

# Linhai Yida Electronics Co., Ltd

## Rudder Angle Indicator Complete Set (45C-0183/ RD-0183)

### Manual

#### I . General

High-precision angle sensor is applied to transmitter, generating digital signal output; RS422 NMEA 0183 format will be output by MCU, MCU employed in rudder meter will convert the digital signal and drive the step electric motor inside, indicating corresponding  $\pm 0\sim 45^\circ$  rudder angle.

#### II . Technical Parameters

Working Volt: DC22~32V (standard DC24V)

Working Temp:  $-10\sim 60^\circ\text{C}$

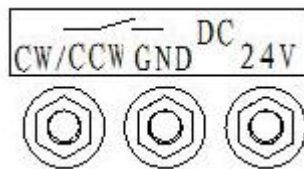
Range:  $\pm 0\sim 45^\circ$




Deviation:  $< 1^\circ$

Anti-fog class: 35

#### III. Installment and Commission

1. Install transmitter: connect the rod with transmitter, turn left and right of the transmitter, make sure the meter indication comply with transmitter, if opposite, change the signal-output cable. Position the transmitter by using mounting plate until the indication is correct.
2.  $0^\circ$  check: place the rudder blade at  $0^\circ$ , adjust the transmitter to  $0^\circ$  (Note: the  $0^\circ$  of rudder blade and transmitter must be correctly checked, or the precision will be reduced); later, install meter and connect the power(DC24V) cable(must be correct); next, connect the cables of transmitter to rudder meter, blue for A + , green for B - , black for GND, red for 12v. Turn power on after finishing the correct connection, the meter will display  $0^\circ$  (note: the  $0^\circ$  has been checked, please don't adjust it again).
3.  $\pm 45^\circ$  adjustment: place the rudder blade at full degree, check the meter and adjust the rod to make sure the  $\pm 45^\circ$  correct.
4. The  $0^\circ$  of rudder blade and transmitter must be correctly checked, or the indication difference (left and right) of the meter will be big.



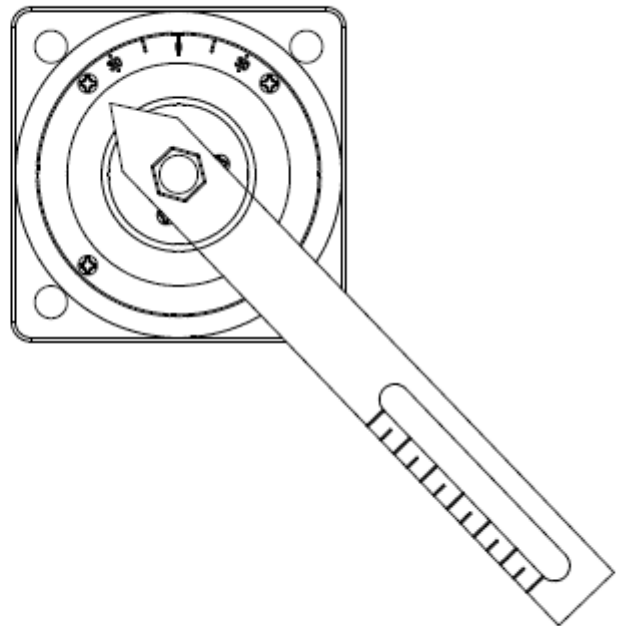
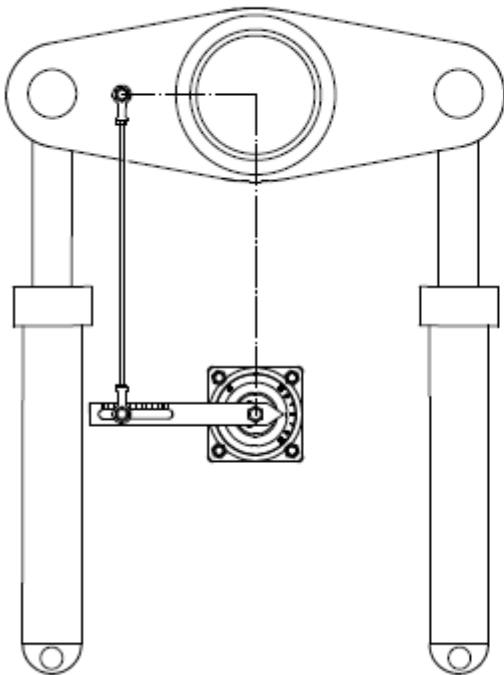
5. CW/CCW and GND    , if the pointer indicates opposite direction with rudder angle, please connect CW/CCW with GND for one time, the indication will go with rudder angle direction.
6. DIM: for the light adjustment, UP and DOWN; POWER: shows power on; WORK: indicates communication is in process.

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## IV. Trouble Shooting

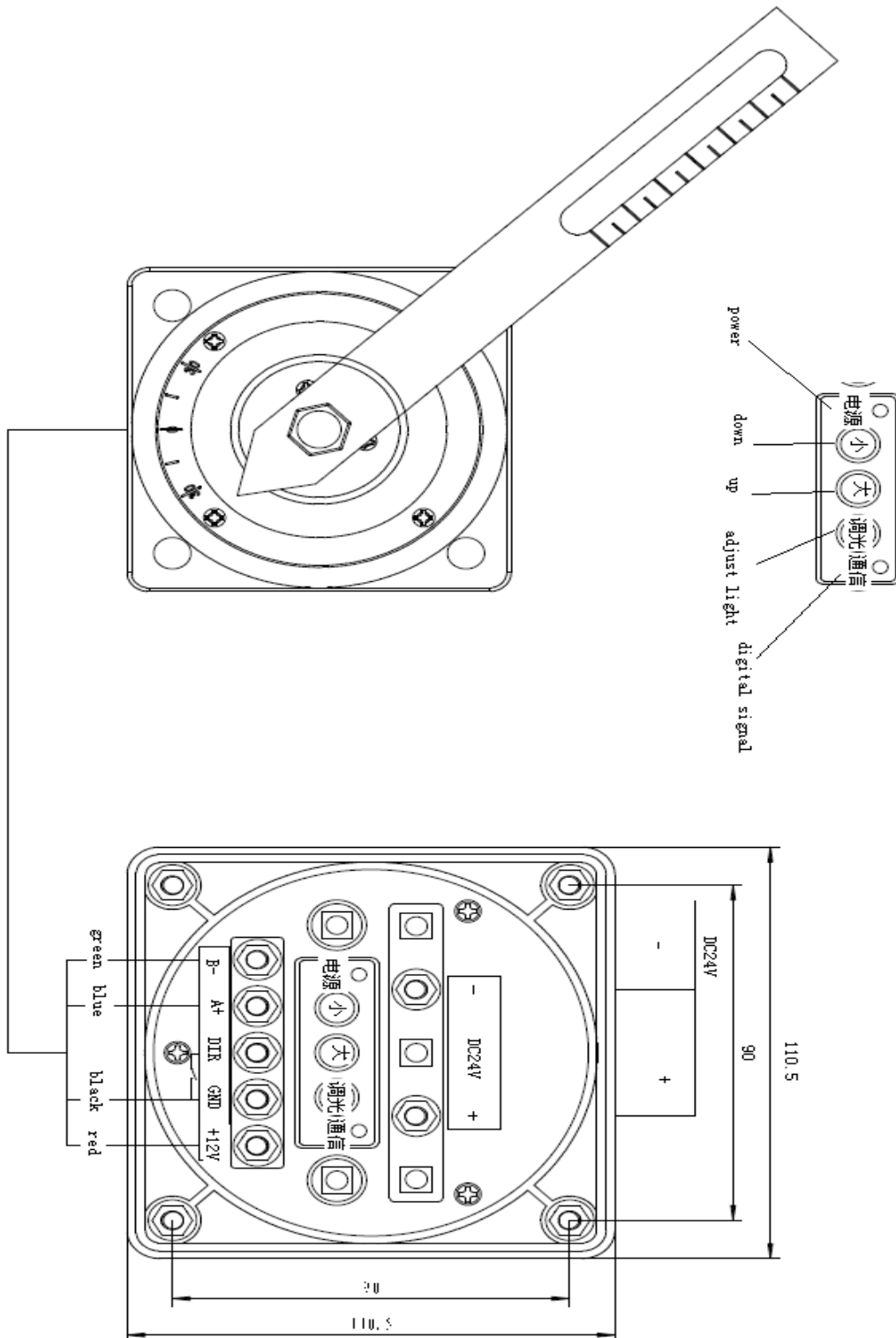
Items	symptoms	causes	solutions
1	Meter: no display, light off	Check the power cable connection	Connect the power cable well and correct
2	Light on but meter no display	check 12v and WORK indication and transmitter	First check 12v on rudder meter, second, check transmitter connection, if Work indication flashes, the rudder meter is broken.
3	Too big or small angle between left and right	rod	Adjust the rod
4	0° not correct	Check 0° of transmitter	Correctly adjust the 0° of rudder blade and transmitter

## V. Installment Dimension



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45C-0183



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