



**CDRY-NTA855 TYPE
MARINE ELECTRONIC FLEXIBLE SHAFT
REMOTE CONTROL DEVICE SERVICE
INSTRUCTION**

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A, General

- 1, Characteristic: CDRY type M/E remote control device, which is divided into two kinds of operating consoles, as flush-type (may be integrated to WH/C) and floor-type, it may remote control M/E governing and gearbox reversing in W/H (or at other 4 different positions), it also may manual control M/E governing and gearbox reversing;
- 2, Structural Composition:
 - ① External dimension of flush-type is: Length 580 *Width 500 *Depth 800mm, or specially manufacture according to customer's requirements.
 - ② External dimension of floor-type is :Length 580 *Width 500 *Aft height 900mm,or specially manufacture according to customer's requirements.
 - ③ Composition of the unit: electronic flexible shaft manoeuvring system, main propulsion set state indication unit(possessing functions as gearbox ahead, astern indication and dimmer); power supply is DC24V),auxiliary engine telegraph unit, extension alarm unit, emergency light telegraph (selective)
- 3, Type: CDRY-M/E type
- 4, Applied type: main propulsion set which is composed by middle high speed diesel engine and gearbox.
- 5, Product classification:single engine manoeuvring type and computer double engine manoeuvring type.
- 6, Ambient condition:
 - 6.1 Ambient temperature : -10℃ ~+55℃
 - 6.2 Relative humidity: relative humidity is 95% under the condition that ambient temperature is +40C.
 - 6.3 Atmospheric pressure: 86~106kpa
 - 6.4 Vibration: 2~13.2Hz displacement ±1mm
13.2~80Hz acceleration ±0.7g
 - 6.5 Working Voltage: DC24V(-10%~+6%)
Battery DC24V± 20%
 - 6.6 Working Current : <30A

B, Main Performance

- 1, Electronic flexible shaft manoeuvring system is imported from America MORSE Company, manoeuvring system's classification as follows:
 - ① KE - 4 type manoeuvring device

Manoeuvring positions:5 positions at most.

Mode of manoeuvring : from manoeuvring position to engine room control box and engine room driving box is connected by cable, engine room driving box may drive M/E governing flexible shaft and gearbox reversing flexible shaft, to proceed governing and reversing of main propulsion set.

Composition: Manipulator(installed in W/H ,standard configure 1 piece)1 piece
Engine room control box(installed in engine room,IP44)1 piece
Engine room driving box(installed in engine room,IP44)1 piece
Connection flexible shaft(standard configure 2m,installed in engine room) 2 pieces
Flexible-shaft connection accessory (flexible-shaft union joint and press code, installed in engine room) each 2 pieces / engine / engine
Controlled member: M/E governor is lever-type 0-45° revolution mode.
Gearbox is $\pm 45^\circ$ handle manoeuvring hydraulic reversing type.

② KE-5 type manoeuvring device

Manoeuvring positions:5 positions at most.

Mode of manoeuvring : from manoeuvring position to engine room control box and engine room driving box is connected by cable, engine room control box outputs 4 - 20mA M/E governing signal and binary gearbox reversing signal.

Composition:manipulator(installed in W/H,standard 1 piece) 1 piece
engine room control box(installed in engine room,IP44) 1 piece
Controlled member: M/E governor is electric drive type, input signal 4 -20mA .
Gearbox is DC24V solenoid valve control hydraulic reversing type.

③ KE-6 type manoeuvring device

Manoeuvring positions:5 positions at most..

Mode of manoeuvring : From manoeuvring position to engine room control box and engine room box is connected by cable, engine room control box outputs PWM M/E governing signal and binary gearbox reversing signal.

Composition:manipulator(installed in W/H,standard 1 piece) 1 piece

engine room control box(installed in engine room, IP44) 1 piece
Controlled member: M/E governor is electric drive type, input
signal 4 -20mA .

Gearbox is DC24V solenoid valve control hydraulic reversing type.

2, Auxiliary engine telegraph unit:

- ① Mainly used for communication between W/H and engine room manoeuvring position.
- ② Communication position selector: W/H-STOP-LOCAL
- ③ Signal transmission form:485 bus system

3, Extension alarm unit:

Extend to WH/C according to alarm signal supplied by different main propulsion units. Mode of signal extension: 485 bus system.

4, Main propulsion set state indication unit:

M/E tachometer, stern shaft tachometer, M/E emergency stop push button, gearbox ahead, astern indication and dimmer, mute self checking function.

5, Emergency light telegraph(selective)

C, Use and Adjustment

1, Installation and operating instruction of electronic flexible shaft manoeuvring system:

Details referred to "KE - 4 type electronic flexible shaft manoeuvring system introduction"

2, Details of other units' debugging referred to electrical equipment system diagram.

D, Others:

1, System is serial order ,partly component(as electronic flexible shaft manoeuvring system, auxiliary engine telegraph, emergency light telegraph)may be ordered separately.

2, Note types of M/E and gearbox, content, quantity and installation mode of all kinds of control units at the time of order.

3, Provide classification society certificate and 3 sets of finishing documents.

4, If user has special requirement, we can specially design and manufacture.

This document is edited by technical center of Henan Guangcai Electric Co.,Ltd.

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