

# ESS315 Pressure Sensor for Drilling System & Downhole Environment

Better Drilling with Better Data   1500bar @ 175°C   Thin Film Sputtering											
Application: Mine Drilling   Downhole Environment   Downhole Fluid & Mud											
<b>Specification</b>		<b>Dimension &amp; Connection</b>									
<b>Pressure Range</b>	0~1500bar										
<b>Power Supply</b>	5Vdc (default); 3~12Vdc										
<b>Proof-Pressure</b>	2200bar										
<b>Wetted Medium</b>	Downhole Fluid & Mud										
<b>Material of Housing</b>	17-4PH SS										
<b>Accuracy</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><b>Non-linearity</b></td> <td style="padding: 2px;">&lt;0.2%/FS</td> </tr> <tr> <td style="padding: 2px;"><b>Hysteresis</b></td> <td style="padding: 2px;">&lt;0.15%/FS</td> </tr> <tr> <td style="padding: 2px;"><b>Repeatability</b></td> <td style="padding: 2px;">&lt;0.10%/FS</td> </tr> <tr> <td style="padding: 2px;"><b>Stability</b></td> <td style="padding: 2px;">&lt;0.15%/FS/Year</td> </tr> </table>			<b>Non-linearity</b>	<0.2%/FS	<b>Hysteresis</b>	<0.15%/FS	<b>Repeatability</b>	<0.10%/FS	<b>Stability</b>	<0.15%/FS/Year
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<b>Output load Resistance</b>	1.5k Ω ~ 5k Ω										
<b>Output @ Zero</b>	≤ ±2mV@5VDC										
<b>Output @ Full Span</b>	≥ 1.4mV/V										
<b>Insulation Impedance</b>	≥ 500M Ω @250VDC										
<b>Temp.</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><b>Working Temp.</b></td> <td style="padding: 2px;">-55°C ~ 175°C</td> </tr> <tr> <td style="padding: 2px;"><b>Temp. Drift @zero</b></td> <td style="padding: 2px;">≤ ±0.015%/FS/°C</td> </tr> <tr> <td style="padding: 2px;"><b>Sensitivity Temp.drift</b></td> <td style="padding: 2px;">≤ +0.015%/FS/°C</td> </tr> </table>			<b>Working Temp.</b>	-55°C ~ 175°C	<b>Temp. Drift @zero</b>	≤ ±0.015%/FS/°C	<b>Sensitivity Temp.drift</b>	≤ +0.015%/FS/°C		
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<b>Black</b>	Power Supply Negative	<b>Green</b>	Output Positive								
<b>Red</b>	Power Supply Positive	<b>White</b>	Output Negative								
<p style="text-align: center;">Wires Length: 150mm</p>											

Connect and power on the device in strict accordance with the prescribed wiring method and power supply voltage as outlined in this specification. The maximum measured pressure must not exceed 150% of the rated value, and the burst pressure must not exceed 300% of the rated value. The measured medium should consist of gas or liquid that is non-corrosive to stainless steel. Exercise caution and refrain from using hands or any sharp objects to apply pressure or clean the pressure hole, as this may result in damage to the chip. Please be advised that this product falls under the category of measurement devices, and as such, it is strictly prohibited to subject it to impacts or drops. Disassembling the product is also not permitted. Please note that any damages resulting from these actions are not covered under the warranty. To ensure reliable sealing in underground situations, the product is accompanied by high-temperature O-rings and PEEK rings.