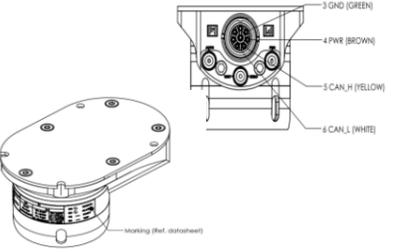
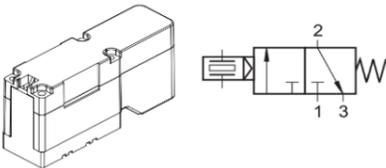
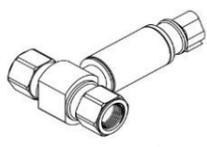
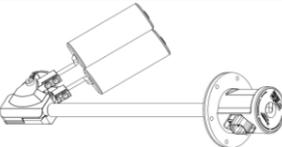


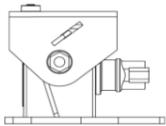
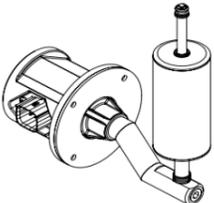
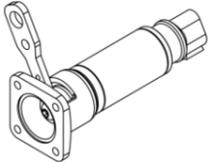
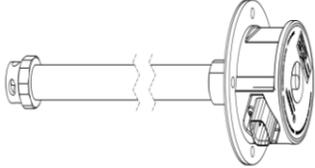
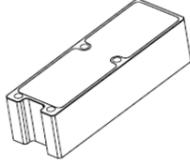
# Intrinsically Safe Sensors

NAUTITECH Intrinsically Safe sensors designed for use in Group 1 and Zone 0 allowing for safe operations in potentially explosive methane rich atmospheres. Applications include environmental monitoring, shutdown/start up system on continuous miners, roof bolters, longwall machines, and shuttle cars. All sensors are approved Ex ia, Group I IEC60079

Item #	Sensor Image	Sensor	Features	Functionality	Sensor Range / Calibration	Operating Temp	Dimensions	Electrical Specs
CX053		Gas Detector	<ul style="list-style-type: none"> <li>- Detects methane gas (0-5% v/v)</li> <li>- Non-dispersive infra-red (NDIRS) gas sensing</li> <li>- Short warm-up and fast response times</li> <li>- Digital transmission of gas concentration</li> <li>- CAN 2.0b communications interface with compatible modules</li> <li>- Highly visible patented light ring design</li> <li>- Integrated self-diagnostics</li> <li>- Event logging</li> <li>- Bluetooth wireless port (V4.0LE)</li> <li>- Location not restricted</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	Methane is measured by utilizing proven sensing elements combined with a safety processor which provides visualisation and user configurability. Gas levels and device status are digitally transmitted to compatible modules using CAN 2.0b interface	Ch4 detection 0-5% v/v	-10°C to 40°C	L: 157 mm W: 100 mm H: 77 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 160 mA Power: 1.5 W
CX105		Smart Piezo Valve	<ul style="list-style-type: none"> <li>- 3/2 Way Normally closed Valve</li> <li>- Low Power Operation</li> <li>- Manifold mounting</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	The manifold mount Piezo Valve is digitally actuated over a one wire communication interface. The digital interface also allows the transmission of the device's serial number, type and status	Process Pressure 150 kPa to 800 kPa	-20°C to 70°C	L: 75 mm W: 20 mm H: 35 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 5 mA
CX070		Differential Pressure Sensor	<ul style="list-style-type: none"> <li>- Digital compensation and transmission of Differential pressures</li> <li>- One Wire communications interface with compatible modules</li> <li>- Location not restricted</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	Process pressure is measured by utilising sensing elements combined with a signal processing circuit and is digitally conditioned and transmitted to compatible modules using a one wire digital interface	Configured for Common Mode Pressures up to 20 MPa	-20°C to 120°C	L: 128 mm W: 80 mm H: 29 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 10 mA
CX051		Temperature Sensor	<ul style="list-style-type: none"> <li>- Intelligent temperature sensor</li> <li>- Digital interface</li> <li>- Serial number is remotely readable</li> <li>- Sensor type is remotely readable</li> <li>- Explosion protected, CoC</li> <li>- Elevated ambient temperatures</li> <li>- Thermal response options</li> <li>- Safety file available</li> <li>- Suited for safety shutdown systems in hazardous environments such as underground coal mines and diesel machinery</li> </ul>	Temperature is measured by resistance temperature elements and signal processing circuits. The output is a digital signal which must be polled by a compatible module	Temperature Range -20°C to 150°C	-20°C to 120°C	L: 128 mm W: 80 mm H: 29 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 6 mA
CX050		Speed Sensor	<ul style="list-style-type: none"> <li>- Intelligent speed (RPM) sensor</li> <li>- Digital interface</li> <li>- Serial number is remotely readable</li> <li>- Sensor type is remotely readable</li> <li>- Explosion protected, CoC</li> <li>- Elevated ambient temperatures</li> <li>- Suited for direct installation in hazardous environments such as underground coal mines and diesel machinery</li> </ul>	<p>I.S pulse sensor detects the motion of ferromagnetic objects (typically gear teeth) moving past its sensing tip. Pulses generated by the sensor are converted into a digital signal that may be scaled and offset to reflect the speed of the passing object.</p> <p>The speed sensor (SSG) has been designed specifically for measuring engine RPM whilst operating safely in potentially explosive methane rich atmospheres</p>	Factory configured, calibrated, and tested. Speed Range 0-2400 RPM	-40°C to 110°C	L: 125 mm W: 29 mm H: 29 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 7.5 mA
CX075		Cantilever Level Sensor	<ul style="list-style-type: none"> <li>- Redundant level sensor elements and floats</li> <li>- Digital interface</li> <li>- Serial number is remotely readable</li> <li>- Sensor type is remotely readable</li> <li>- Explosion protected, CoC</li> <li>- Elevated ambient temperatures</li> <li>- Thermal response options</li> <li>- Safety file available</li> <li>- Suited for safety shutdown systems in hazardous environments</li> </ul>	Level is determined by measuring the position of a magnet present in each of the float arms and with is conditioned by signal processing circuits. The output is a digital signal which must be polled by a compatible module	Level determined by magnet positioned in each float arm	-40°C to 120°C	L: 128 mm W: 80 mm H: 29 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 13 mA

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Item #	Sensor Image	Sensor	Features	Functionality	Sensor Range / Calibration	Operating Temp	Dimensions	Electrical Specs
CX055		Angle Sensor	<ul style="list-style-type: none"> <li>- Digital compensation and transmission of Angle</li> <li>- One Wire communications interface with compatible modules</li> <li>- Explosion protected</li> <li>- Location not restricted</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	Process Angle is measured by utilising sensing elements combined with a signal processing circuit and is digitally conditioned and transmitted to compatible modules using a one wire digital interface.	Preconfigured for selected range	-20°C to 120°C	L: 119 mm W: 111.1 mm H: 90 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 6 mA
CX087		Make-up Tank Level Sensor	<ul style="list-style-type: none"> <li>- Measures process level</li> <li>- Measures process temperature (optional)</li> <li>- Digital interface</li> <li>- Serial number is remotely readable</li> <li>- Sensor type is remotely readable</li> <li>- Explosion protected, CoC</li> <li>- Elevated ambient temperatures</li> <li>- Safety file available</li> <li>- Suited for safety shutdown systems in hazardous environments</li> </ul>	The sensor consists of two independent circuits allowing different process variables. Temperature is measured using an element located at the base of the shaft. Level is determined by measuring the pressure produced from displacing a column of water and is conditioned by signal processing circuits. Output is a digital signal which must be polled by a compatible module	Calibrated and tested, ready to use no site configuration required	-40°C to 120°C	L: 200 mm W: 100 mm H: 235 mm <i>Dimensions variable to suit applicaiton</i>	Applied Voltage: 7.0 - 9.0 VDC Current: 13 mA
CX052		Absolute Pressure Sensor	<ul style="list-style-type: none"> <li>- Digital compensation and transmission of pressures</li> <li>- One Wire communications interface with compatible modules</li> <li>- Explosion protected</li> <li>- Location not restricted</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	Process Pressure is measured by utilising a sensing element combined with a signal processing circuit and is digitally conditioned and transmitted to compatible modules using a one wire digital interface	Configured for Pressures up to 20 Mpa. Variants possible for absolute pressure ranges from 200 kPa - 35,000 kPa	-20°C to 120°C	L: 114 mm W: 29 mm H: 29 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 6 mA
CX086		Position Sensor	<ul style="list-style-type: none"> <li>- Digital compensation and transmission of Position</li> <li>- One Wire communications interface with compatible modules</li> <li>- Explosion protected</li> <li>- Location not restricted</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	Process Position is measured by utilising sensing elements combined with a signal processing circuit and is digitally conditioned and transmitted to compatible modules using a one wire digital interface	Preconfigured for selected range but calibration required after installation	-20°C to 120°C	L: 119 mm W: 111.1 mm H: 90 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 6 mA
CX080		Level Temperature Sensor	<ul style="list-style-type: none"> <li>- Measures process level</li> <li>- Measures process temperature</li> <li>- Digital interface</li> <li>- Serial number is remotely readable</li> <li>- Sensor type is remotely readable</li> <li>- Explosion protected, CoC</li> <li>- Elevated ambient temperatures</li> <li>- Safety file available</li> <li>- Suited for safety shutdown systems in hazardous environments</li> </ul>	The sensor consists of two independent circuits allowing different process variables. Temperature is measured using an element located at the base of the shaft. Level is determined by measuring the pressure produced from displacing a column of water and is conditioned by signal processing circuits. Output is a digital signal which must be polled by a compatible module	Calibrated and tested, ready to use no site configuration required	-40°C to 120°C	L: 1100 mm W: 100 mm H: n/a <i>Dimensions variable to suit applicaiton</i>	Applied Voltage: 7.0 - 9.0 VDC Current: 13 mA
CX071		Manifold Pressure Sensor	<ul style="list-style-type: none"> <li>- Digital compensation and transmission of absolute pressures</li> <li>- One Wire communications interface with compatible modules</li> <li>- Explosion protected</li> <li>- Location not restricted</li> <li>- Manifold mounting</li> <li>- Suited for direct installation in hazardous environments</li> </ul>	Process pressure is measured by utilising sensing elements combined with a signal processing circuit and is digitally corrected and transmitted to compatible modules using a one wire digital interface	1. Pressure Range 0-700 kPa 2. Pressure Range 0-100 MPa	-20°C to 70°C	L: 78 mm W: 25 mm H: 24 mm	Applied Voltage: 7.0 - 9.0 VDC Current: 10 mA