

# IP69k INDUCTIVE WASHDOWN SENSORS



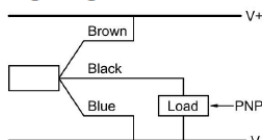
Sensing Distance: **3mm** – Housing Diameter: **M12**

<p>Dimensions are in mm.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Part Numbers:</th> </tr> </thead> <tbody> <tr> <td style="width: 15%;"><b>PNP / NO</b></td> <td>SIMKFHT-912-102</td> </tr> <tr> <td><b>PNP / NC</b></td> <td>Contact for Information</td> </tr> </tbody> </table>	Part Numbers:		<b>PNP / NO</b>	SIMKFHT-912-102	<b>PNP / NC</b>	Contact for Information	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Technical Data:</th> </tr> </thead> <tbody> <tr> <td>Mounting:</td> <td>Flush, PTFE face</td> </tr> <tr> <td>Sensing Range in mm:</td> <td>3 mm</td> </tr> <tr> <td>Supply Voltage</td> <td>10-40 V DC</td> </tr> <tr> <td>Output function:</td> <td>N.O.</td> </tr> <tr> <td>Load current:</td> <td>&lt; 4 mA 200 at 24V DC, 25°C</td> </tr> <tr> <td>Switching Frequency:</td> <td>1 kHz</td> </tr> <tr> <td>Short circuit limit:</td> <td>&lt; 80mA (SCP)</td> </tr> <tr> <td>Cable:</td> <td>2m silicone cable</td> </tr> <tr> <td>Operating temperature:</td> <td>-25°C to +150°C, IP69k</td> </tr> <tr> <td>Target size</td> <td>8 x 8 x 1 mm ST37</td> </tr> <tr> <td>Hysteresis:</td> <td>3 to 20%</td> </tr> <tr> <td>LED:</td> <td>no</td> </tr> <tr> <td>Options:</td> <td>Cable length, Cable type</td> </tr> </tbody> </table>	Technical Data:		Mounting:	Flush, PTFE face	Sensing Range in mm:	3 mm	Supply Voltage	10-40 V DC	Output function:	N.O.	Load current:	< 4 mA 200 at 24V DC, 25°C	Switching Frequency:	1 kHz	Short circuit limit:	< 80mA (SCP)	Cable:	2m silicone cable	Operating temperature:	-25°C to +150°C, IP69k	Target size	8 x 8 x 1 mm ST37	Hysteresis:	3 to 20%	LED:	no	Options:	Cable length, Cable type
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### This sensor has the following specifications:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>* The EMC (Electromagnetic Compatibility) resistance of the switches:<br/>IEC 61000-4-2 Level 2 IEC 61000-4-4 Level 2<br/>IEC 61000-4-3 Level 2 IEC 60255-5 1 kV</li> <li>* Sensing range can vary +/-10 %.</li> <li>* Voltage spikes (300 V for 1 ms, 10 Hz)</li> <li>* All standard cables are 3 x 0.25 mm<sup>2</sup> and a length of 2 m +/- 5 %.</li> <li>* Output capacity is 100 nF.</li> <li>* Storage temperature -13 °F to + 176 °F (-25 °C to 80 °C).</li> <li>* Relative humidity is 100 %.</li> </ul> | <ul style="list-style-type: none"> <li>* Vibration resistant to 1 mm amplitude at 55 Hz.</li> <li>* Shock resistant to 5 g for a period of 11 ms.</li> <li>* Degree of protection (DIN 40 050) is IP69k.</li> <li>* Reverse polarity protection is incorporated on the supply voltage.</li> <li>* Load resistor of 100 kOhm is incorporated.</li> <li>* Leakage current is 4 mA at 24 V supply voltage.</li> <li>* Residual ripple is 15 %.</li> <li>* Voltage drop is approximately 2 V when sensor is on.</li> <li>* Sensing face material is: PTFE.</li> </ul> |
|---|---|

#### Wiring Diagram PNP NO



**Special types and silicone free versions are available upon request**

Design and technical details subject to change

# IP69k INDUCTIVE WASHDOWN SENSORS



Sensing Distance: **4mm** – Housing Diameter: **M12**

	<b>Technical Data:</b>	
	Mounting:	Non- Flush, PTFE face
	Sensing Range in mm:	4 mm
	Supply Voltage	10-40 V DC
	Output function:	N.O.
	Load current:	< 4 mA 200 at 24V DC, 25°C
	Switching Frequency:	500 Hz
	Short circuit limit:	< 80mA (SCP)
	Cable:	2m silicone cable
	Operating temperature:	-25°C to +150°C, IP69k
	Target size	8 x 8 x 1 mm ST37
	Hysteresis:	3 to 20%
	LED:	no
	Options:	Cable length, Cable type

Dimensions are in mm.

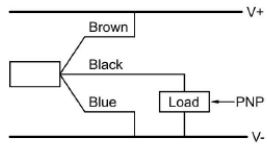
**Part Numbers:**

<b>PNP / NO</b>	SIMKFHT-912-104
<b>PNP / NC</b>	Contact for Information

**This sensor has the following specifications:**

<ul style="list-style-type: none"> <li>* The EMC (Electromagnetic Compatibility) resistance of the switches: IEC 61000-4-2 Level 2 IEC 61000-4-4 Level 2 IEC 61000-4-3 Level 2 IEC 60255-5 1 kV</li> <li>* Sensing range can vary +/-10 %.</li> <li>* Voltage spikes (300 V for 1 ms, 10 Hz)</li> <li>* All standard cables are 3 x 0.25 mm<sup>2</sup> and a length of 2 m +/- 5 %.</li> <li>* Output capacity is 100 nF.</li> <li>* Storage temperature -13 °F to + 176 °F (-25 °C to 80 °C).</li> <li>* Relative humidity is 100 %.</li> </ul>	<ul style="list-style-type: none"> <li>* Vibration resistant to 1 mm amplitude at 55 Hz.</li> <li>* Shock resistant to 5 g for a period of 11 ms.</li> <li>* Degree of protection (DIN 40 050) is IP69k.</li> <li>* Reverse polarity protection is incorporated on the supply voltage.</li> <li>* Load resistor of 100 kOhm is incorporated.</li> <li>* Leakage current is 4 mA at 24 V supply voltage.</li> <li>* Residual ripple is 15 %.</li> <li>* Voltage drop is approximately 2 V when sensor is on.</li> <li>* Sensing face material is: PTFE.</li> </ul>
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**Wiring Diagram PNP NO**



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# IP69k INDUCTIVE WASHDOWN SENSORS



Sensing Distance: **5mm** – Housing Diameter: **M18**

		<b>Technical Data:</b>	
		Mounting:	Flush, PTFE face
		Sensing Range in mm:	5 mm
		Supply Voltage	10-40 V DC
		Output function:	N.O.
		Load current:	< 4 mA 200 at 24V DC, 25°C
		Switching Frequency:	150 Hz
		Short circuit limit:	< 80mA (SCP)
		Cable:	2m silicone cable
		Operating temperature:	-25°C to +150°C, IP69k
		Target size	8 x 8 x 1 mm ST37
		Hysteresis:	3 to 20%
		LED:	no
		Options:	Cable length, Cable type

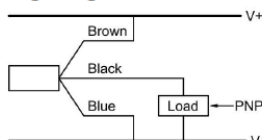
Dimensions are in mm.

Part Numbers:	
PNP / NO	SIMKFHT-918-102
PNP / NC	Contact for Information

### This sensor has the following specifications:

- \* The EMC (Electromagnetic Compatibility) resistance of the switches:  
IEC 61000-4-2 Level 2 IEC 61000-4-4 Level 2  
IEC 61000-4-3 Level 2 IEC 60255-5 1 kV
- \* Sensing range can vary +/-10 %.
- \* Voltage spikes (300 V for 1 ms, 10 Hz)
- \* All standard cables are 3 x 0.25 mm<sup>2</sup> and a length of 2 m +/- 5 %.
- \* Output capacity is 100 nF.
- \* Storage temperature -13 °F to + 176 °F (-25 °C to 80 °C).
- \* Relative humidity is 100 %.
- \* Vibration resistant to 1 mm amplitude at 55 Hz.
- \* Shock resistant to 5 g for a period of 11 ms.
- \* Degree of protection (DIN 40 050) is IP69k.
- \* Reverse polarity protection is incorporated on the supply voltage.
- \* Load resistor of 100 kOhm is incorporated.
- \* Leakage current is 4 mA at 24 V supply voltage.
- \* Residual ripple is 15 %.
- \* Voltage drop is approximately 2 V when sensor is on.
- \* Sensing face material is: PTFE.

#### Wiring Diagram PNP NO



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Design and technical details subject to change

# IP69k INDUCTIVE WASHDOWN SENSORS



Sensing Distance: **7mm** – Housing Diameter: **M18**

		<b>Technical Data:</b>	
		Mounting:	Non-flush, PTFE face
		Sensing Range in mm:	7 mm
		Supply Voltage	10-40 V DC
		Output function:	N.O.
		Load current:	< 4 mA 200 at 24V DC, 25°C
		Switching Frequency:	100 Hz
		Short circuit limit:	< 80mA (SCP)
		Cable:	2m silicone cable
		Operating temperature:	-25°C to +150°C, IP69k
		Target size	8 x 8 x 1 mm ST37
		Hysteresis:	3 to 20%
		LED:	no
		Options:	Cable length, Cable type

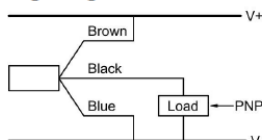
Dimensions are in mm.

Part Numbers:	
PNP / NO	SIMKFHT-918-104
PNP / NC	Contact for Information

### This sensor has the following specifications:

- \* The EMC (Electromagnetic Compatibility) resistance of the switches:  
IEC 61000-4-2 Level 2 IEC 61000-4-4 Level 2  
IEC 61000-4-3 Level 2 IEC 60255-5 1 kV
- \* Sensing range can vary +/-10 %.
- \* Voltage spikes (300 V for 1 ms, 10 Hz)
- \* All standard cables are 3 x 0.25 mm<sup>2</sup> and a length of 2 m +/- 5 %.
- \* Output capacity is 100 nF.
- \* Storage temperature -13 °F to + 176 °F (-25 °C to 80 °C).
- \* Relative humidity is 100 %.
- \* Vibration resistant to 1 mm amplitude at 55 Hz.
- \* Shock resistant to 5 g for a period of 11 ms.
- \* Degree of protection (DIN 40 050) is IP69k.
- \* Reverse polarity protection is incorporated on the supply voltage.
- \* Load resistor of 100 kOhm is incorporated.
- \* Leakage current is 4 mA at 24 V supply voltage.
- \* Residual ripple is 15 %.
- \* Voltage drop is approximately 2 V when sensor is on.
- \* Sensing face material is: PTFE.

#### Wiring Diagram PNP NO



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Design and technical details subject to change

# IP69k INDUCTIVE WASHDOWN SENSORS



Sensing Distance: **5mm** – Housing Diameter: **M18**

Dimensions are in mm.

Part Numbers:	
<b>PNP / NO</b>	IN5-18HTPS-230ext-IP69k
<b>NPN / NO</b>	IN5-18HTNS-230ext-IP69k

Technical Data:	
Mounting:	Flush, Ceramic face
Sensing Range in mm:	5 mm
Supply Voltage	10-35 V DC
Output function:	N.O.
Load current:	200 mA at 24V DC, 25°C
Switching Frequency:	200 Hz
Short circuit limit:	240 mA (SCP)
Cable:	L1: 2m Silicon, L2: 2m PUR
Operating temperature:	-20°C to +230°C, IP69k
Target size	8 x 8 x 1 mm ST37
Hysteresis:	3 to 20%
LED:	no
Options:	Cable length, Cable type

Dimensions are in mm.

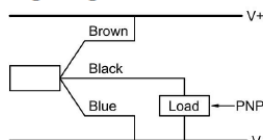
Part Numbers:	
<b>PNP / NO</b>	IN5-18HTPS-230ext-L91-IP69k-PEEK
<b>NPN / NO</b>	IN5-18HTNS-230ext-L91-IP69k-PEEK

Technical Data:	
Mounting:	Flush, PEEK face
Sensing Range in mm:	5 mm
Supply Voltage	10-36 V DC
Output function:	N.O.
Load current:	200 mA at 20V DC, 25°C
Switching Frequency:	200 Hz
Short circuit limit:	240 mA (SCP)
Cable:	L1: 3m Silicon, L2: 2m PUR
Operating temperature:	-25°C to +230°C, IP69k
Target size	8 x 8 x 1 mm ST37
Hysteresis:	3 to 20%
LED:	no
Options:	Cable length, Cable type

### This sensor has the following specifications:

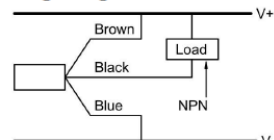
- \* The EMC (Electromagnetic Compatibility) resistance of the switches:  
IEC 61000-4-2 Level 2 IEC 61000-4-4 Level 2  
IEC 61000-4-3 Level 2 IEC 60255-5 1 kV
- \* Sensing range can vary +/-10 %.
- \* Voltage spikes (300 V for 1 ms, 10 Hz)
- \* All standard cables are 3 x 0.25 mm<sup>2</sup> and a length of 2 m, or as noted, all lengths are +/-5 %.
- \* Output capacity is 100 nF.
- \* Storage temperature -13 °F to +176 °F (-25 °C to 80 °C).
- \* Relative humidity is 100 %.
- \* Vibration resistant to 1 mm amplitude at 55 Hz.
- \* Shock resistant to 5 g for a period of 11 ms.
- \* Degree of protection (DIN 40 050) is IP69k.
- \* Reverse polarity protection is incorporated on the supply voltage.
- \* Load resistor of 100 kOhm is incorporated.
- \* Leakage current is 200 mA at 24 V supply voltage.
- \* Residual ripple is 15 %.
- \* Voltage drop is approximately 2 V when sensor is on.
- \* Sensing face material is: Ceramic / PEEK.
- \* Temperature specification for external amplifier:  
-13 °F to +140°F (-10 °C to 60 °C).

#### Wiring Diagram PNP NO



Special types and silicone free versions are available upon request

#### Wiring Diagram NPN NO

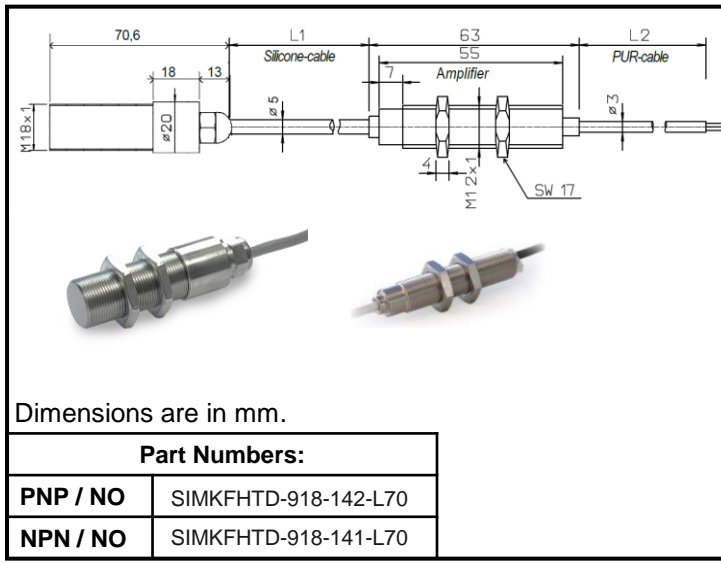


Design and technical details subject to change

# IP69k INDUCTIVE HIGH PRESSURE SENSORS



Sensing Distance: **5mm** – Housing Diameter: **M18**

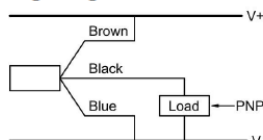


Technical Data:	
Mounting:	Flush, Ceramic face
Sensing Range in mm:	5 mm
Supply Voltage	10-35 V DC
Output function:	N.O.
Load current:	200 mA at 24V DC, 25°C
Switching Frequency:	300 Hz
Short circuit limit:	240 mA (SCP)
Cable:	L1: 2m Silicon, L2: 2m PUR
Operating temperature:	-20°C to +230°C, <=50 Bar
Target size	8 x 8 x 1 mm ST37
Hysteresis:	3 to 15%
LED:	no
Options:	Cable length, Cable type

### This sensor has the following specifications:

- \* The EMC (Electromagnetic Compatibility) resistance of the switches:  
IEC 61000-4-2 Level 2 IEC 61000-4-4 Level 2  
IEC 61000-4-3 Level 2 IEC 60255-5 1 kV
- \* Sensing range can vary +/-10 %.
- \* Voltage spikes (300 V for 1 ms, 10 Hz)
- \* All standard cables are 3 x 0.25 mm<sup>2</sup> and a length of 2 m +/- 5 %.
- \* Output capacity is 100 nF.
- \* Storage temperature -13 °F to + 176 °F (-25 °C to 80 °C).
- \* Relative humidity is 100 %.
- \* Vibration resistant to 1 mm amplitude at 55 Hz.
- \* Shock resistant to 5 g for a period of 11 ms.
- \* Degree of protection (DIN 40 050) is IP69k.
- \* Reverse polarity protection is incorporated on the supply voltage.
- \* Load resistor of 100 kOhm is incorporated.
- \* Leakage current is 200 mA at 24 V supply voltage.
- \* Residual ripple is 15 %.
- \* Voltage drop is approximately 2 V when sensor is on.
- \* Sensing face material is: Ceramic.
- \* Temperature specification for external amplifier:  
-13 °F to +140°F (-10 °C to 60 °C).

#### Wiring Diagram PNP NO



Special types and silicone free versions are available upon request

Design and technical details subject to change