



OpreX™ Field Instruments

For Marine Industry



YOKOGAWA's Field Instruments Are Very Useful in **Marine Applications**

**Acquired Marine Approval
Expand to Field Instruments**

SELECTION GUIDE

Model Name	EJX / EJA series	YTA series	ROTAMASS TI series	ADMAG TI series AXG/AXW	VY series
Device Type	Differential pressure / Pressure transmitter	Temperature transmitter	Coriolis mass flowmeter	Magnetic flowmeter	Vortex flowmeter
Measurement	Pressure measurement (Gauge / Absolute pressure)	Temperature measurement	Mass flow / Density measurement	Flow measurement	Flow measurement
Fluid Type	Liquid / Gas / Steam	Liquid / Gas / Steam	Liquid / Gas	Liquid	Liquid / Gas / Steam
Marine Approval		✓	✓	✓	✓
		✓			✓
		✓			
		✓			
		✓	✓	✓	
Accuracy (Reading)	EJX-A: ±0.04% EJX-J: ±0.075% EJA-E: ±0.055% EJA-J: ±0.1%	YTA710 : ±0.1°C YTA610: ±0.14°C When PT100 is selected (Excluding D / A accuracy)	Liquid: Ultimate: ±0.1% Liquid: Essential: ±0.15% Gas: Ultimate: ±0.35% Gas: Essential: ±0.75%	AXG: ±0.3 % AXW: ±0.35%	Liquid: ±0.75% Gas / Steam: ±1.0%
Process Temperature	-40 ~ 120°C	-200 ~ 2300°C	-196°C~350°C	-40 ~ 160°C	-196 ~ 450°C
Process Pressure	EJX110A/EJX110J: MAX 250bar EJA110E/EJA110J: MAX 160bar	—	MAX 360bar	MAX 40bar	MAX 248bar
IP Protection Grade	IP66/67	IP66/67	IP66/67	IP66/67, IP68	IP66/67
Output Signal	4 ~ 20mA	4 ~ 20mA	4 ~ 20mA Pulse / Frequency / Status	4 ~ 20mA Pulse / Frequency / Status	4 ~ 20mA Pulse / Frequency / Status
Communication Protocol	HART	HART	HART MODBUS	HART MODBUS	HART
Supply Voltage	10.5 ~ 42V DC	10.5 ~ 42V DC	24 or 100-240 V AC 24 or 100-120 V DC	20.4 ~ 28.8 V AC 80 ~ 264 V AC 20.4 ~ 28.8 V DC 90 ~ 130 V DC	10.5 ~ 42V DC
Housing Material	Aluminum alloy Stainless steel	Aluminum alloy Stainless steel	Aluminum alloy Stainless steel	Aluminum alloy Stainless steel	Aluminum alloy
Diagnostic Function	✓	✓	✓	✓	✓
SIL	SIL2	SIL2	SIL2 / 3 (with HFT1)	SIL2	SIL2

[✓ : Supported] [Blank : Not Supported]

*Corresponding ship class standards, accuracy, process temperature / pressure, materials, communication specifications, etc. differ depending on the model name, additional specifications, etc.
*ADMAG AXG / AXW : Some are special specifications, so please contact our sales office when ordering

Classification Society

An organization that recognizes that the hull, equipment, and engine of a ship are in good condition, and establishes rules for ship class registration and inspects them.

Ship Class Standard

A standard established by the ship classification associations of each country based on the unified requirements set by the International Association of Classification Societies (IACS). Products and materials used on ships must be inspected and approved by the classification society according to their type and application.

EU RO MR

A mutual recognition system that can be mounted on registered ship class among 12 classification societies if the certificate issued by 12 classification societies around the world is appropriate. We also use this certification system for some products.



Engine Room [Liquid / Gas]



Location of the Engine Control, Generator, Desulfurization Equipment, etc., Known as the Power Source

Cargo Tank [Liquid]

Tank that can Store Various Supplies

Robustness for Safe and Secure Operation

Fuel Pressure Measurement, Temperature Measurement

Pressure Transmitter DPharp EJX/EJA Series
 • High Accuracy, Long Term Stability

Temperature Transmitter YTA Series
 • High Accuracy, Improved Visibility in the Field



Report on Fuel Consumption to Protect the Environment

Measurement of Fuel Consumption

Coriolis Mass Flowmeter ROTAMASS TI Series
 • High Accuracy, Self Diagnostic Function

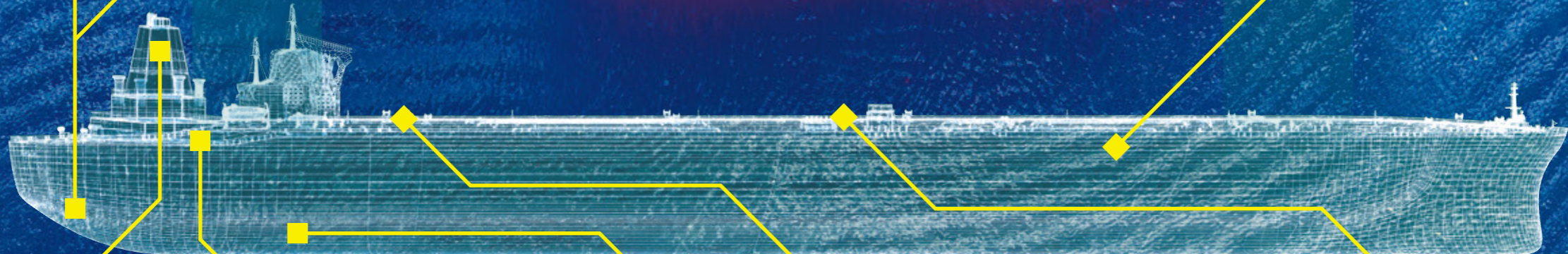


Quality that Can Be Thoroughly Managed

Temperature Control and Pressure Measurement Inside the Tank

Temperature Transmitter YTA Series
 • High Accuracy, Improved Visibility in the Field

Pressure Transmitter DPharp EJX/EJA Series
 • High Accuracy, Long Term Stability



SOx Scrubber [Liquid]



Equipment that Controls the SOx of the Exhaust Gas of a Ship Air Pollution Control

Flow Rate Measurement of the Cleaning Seawater

Magnetic Flowmeter ADMAG TI Series
 • Abundant Wetted Part Materials
 Self Diagnosis Function

Boiler Control [Steam]



Combustion Management at Optimal Mixing Ratio Measures Against Global Warming

Steam Flow Rate / High Temperature / High Pressure Measurement

Pressure Transmitter DPharp EJX / EJA Series
 • High Accuracy and Long-Term Stability
 Vortex Flowmeter VY Series
 • High Temperature, High Pressure Resistance, Mass Flow Rate [Steam]

Ballast Water Treatment System [Liquid]



System that Purifies Ballast Water Prevention of Cross-Border Movement of Marine species

Measurement of Inflow and Outflow

Magnetic Flowmeter ADMAG TI Series
 • Abundant Wetted Part Materials
 Self Diagnosis Function
 Pressure Transmitter DPharp EJX / EJA Series
 • High Accuracy and Long-Term Stability

Fuel Gas Supply System (FGSS) [Liquid / Gas]



LNG Fuel Supply System for Marine Main Engines that Supply LNG as Fuel Reduction of Environmental Impact through Advanced Process Control

Differential Pressure / Pressure Measurement on Engine Fuel Supply Process

Pressure Transmitter DPharp EJX / EJA Series
 • High Accuracy and Long-Term Stability

Re-liquefaction System [Liquid / Gas]



System that "Re-Liquefies" Boil-Off Gas Vaporized from Liquefied Natural Gas and Maintains the Liquefied State in the Storage Tank of a Ship Reducing the Environmental Load by Recycling Resources

Differential Pressure / Pressure Measurement for Re-Liquefaction Process Control

Pressure Transmitter DPharp EJX / EJA Series
 • High Accuracy and Long-Term Stability

