

dimensions \varnothing 38 x 108mm
 \varnothing 38 x 122mm

DW34 G $\frac{1}{2}$ "A	diverse pressure ranges	-1 to +600bar
DW35 G $\frac{1}{4}$ "A	diverse pressure ranges	-1 to +600bar
DW36 G $\frac{1}{8}$ "	diverse pressure ranges	-1 to +1bar

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

intelligent pressure sensor, membrane keyboard, USB interface



11

description

ipf electronic's pressure monitors offer a high level of operating comfort.

The **DW34** series has a $\frac{1}{2}$ inch connection with a front-flush 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 distinguished by a different sensing element connection. It comes with a $\frac{1}{4}$ 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 monitor is suitable for low and negative pressure measurements. This sensor has a $\frac{1}{8}$ inch connection. Its pressure transducer is made of ceramic and is used in a range of -1 bar to +1 bar.

The 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 2 switching outputs and an analog output.

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 feature an adjustable damping function.

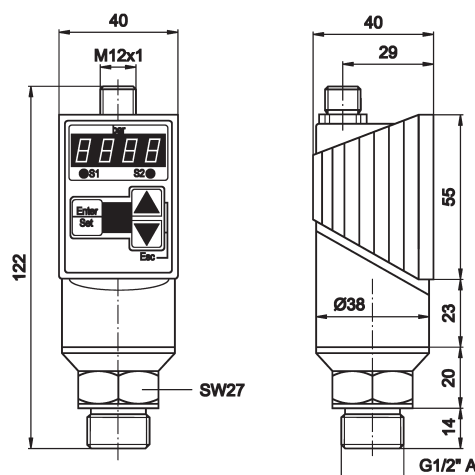
Following installation, the sensor body can be rotated by 350° and the sensor display can be rotated by 180° by means of the software.

All adjustment parameters can be set and changed via a PC or notebook via the optical interface of the pressure monitor. The test function offers a simple and quick possibility to check the function of the device and/or the connected analyses. Each pressure value of the pressure range can be "simulated" through the operating buttons or operation via PC. The device behaves as if the actual pressure was present.

application examples

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

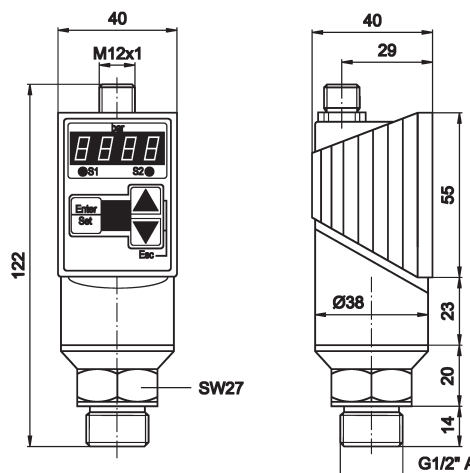
article-no.	DW34311K	DW34311D	DW34311F	DW343114
operating range	-1 ... +10bar	10bar	50bar	100bar
connection	4-pin	4-pin	4-pin	4-pin
article-no.	DW34312K	DW34312D	DW34312F	DW343124
operating range	-1 ... +10bar	10bar	50bar	100bar
connection	8-pin	8-pin	8-pin	8-pin



TECHNICAL DATA

version	front-flush stainless steel membrane G½" A / see below - connection (sensing element)			
pressure range	see above			
pressure detection	peak value memory every 2ms			
output signal	pnp / analog (current output) / alarm output - see wiring diagram on following pages			
operating voltage	12 ... 32V DC			
output current (max. load)	250mA			
current consumption (w/o load)	< 60mA			
voltage drop (max. load)	< 2.0V DC			
turn-on/off delay	0 ... 20s, on and off delayed			
adjustment range	switching point: 1 ... 100% of the final value / release position: 0 ... 99% of the final value			
repeat accuracy	< ±0.1% of the final value			
analog output	0/4 ... 20mA or 20 ... 0/4mA			
burden	max. R _L [Ω] = (U _b -8V)/20mA			
error recognition	in case of line break, overload, measurement error			
rise time	5ms (10 ... 90% of the final value)			
damping adjustable	0 ... 20s			
linearity deviation	max. ±0.25% of P _n			
switching frequency	max. 125Hz			
display (switching function)	2 x red LED			
display (pressure)	4 x 7-segment LED			
damping (display)	0 ... 20s			
short-circuit protection	+			
reverse polarity protection	+			
housing material	PA6.6, polyester			
pressure transducer material	stainless steel			
dimensions	Ø 38x122mm			
operating temperature	-20 ... +80°C			
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)			
degree 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)			
connection (sensing element)	G½" A (outside thread) / SW27 / front-flush stainless steel membrane			
interface	opto-adapter on USB + software AD000011			
mounting accessories (clip)	AY000060			

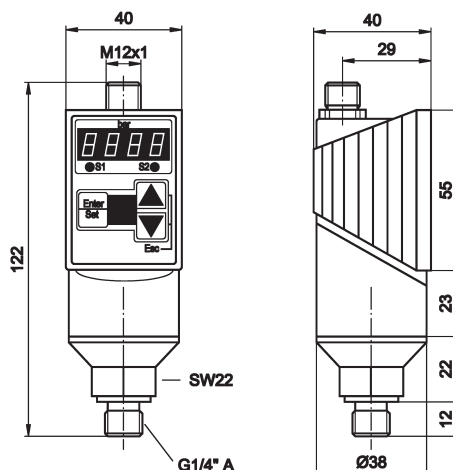
article-no.	DW34311G	DW343116	DW343117
operating range	200bar	400bar	600bar
connection	4-pin	4-pin	4-pin
article-no.	DW34312G	DW343126	DW343127
operating range	200bar	400bar	600bar
connection	8-pin	8-pin	8-pin



11

TECHNICAL DATA	
version	front-flush stainless steel membrane G $\frac{1}{2}$ " A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2ms
output signal	pnp / analog (current output) / alarm output - see wiring diagram on following pages
operating voltage	12 ... 32V DC
output current (max. load)	250mA
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
turn-on/off delay	0 ... 20s, on and off delayed
adjustment range	switching point: 1 ... 100% of the final value / release position: 0 ... 99% of the final value
repeat accuracy	< $\pm 0.1\%$ of the final value
analog output	0/4 ... 20mA or 20 ... 0/4mA
burden	max. $R_L [\Omega] = (U_b - 8V) / 20mA$
error recognition	in case of line break, overload, measurement error
rise time	5ms (10 ... 90% of the final value)
damping adjustable	0 ... 20s
linearity deviation	max. $\pm 0.25\%$ of P_n
switching frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7-segment LED
damping (display)	0 ... 20s
short-circuit protection	+
reverse polarity protection	+
housing material	PA6.6, polyester
pressure transducer material	stainless steel
dimensions	$\varnothing 38 \times 122mm$
operating temperature	-20 ... +80°C
temperature drift	< $\pm 0.2\%$ / 10K, (-10 ... +70°C)
degree 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)
connection (sensing element)	G $\frac{1}{2}$ " A (outside thread) / SW27 / front-flush stainless steel membrane
interface	opto-adapter on USB + software AD000011
mounting accessories (clip)	AY000060

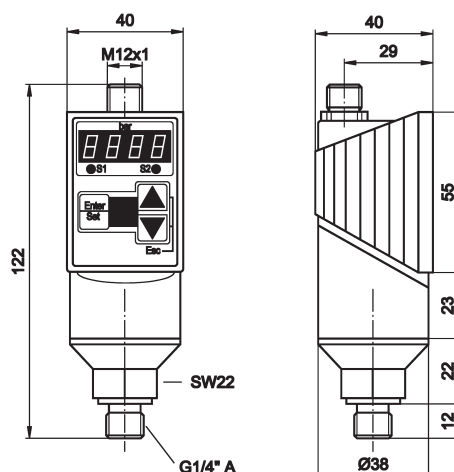
article-no.	DW35311K	DW35311D	DW35311F	DW353114
operating range	-1 ... +10bar	10bar	50bar	100bar
connection	4-pin	4-pin	4-pin	4-pin
article-no.	DW35312K	DW35312D	DW35312F	DW353124
operating range	-1 ... +10bar	10bar	50bar	100bar
connection	8-pin	8-pin	8-pin	8-pin



TECHNICAL DATA

version	G1/4" A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2ms
output signal	pnp / analog (current output) / alarm output - see wiring diagram on following pages
operating voltage	12 ... 32V DC
output current (max. load)	250mA
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
turn-on/off delay	0 ... 20s, on and off delayed
adjustment range	switching point: 1 ... 100% of the final value / release position: 0 ... 99% of the final value
repeat accuracy	< ±0.1% of the final value
analog output	0/4 ... 20mA or 20 ... 0/4mA
burden	max. $R_L [\Omega] = (U_b - 8V) / 20mA$
error recognition	in case of line break, overload, measurement error
rise time	5ms (10 ... 90% of the final value)
damping adjustable	0 ... 20s
linearity deviation	max. ±0.25% of P_n
switching frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7-segment LED
damping (display)	0 ... 20s
short-circuit protection	+
reverse polarity protection	+
housing material	PA6.6, polyester
pressure transducer material	stainless steel
dimensions	Ø 38x122mm
operating temperature	-20 ... +80°C
temperature drift	< ±0.2% / 10K, (-10 ... +70°C)
degree 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)
connection (sensing element)	G1/4" A (outside thread) / SW22
interface	opto-adapter 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

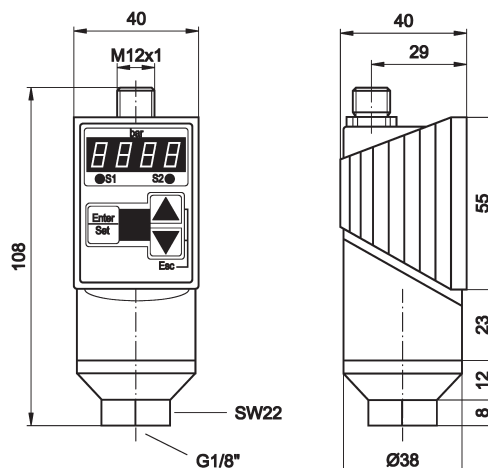


11

TECHNICAL DATA

version	G $\frac{1}{4}$ "A / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2ms
output signal	pnp / analog (current output) / alarm output - see wiring diagram on following pages
operating voltage	12 ... 32V DC
output current (max. load)	250mA
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
turn-on/off delay	0 ... 20s, on and off delayed
adjustment range	switching point: 1 ... 100% of the final value / release position: 0 ... 99% of the final value
repeat accuracy	< $\pm 0.1\%$ of the final value
analog output	0/4 ... 20mA or 20 ... 0/4mA
burden	max. $R_L [\Omega] = (U_b - 8V) / 20mA$
error recognition	in case of line break, overload, measurement error
rise time	5ms (10 ... 90% of the final value)
damping adjustable	0 ... 20s
linearity deviation	max. $\pm 0.25\%$ of P_n
switching frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7-segment LED
damping (display)	0 ... 20s
short-circuit protection	+
reverse polarity protection	+
housing material	PA6.6, polyester
pressure transducer material	stainless steel
dimensions	$\varnothing 38 \times 122mm$
operating temperature	-20 ... +80°C
temperature drift	< $\pm 0.2\%$ / 10K, (-10 ... +70°C)
degree 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)
connection (sensing element)	G $\frac{1}{4}$ "A (outside thread) / SW22
interface	opto-adapter on USB + software AD000011
mounting accessories (clip)	AY000060

article-no.	DW36311H	DW36311J	DW363110	DW363111
operating range	-0.5 ... +0.5bar	-1 ... +1bar	-1 ... 0 bar	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	G $\frac{1}{8}$ " / see below - connection (sensing element)
pressure range	see above
pressure detection	peak value memory every 2ms
output signal	pnp / analog (current output) / alarm output - see wiring diagram on following pages
operating voltage	12 ... 32V DC
output current (max. load)	250mA
current consumption (w/o load)	< 60mA
voltage drop (max. load)	< 2.0V DC
turn-on/off delay	0 ... 20s, on and off delayed
adjustment range	switching point: 1 ... 100% of the final value / release position: 0 ... 99% of the final value
repeat accuracy	< $\pm 0.1\%$ of the final value
analog output	0/4 ... 20mA or 20 ... 0/4mA
burden	max. $R_L [\Omega] = (U_b - 8V) / 20mA$
error recognition	in case of line break, overload, measurement error
rise time	5ms (10 ... 90% of the final value)
damping adjustable	0 ... 20s
linearity deviation	max. $\pm 0.25\%$ of P_n
switching frequency	max. 125Hz
display (switching function)	2 x red LED
display (pressure)	4 x 7-segment LED
damping (display)	0 ... 20s
short-circuit protection	+
reverse polarity protection	+
housing material	PA6.6, polyester
pressure transducer material	ceramic
dimensions	$\varnothing 38 \times 122mm$
operating temperature	-20 ... +80°C
temperature drift	< $\pm 0.2\%$ / 10K, (-10 ... +70°C)
degree 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)
connection (sensing element)	G $\frac{1}{8}$ " / SW22
interface	opto-adapter on USB + software AD000011
mounting accessories (clip)	AY000060



11

comfortable software

At first glance, all functions can be seen straight away and are quickly changeable.

graphical interface

The user interface of the software has an extremely clear graphical layout; this makes operation easy.

test function

The test function offers a simple and quick possibility to check the function of the device and/or the connected analyses. To allow this, each pressure value can be simulated using the operating

buttons or the PC software.

self-critical

The pressure sensor's automatic self-test indicates the following functions: Overshooting or undershooting of the measuring range, short circuit at output 1 / output 2, defective pressure monitor, internal fault, and analog output open. The onward transmission of the faults to the control can take place via the alarm or analog output.

very fast

Quick pressure peak detection is possible within 2ms.

tamper proof

The keypad lock can be engaged 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 triggered either time or measurement controlled.

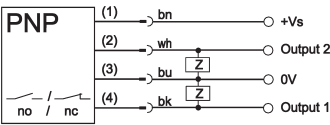
opto USB interface

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



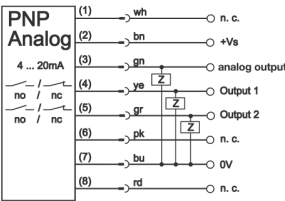
connection

4-pin



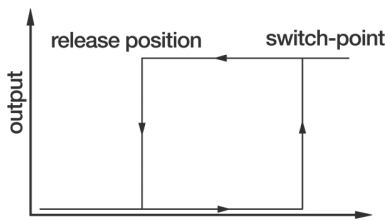
output 2, selectable between switching, analog and alarm output

8-pin

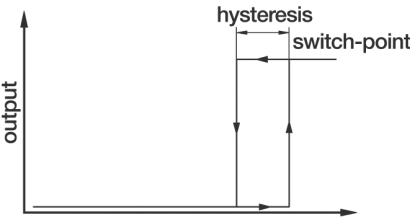


programmable switching functions

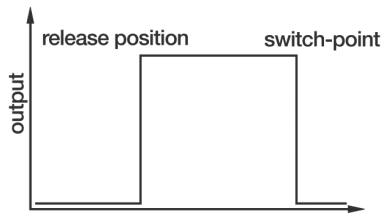
switch-point with release position



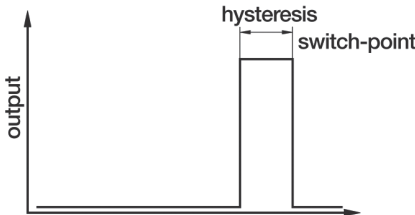
switch-point with hysteresis



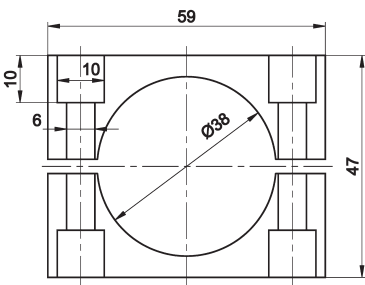
window function with release position



window function with hysteresis



mounting clip AY000060



ACCESSORIES

article-no.	description
AY000060	mounting clip, plastic

This data sheet only contains the available standard variants. For other output / connection variants, we kindly ask that you contact us.

We are happy to supply the right cable socket for the plug equipment. You will find a list in the “accessories” section of the catalog under **ipf-SENSORFLEX®** “cable sockets” or in the search window on our homepage www.ipf-electronic.com (using the search term “VK”).

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

You also find this data sheet, as well as contact details under www.ipf-electronic.com