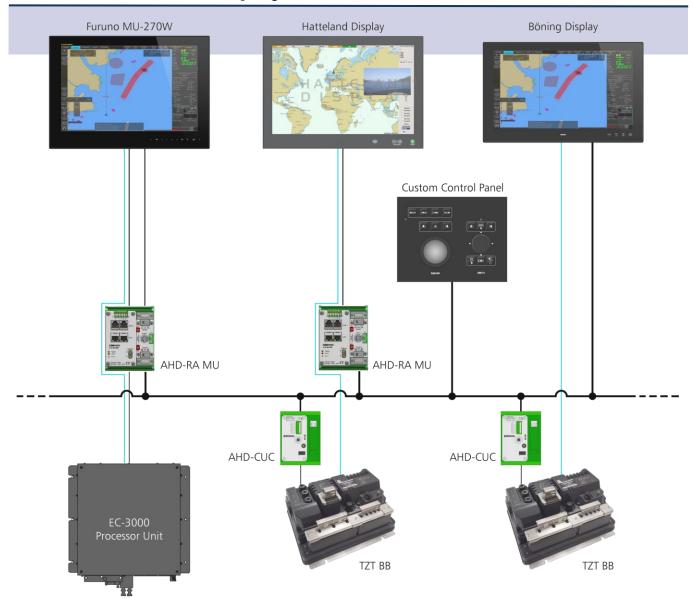
# AHD-RA MU V2 Remote Control of Displays



- Integration of displays from third-party manufacturers
- Switching and control of display panels via the Böning Control-CAN
- Integrated failsafe switch allows normal function in case of device failure

AHD RA MU allows the remote control of selected Hatteland and Furuno displays via the Control CAN bus of Böning systems (other display manufacturers on request).

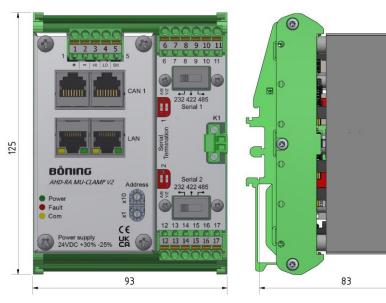
In the case of a device failure, the data are automatically forwarded so that the normal operating function is ensured at all times.

As far as the protocols of the connected displays allow, the following functions are available:

- Use of common dimming settings. The displays may still be dimmed individually.
- Display power on/off by remote control.
- Selection of the video source (depending on the display type)
- General control commands can be sent on the CAN bus to any display. This is independent of the display type and the connected processor unit.



#### **Views and dimensions**



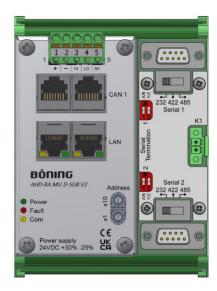


Fig. AHD-RA MU D-SUB

Fig. AHD AHD-RA MU

## Pin assignment AHD-RA MU CLAMP

Serial 1	6	7	8	9	10	11	Serial 2	12	13	14	15	16	17
RS232	TX	RX	GND	NC	NC	-	RS232	TX	RX	GND	NC	NC	-
RS422 (4wire)	Y+(Tx)	Z-(Tx)	GND	A+(Rx)	B-(Rx)	-	RS422 (4wire)	A+(Rx)	B-(Rx)	GND	Y+(Tx)	Z-(Tx)	-
RS485 (2wire)	NC	NC	GND	A+/Y+	B-/Z-	-	RS485 (2wire)	NC	NC	GND	Y+/A+	Z-/B-	-

### Pin assignment AHD-RA MU D-SUB

		_											_						
Serial 1	1	2	3	4	5	6	7	8	9	Serial 2	1	2	3	4	5	6	7	8	9
RS232	-	Rx	Tx		GND				-	RS232	-	Tx	Rx		GND				-
RS422 (4wire)	-			Z-(Tx)		B-(Rx)	Y+(Tx)	A+ (Rx)	-	RS422 (4wire)	-			B-(Rx)		Z-(Tx)	A+(Rx)	Y+(Tx)	-
RS485 (2wire)	-					B-/Z-		A+/Y+	-	RS485 (2wire)	-					Z-/B-		Y+/A+	-

#### **Technical Data**

Dimensions	93 mm x 125 mm x 83 mm (Allow additional depth of approximately 80 mm for connectors and wiring)						
Weight	Ca. 0.35 kg						
Ambient temperature	-20°C +60°C						
Storage temperature	-30°C +80°C						
Protection class	IP 22 (front)						
Power supply	24 V DC (+30% / -25%)						
Current consumption	Max. 140 mA (24 V DC)						
Installation	DIN rail						
Item number 21377 21378	AHD-RA MU V2 (D-Sub) AHD-RA MU V2 (Clamp)						

Interfaces	1 x CAN: CAN1- connection via 2 x RJ45 (In/Out) or terminals no. 3-5
	1 x LAN: Connection via 2 x RJ45 (pass- through via integrated switch)
	2 x serial (NMEA 0183) Depending on version, routed out to SUB-D9 or clamp RS 232/422/485 selectable by switch, termination can be activated on the device.
Output (NO)	1 x relay contact (on K1, pin 1-2)