

EXACT-MODEL ENGINEERING SUMMARY

Honeywell TA3840C

Marine Communication Rack

Honeywell TA3840C centralizes marine tank-gauging measurements and delivers calculated level, volume, pressure and temperature data to shipboard monitoring systems.

SYSTEM CONTEXT Honeywell marine fixed tank gauging

Verified highlights

- Up to 64 cargo tanks
- Up to 96 auxiliary instrument inputs
- EMS and Modbus RTU output
- 12U and 21U rack versions

Functional signal path

FIELD / SYSTEM INPUT

Sensor acquisition: Marine radar, analog transmitters, pressure, temperature, trim and heel signals

EXACT-MODEL INTERFACE

I/O expansion: Analog input boards or multifunction I/O boards in the two available slots

INTERNAL PROCESSING

System output: EMS and Modbus RTU data for gauging software and loading systems

CONTROL-SYSTEM RESULT

Operator access: Function keyboard and LCD display for measurement and alarm data

Verified technical matrix

Rack format	Standard 19-inch rack	Multifunction I/O option	8 x 4-20 mA, 24 binary outputs, 16 binary inputs
Rack sizes	12U and 21U	Serial channels	4
Cargo-tank capacity	Maximum 64 tanks	Operating temperature	5 to +70 degrees C
Other instrument inputs	Up to 96	Communication outputs	EMS; Modbus RTU
Analog input option	One or two 4-20 mA boards; 48 channels	On/off output capacity	Up to 48 outputs; 250 VAC / 1250 VA relay contacts

Engineering boundary

Only the values shown in the exact-model source set are stated. Final settings, wiring, firmware, companion devices and safety functions must be matched to the installed system before energization.

Interfaces and system relationships

INTERFACE 1

Sensor acquisition: Marine radar, analog transmitters, pressure, temperature, trim and heel signals

INTERFACE 2

I/O expansion: Analog input boards or multifunction I/O boards in the two available slots

INTERFACE 3

System output: EMS and Modbus RTU data for gauging software and loading systems

INTERFACE 4

Operator access: Function keyboard and LCD display for measurement and alarm data

Where the module is used

Cargo tank monitoring

Combines ullage, level, pressure and temperature measurements for cargo visibility.

Ballast management

Processes ballast, draft, trim and heel signals used to monitor vessel balance.

Loading-computer integration

Provides calculated tank data to connected shipboard loading and gauging software.

Control-room indication

Presents measurement and alarm information locally on the rack display.

Engineering checks and diagnostic decisions

1

Missing sensor value: verify channel assignment, field power, signal type and terminal continuity.

2

Incorrect tank calculation: recheck tank table, sensor mapping and trim/list input validity.

3

No EMS data: confirm selected serial channel, rate, framing and conductor polarity.

4

No Modbus RTU response: inspect address, protocol settings, termination and receiver wiring.

5

Output does not switch: compare configured function with relay contact assignment and load rating.

6

Display and loading system disagree: compare raw input, calculation basis and transmitted register.

Evidence ledger

SOURCE 1

Honeywell Communication Interface Unit product page for TA3840C

SOURCE 2

Honeywell PMC Marine Solutions brochure, fixed tank gauging communication-rack architecture

Engineering FAQ

Q1 What measurement role does Honeywell TA3840C perform?

TA3840C centralizes fixed marine gauging signals and calculates level, volume, pressure, temperature, trim and heel data for connected ship systems.

Q2 How many cargo tanks can Honeywell TA3840C handle?

The communication rack supports measurement signals from a maximum of 64 cargo tanks.

Q3 How many additional instrument inputs can Honeywell TA3840C accept?

Its stated capacity includes up to 96 inputs from other instruments.

Related products

Verified related products on ApterPower

Honeywell TMG740-3-MOD-43-35

Honeywell portfolio reference

[View Honeywell TMG740-3-MOD-43-35](#)

Honeywell C7076A1015

Honeywell portfolio reference

[View Honeywell C7076A1015](#)

Honeywell EC7850A1072

Honeywell portfolio reference

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Contact Apter Power

PHONE +86 180 3023 5313

EMAIL sales13@apterpower.com

WEBSITE www.apterpower.com



Share the exact TA3840C nameplate, application and required quantity for a model-specific quotation.