



Photo courtesy of Bumi Armada

Jastram Rudder Angle Indicators

X80 Series

The X80 Series Rudder Angle Indicators are produced to fill the requests of vessels operators and to meet Classification Societies' requirements.

The X80 Indicators come in 3 sizes to fit all bridge applications. In a system up to five indicators can be used with a mixture of forward and reverse scale meters.

The 2 main components in a Jastram X Series RAI system are:

1. Rudder Angle Indicator(s)
2. Rudder Feedback Unit (RFU)

RAI 3300

The largest of the series is the 3300 overhead three faced panoramic indicator. These are stand alone systems comprised of three main components:

1. A three faced panoramic Rudder Angle Indicator (RAI 3300)
2. RAI 3300 power supply
3. Rudder Feedback Unit

The X80 Series

- Wheelmark and MED Approved
- Dimmable backlit analog display
- Designed to be flush-mounted into any convenient panel or console
- Reverse scale indicators are available for aft facing stations
- Indication up to 50 degrees port and starboard
- Drive up to five indicators from one feedback

Rudder Feedback Units for the X80 Series are:

RFU 400 Commercial potentiometer and driver board

RFU 1300 Hall effect device, driver board and limit switches (used with control system)

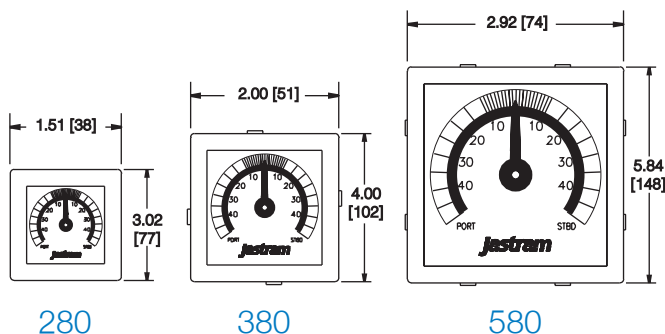
RFU 2000 Commercial potentiometer, driver board and limit switches (used with control system)

IP Ratings:

- X80's are rated for IP52 protection (to the face)
- Optional seal kits available for IP66 protection (to the face)
- Optional 580 Bulkhead Mount version available for IP66 to the whole indicator

X80 Signal Inputs:	0 Volts at 0 Degrees
	±1 Volts at ±50 Degrees
	1 kΩ input resistance
Power Supply:	24VDC, Max 150 mA
Cable:	18 AWG, 4 wire, shielded

X80 Models & OADs



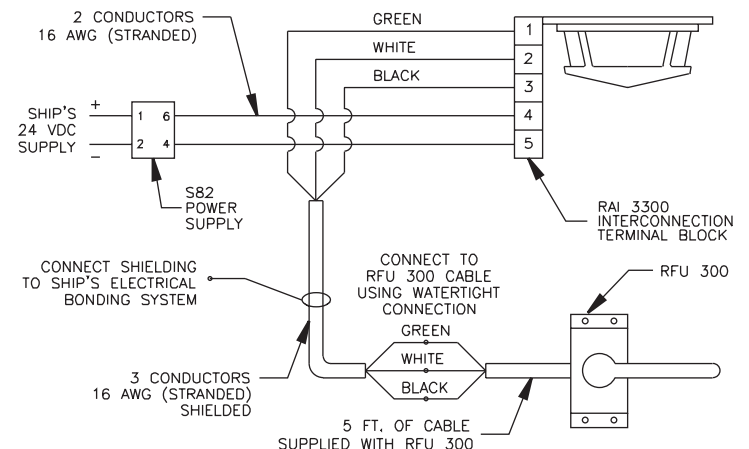
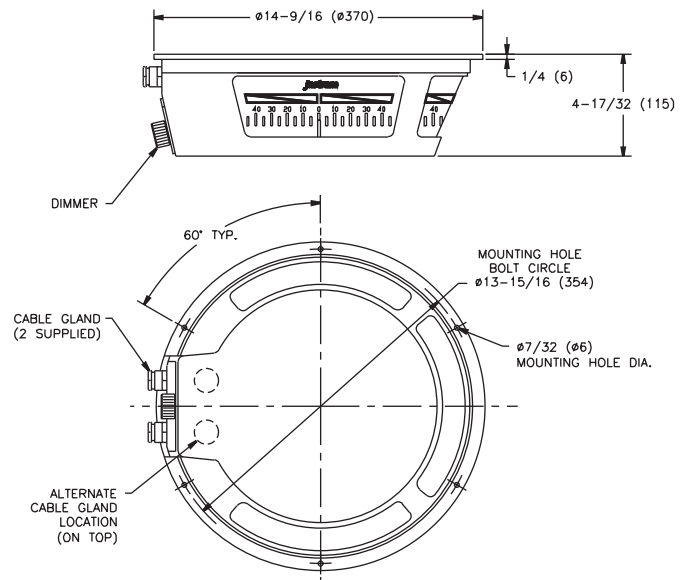
The RAI 3300

- Accurately shows the position of the rudder on three large scale analog displays
- Built-in dimmer allows for adjustment of the backlight
- Deckhead mounted at any convenient location in the wheelhouse
- Two Power Supply options are available
 - * Input voltage of 12-24 VDC and outputs 24 VDC
 - * Input voltage of 100- 40 VAC and outputs 24 VDC
- Cable requirements 16 AWG, 3 wire, shielded

Rudder Feedback Units for the RAI 3300 are:

RFU 300 Commercial potentiometer

RFU 2000 Commercial potentiometer, driver board and limit switches (used with control system)



Data is subject to change without notice.