
output current (max. load)	1A
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
on/off delay	0 ... 20sec, on- and off-delayed
adjustment range	switch-point: 1 ... 100% of the accumulated value / release position: 0 ... 99% of the accumulated value
repeat accuracy	< ±0.1% of the accumulated value
analog output	0/4 ... 20mA and/or 20 ... 0/4 mA
burden	max. R_L [Ω] = (U_b-8V)/20mA
error recognition	in case of line break, overload, measurement error
rise time	5msec (10 ... 90% of the accumulated value)
damping adjustable	0 ... 20sec
linearity deviation	max. ±0.25% of P_n
sampling frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7 segment LED
damping (display)	0 ... 20sec
short-circuit protection	+
reverse polraity protection	+
housing material	PA6.6, polyester
sensor head material	stainless steel
design	Ø38x122mm
operating temperature	-20 ... +80°C
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)
system of protection (EN 60529)	IP65
connection	M12-connector - 4-pin / 8-pin - see above
connection accessories	e.g. M12-cable socket - **VK205325** (4-wire) / **VK205A25** (8-wire) - 2m, straight, PUR
connection (sensing element)	G½" A (outside thread) / SW27 / flush-mounted stainless steel membrane
interface	opto-adaptor on USB + software **AD000011**
mounting accessories (clip)	**AY000060**

1000 pressure sensors

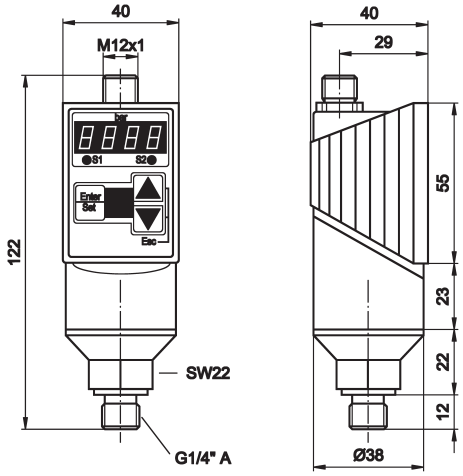
article-no.	**DW35311K**	**DW35311D**	**DW35311F**	**DW353114**
operating range	**-1 ... +10bar**	**10bar**	**50bar**	**100bar**
connection	**4-pin**	**4-pin**	**4-pin**	**4-pin**
article-no.	**DW35312K**	**DW35312D**	**DW35312F**	**DW353124**
operating range	**-1 ... +10bar**	**10bar**	**50bar**	**100bar**
connection	**8-pin**	**8-pin**	**8-pin**	**8-pin**



TECHNICAL DATA

version	G¼" A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2msec
output signal	pnp / analog (current output) / alarm output - see wiring diagram on page 8
operating voltage	12 ... 32V DC
output current (max. load)	1A
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
on/off delay	0 ... 20sec, on- and off-delayed
adjustment range	switch-point: 1 ... 100% of the accumulated value / release position: 0 ... 99% of the accumulated value
repeat accuracy	< ±0.1% of the accumulated value
analog output	0/4 ... 20mA and/or 20 ... 0/4 mA
burden	max. R_L [Ω] = (U_b-8V)/20mA
error recognition	in case of line break, overload, measurement error
rise time	5msec (10 ... 90% of the accumulated value)
damping adjustable	0 ... 20sec
linearity deviation	max. ±0.25% of P_n
sampling frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7 segment LED
damping (display)	0 ... 20sec
short-circuit protection	+
reverse polraity protection	+
housing material	PA6.6, polyester
sensor head material	stainless steel
design	Ø38x122mm
operating temperature	-20 ... +80°C
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)
system of protection (EN 60529)	IP65
connection	M12-connector - 4-pin / 8-pin - see above
connection accessories	e.g. M12-cable socket - **VK205325** (4-wire) / **VK205A25** (8-wire) - 2m, straight, PUR
connection (sensing element)	G¼" A (outside thread) / SW22
interface	opto-adaptor on USB + software **AD000011**
mounting accessories (clip)	**AY000060**

article-no.	**DW35311G**	**DW353116**	**DW353117**
operating range	**200bar**	**400bar**	**600bar**
connection	**4-pin**	**4-pin**	**4-pin**
article-no.	**DW35312G**	**DW353126**	**DW353127**
operating range	**200bar**	**400bar**	**600bar**
connection	**8-pin**	**8-pin**	**8-pin**

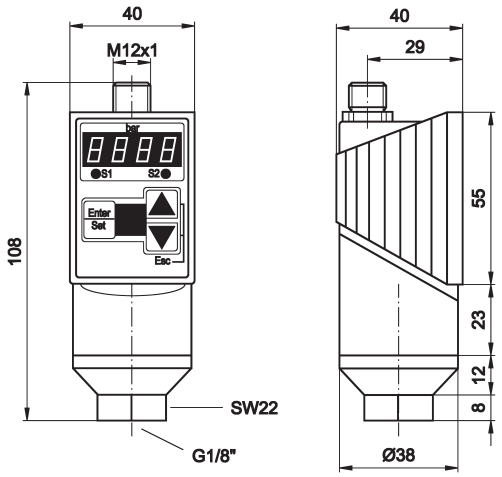


TECHNICAL DATA

version	G¼" A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2msec
output signal	pnp / analog (current output) / alarm output - see wiring diagram on page 8
operating voltage	12 ... 32V DC
output current (max. load)	1A
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
on/off delay	0 ... 20sec, on- and off-delayed
adjustment range	switch-point: 1 ... 100% of the accumulated value / release position: 0 ... 99% of the accumulated value
repeat accuracy	< ±0.1% of the accumulated value
analog output	0/4 ... 20mA and/or 20 ... 0/4 mA
burden	max. R_L [Ω] = (U_b-8V)/20mA
error recognition	in case of line break, overload, measurement error
rise time	5msec (10 ... 90% of the accumulated value)
damping adjustable	0 ... 20sec
linearity deviation	max. ±0.25% of P_n
sampling frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7 segment LED
damping (display)	0 ... 20sec
short-circuit protection	+
reverse polraity protection	+
housing material	PA6.6, polyester
sensor head material	stainless steel
design	Ø38x122mm
operating temperature	-20 ... +80°C
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)
system of protection (EN 60529)	IP65
connection	M12-connector - 4-pin / 8-pin - see above
connection accessories	e.g. M12-cable socket - **VK205325** (4-wire) / **VK205A25** (8-wire) - 2m, straight, PUR
connection (sensing element)	G¼" A (outside thread) / SW22
interface	opto-adaptor on USB + software **AD000011**
mounting accessories (clip)	**AY000060**

1000 pressure sensors

article-no.	**DW36311H**	**DW36311J**	**DW363110**	**DW363111**
operating range	**-0.5 ... +0.5bar**	**-1 ... +1bar**	**-1 ... 0bar**	**0 ... +1bar**
connection	**4-pin**	**4-pin**	**4-pin**	**4-pin**
article-no.	**DW36312H**	**DW36312J**	**DW363120**	**DW363121**
operating range	**-0.5 ... +0.5bar**	**-1 ... +1bar**	**-1 ... 0bar**	**0 ... +1bar**
connection	**8-pin**	**8-pin**	**8-pin**	**8-pin**



TECHNICAL DATA

version	G⅛" A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2msec
output signal	pnp / analog (current output) / alarm output - see wiring diagram on page 8
operating voltage	12 ... 32V DC
output current (max. load)	1A
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
on/off delay	0 ... 20sec, on- and off-delayed
adjustment range	switch-point: 1 ... 100% of the accumulated value / release position: 0 ... 99% of the accumulated value
repeat accuracy	< ±0.1% of the accumulated value
analog output	0/4 ... 20mA and/or 20 ... 0/4 mA
burden	max. R_L [Ω] = (U_b-8V)/20mA
error recognition	in case of line break, overload, measurement error
rise time	5msec (10 ... 90% of the accumulated value)
damping adjustable	0 ... 20sec
linearity deviation	max. ±0.25% of P_n
sampling frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7 segment LED
damping (display)	0 ... 20sec
short-circuit protection	+
reverse polraity protection	+
housing material	PA6.6, polyester
sensor head material	stainless steel
design	Ø38x122mm
operating temperature	-20 ... +80°C
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)
system of protection (EN 60529)	IP65
connection	M12-connector - 4-pin / 8-pin - see above
connection accessories	e.g. M12-cable socket - **VK205325** (4-wire) / **VK205A25** (8-wire) - 2m, straight, PUR
connection (sensing element)	G⅛" A / SW22
interface	opto-adaptor on USB + software **AD000011**
mounting accessories (clip)	**AY000060**

comfortable software
From the first moment on, all functions can be seen straight away and are quickly changeable.

graphical interface
The software user interface is graphically shown very well; this makes it possible to operate easily.

test function
The test function offers a simple and quick possibility to check the function of the device and/or the analysis which have been switched on. In connection with this, each incidence of pressure can be simulated by the operating buttons or the PC software.

self-critical
The pressure sensor's automatic self-test indicates the following functions: Overshooting or undershooting within the measuring range, a short-circuit – output 1 / output 2, a pressure sensor defect, an internal fault, as well as an open analog output. The onward transmission of the faults to the control can take place via the alarm or analog output.

very fast
Quick detection of the peak pressures is possible within 2msec.

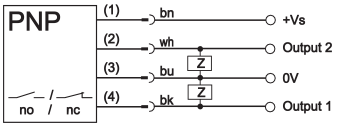
tamper proof
The keypad lock can be adjusted via the membrane keyboard or as a hard lock. The hardlock can only be operated via the software.

data logging function
The software offers the opportunity to write measured values in an Excel table. Data logging can be carried out in a way which is controlled either by time or measurement.

opto USB interface
Even during the running operation, you can communicate with the pressure sensor via the opto USB interface (galvanically separated).

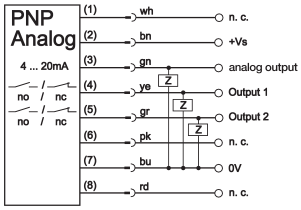
connection

4-pin



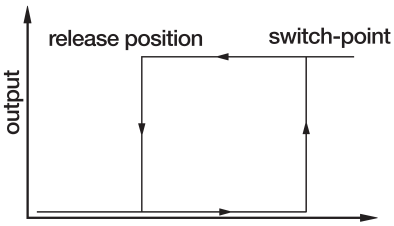
output 2, slectable between switching, analog and alarm output

8-pin

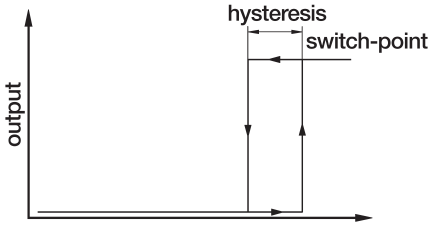


programmable switching functions

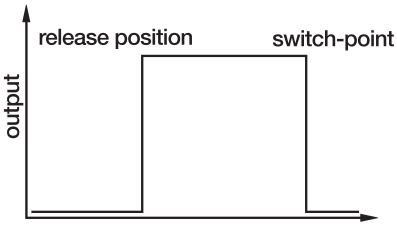
switch-point with release position



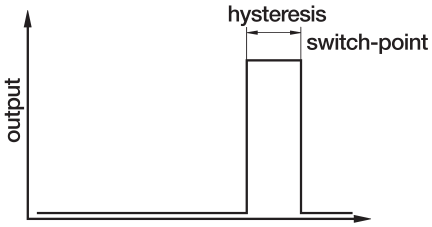
switch-point with hysteresis



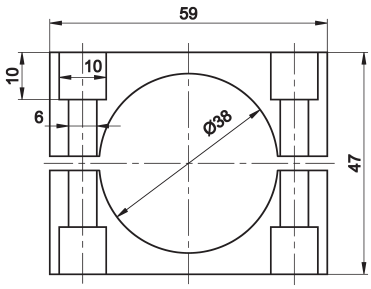
window function with release position



window function with hysteresis



mounting clip AY000060



ACCESSORIES

article-no.	description
AY000060	mounting clip, plastic

This data sheet contains the standard versions only. Kindly request the availability of other output- and connection functions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets ipf-*SENSORFLEX*®" or search our website for "VK".

Warning: Never use these devices in applications where the safety of a person depends on their functionality.