

Emerson Subsea Product Portfolio

Whether you're in the Fixed, Floating, Marine or Subsea Production facility environment, production control, energy costs and maintenance create daily challenges that Emerson's portfolio can assist in your production optimization. For more information, please contact subsea@emerson.com.

Multiphase Metering



ROXAR

Subsea Wet Gas · Protecting your Subsea Gas Well

The ultimate solution for securing and optimizing production for gas and gas condensate wells – enabling cost effective field development concepts by reducing integrity risk and improving flow assurance.



ROXAR

Multiphase Metering

The broadest range of measurement and analytical technologies takes operators through the entire reservoir life cycle from interpretation of geological data through to collection and analysis of real-time production data.

- Continuous well flow monitoring for Oil & Gas production metering systems

Flow Assurance



TESCOM

Chemical Injection Flow Control

TESCOM's 56 Series chemical injection flow control valves utilize an integrated microprocessor based PID controller that brings precise algorithmic control to chemical injection systems. This technology provides responsive control that can prevent issues associated with over and under injection in flow assurance systems while lowering maintenance costs.

- Flow rates up to 40 GPM
- Pressures up to 20,000 PSI
- Closed loop PID Control



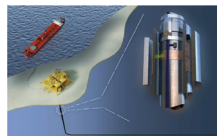
ROXAR

Sand Erosion, Acoustic Sand, and Corrosion Monitoring

Accurately determine the short and long-term effects of damage caused by sand and corrosion in order to maintain asset integrity and provide vital insights to optimizing oil & gas production.

- Pressures up to 15000 PSI (Sand) / 10000 PSI (Corrosion)
- Add pressure & temperature sensing for more insights
- 10000 ft water depth

Downhole/Reservoir Monitoring



ROXAR

Downhole Instrumentation Network

Roxar technology allows the implementation of a robust, efficient and reliable downhole network for multiple in-well instruments such as PT sensors, inflow control valve position indication, watercut measurement, flow density and full multiphase measurement downhole. Fully IWIS compliant for standardized subsea controls interfacing.

Downhole Wireless PT Sensor System · Annulus B

Real time monitoring of pressure and temperature of the B Annulus behind the casing of subsea wells to provide operators with a new, robust tool for achieving well integrity goals.

Regulators



TESCOM™

Hydraulic Power Fluid Control

TESCOM™ regulators, valves and systems deliver a wide range of standard and custom engineered pressure control solutions for a diverse world market. You can count on expert application and customer support ranging from single point solutions to complex projects.

- Precision Topside and subsea regulators for up to 30,000 PSI
- Robust high pressure 2 & 3 way valves
- Electro-pneumatic options for automated closed loop pressure control

Pressure/Temperature and Differential Pressure



ROXAR™

Pressure and Temperature Sensors

Piezoresistive sensing technology maintains high accuracy and stability in fluctuating processes. Fully-redundant configurations (PTPT) provide reliable long term production measurements in harsh subsea environments.

- Pressures up to 15000 PSI
- Accuracy up to $\pm 0.02\%$ of full scale range within calibrated temperature range
- 10000 ft water depth



PAINE™

Subsea Pressure and Temperature Measurement Solutions

Digital sensors that are fully submersible and designed to withstand the rigors of day to day subsea operations. Pressure and temperature measurement solutions to reduce space, lower installation costs and increase process performance in remote subsea applications.

- Differential pressure range: Up to 10K PSID (690 BAR) & Up to 30K PSIA (2068 BAR)
- Environments: Up to 6,000 PSI (414 BAR); +25°F to +175°F (-4°C to +80°C)
- Digital Outputs: CANopen®, CIA 443 (fault tolerant SIIS Level 2)
- Pressure Resolution: 16 bits minimum Temperature Resolution: 13 bits minimum, ($< 0.05^\circ\text{F}$)



ROSEMOUNT™

Differential Pressure Transmitter

Ultra-compact differential pressure transmitter that leverages advanced capacitive sensing and high pressure remote seal technologies to deliver industry leading performance and reliability in subsea applications.

- Accuracy $\pm 0.055\%$ of calibrated span
- Up to 150 PSI differential pressure range
- Static pressure up to 15000 PSI
- Remote diaphragm seals eliminate hydrate formation with operation up to 200°C
- 10000 ft water depth

Actuations



BETTIS™

Subsea Scotch Yoke Actuators

Symmetrical scotch yoke mechanism, with a 40 year design history, provides quarter-turn rotation with a safety feature, positively locking the spring module in place under load.

- Rated up to 5,000 PSI operating pressure
- Designed for depths in excess of 10,000 ft.
- Capable of 6MM in lbs. in dual acting and 3MM in lbs. for spring-return torques



DANTORQUE™

Compact Subsea Actuators and Gearboxes

Available in quarter-turn rotation based on the helical spline and are perfectly suited for subsea applications. The actuators with 26 year design history are precisely designed, compact, concentric and produce perfectly balanced torque to the valve stem.

- Qualified for projects at 10,000 ft. +
- Available in double acting and spring-return, and for torques up to 3.6MM in lbs.



SHAFER™

Subsea Rotary Vane Actuators

Available in double acting and balanced quarter-turn torque without the need for any internal gearing or power conversion mechanism. This subsea actuator is extremely efficient and compact, and does not require pressure compensation.

- Rated up to 3000 PSI operating pressures
- Qualified to depths of 3000 ft.
- Capable of up to 5MM in lbs. of torque (dual acting only)