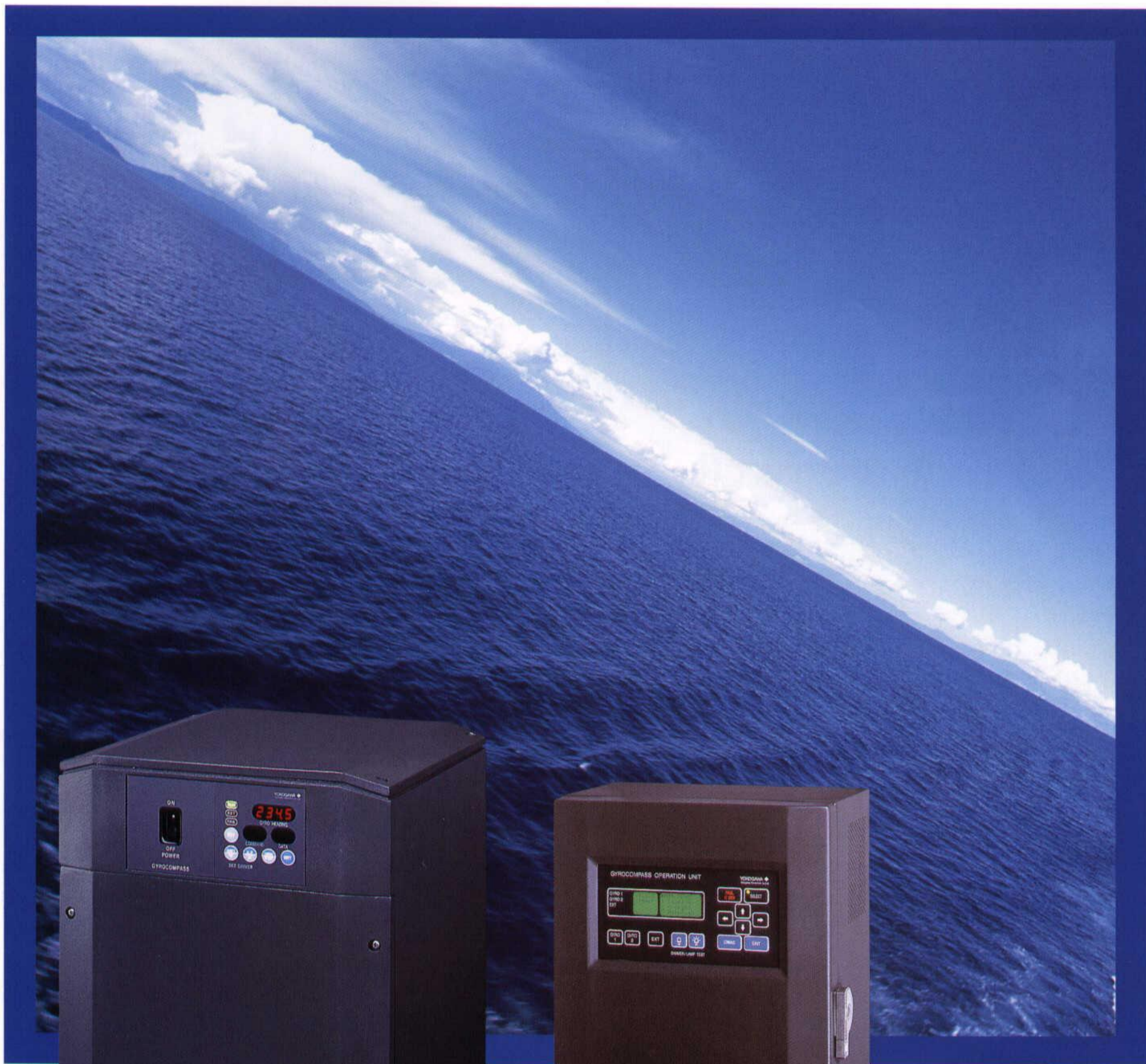


# GYROCOMPASS

CMZ700 series



ISO 9001-1994  
Marine Equipment



MASTER COMPASS  
(MKM 022)



CONTROL BOX  
(MKC 320/321)

Yokogawa Denshikiki Co., Ltd.

TEL:020-84878734

FAX:020-84870714

Bulletin 80B10M08E  
1st Edition

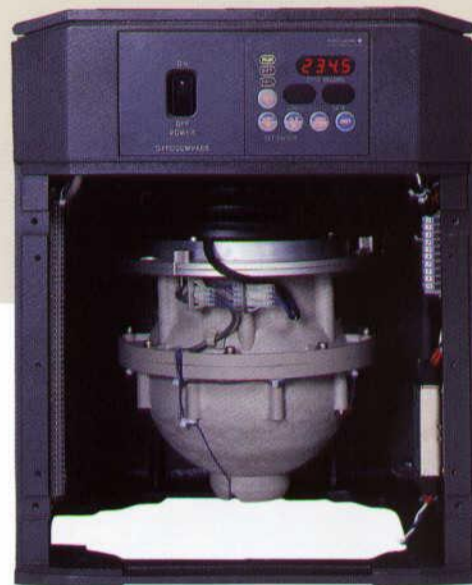


# CMZ 700 Gyrocompass

gives you a technical solution  
and a excellent performance.



CONTROL BOX  
(MKC 320/321)



MASTER COMPASS  
(MKM 022)

## Features

### Easy to construct the system

CMZ700 series is easy to construct the system for the requested specification.

Three types of the CMZ700 are provided. CMZ700 B drives the repeaters directly from the master compass without the control box. CMZ700 S has various inputs and outputs with the control box. CMZ700 D is for a dual gyrocompass system.

### Improvement of follow-up function

The container mass reduced a burden to compass motor (Stepping motor) and realized the follow-up speed of 30°/s. (CMZ500: 12°/s). This improvement enabled high-speed follow-up for small high-speed turning vessels.

### Operation by ship's battery

Low power consumption realized ship's battery drive. If AC adapter is connected, AC mains back-up the system. (AC adapter: Option).

### Built-in autopilot stand

Master compass and control box of CMZ700 S can be installed in autopilot stand.

### Built-in the restart timer

CMZ700 series can be set the restart time from 1 to 99 hours.

### Auto speed-error correction function (Option for CMZ700 B)

The speed-error is corrected automatically based on the ship speed signal from speed sensor and the latitude signal from GPS or other position sensor. In the case of no latitude signal, the latitude value is estimated based on the ship speed and heading.

### Excellent vibration-Proof structure

Improved vibration-proof and shock-proof mechanism by adopting universal joint and outer bellows damper in addition to rubber isolator and bellows damper.

### Back-up by external heading signal

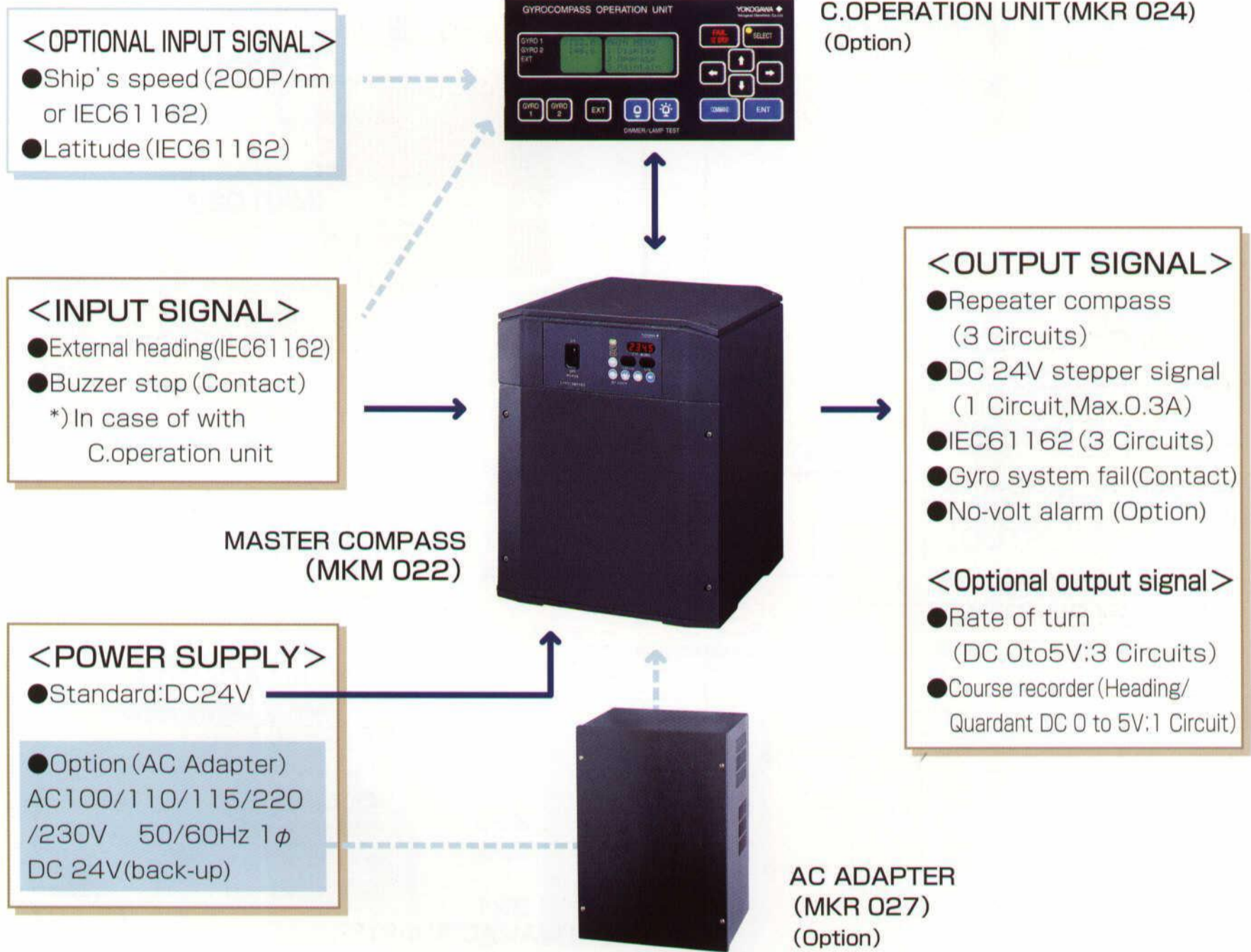
External heading sensor (Magnetic compass, GPS compass etc.) can drive all repeater system. Repeater heading is automatically synchronized from Gyro heading to external heading.



# CMZ700 B type

This type is suitable for a small ship.

## ■ CONFIGURATION ■



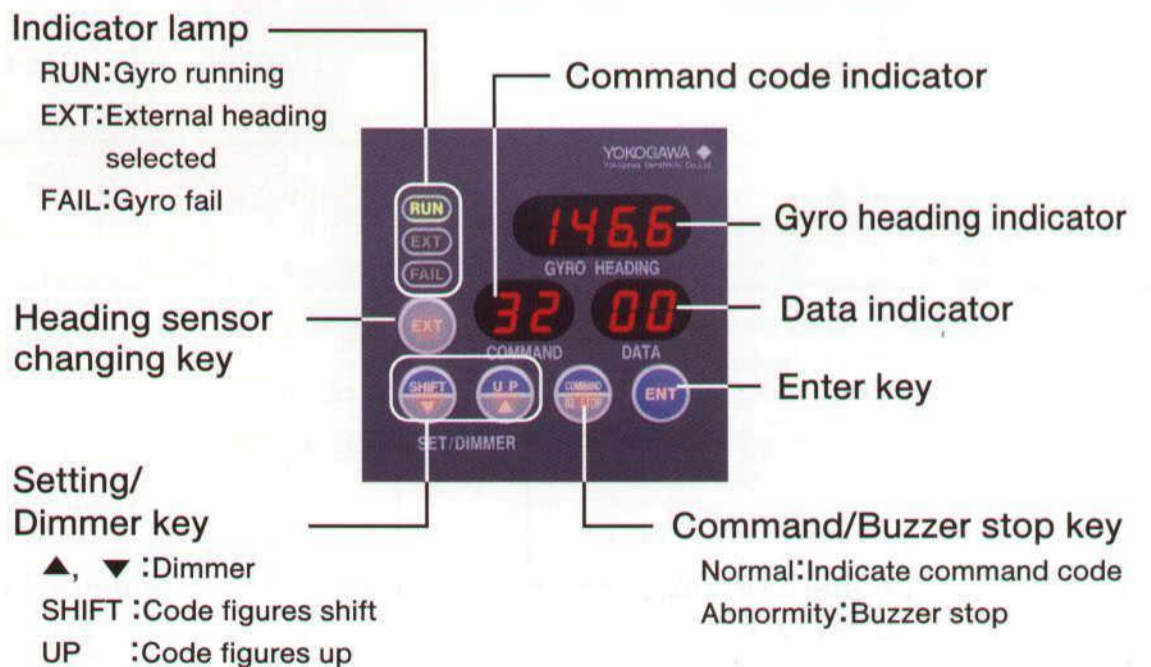
## ■ M.OPERATION UNIT / SWITCH UNIT ■

### SWITCH UNIT (MKR 026)



Power switch

### M.OPERATION UNIT (MKR 025)





# CMZ700 D type

CMZ700D type has high reliability change-over function for Dual gyrocompass system, and the system configuration is very simple.

## SYSTEM CONFIGURATION

No.1  
MASTER COMPASS  
(MKM 022)



No.2  
MASTER COMPASS  
(MKM 022)



### <INPUT SIGNAL>

- Ship's speed (200P/nm or IEC61162)
- Latitude (IEC61162)
- External heading (IEC61162)
- Buzzer stop (Contact)

### <POWER SUPPLY>

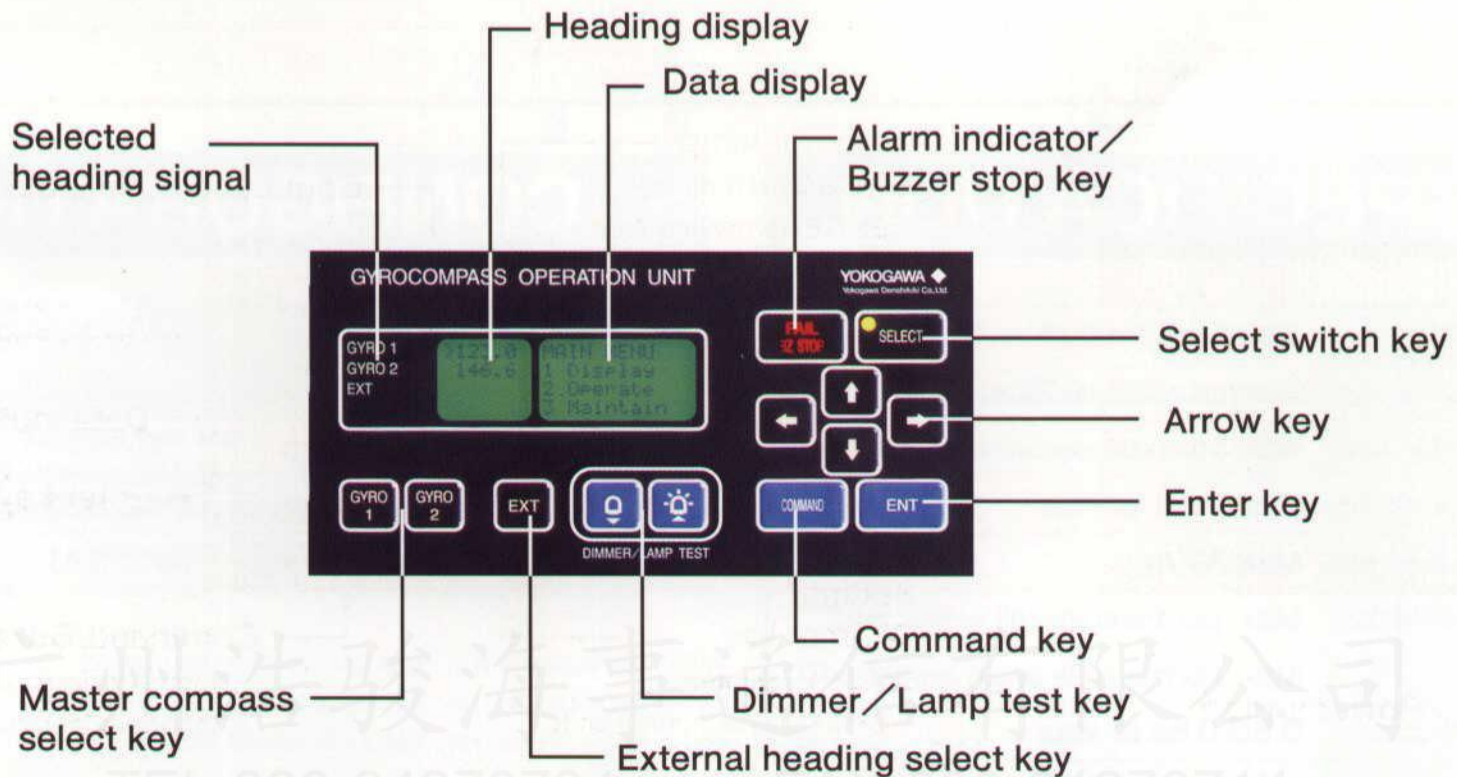
- AC 100/110/115/220 /230V 50/60Hz 1 $\phi$   
DC 24V (No-volt alarm/Back up)
- AC 100/110/115/220 /230V 50/60Hz 1 $\phi$   
DC 24V (No-volt alarm/Back up)

### <OUTPUT SIGNAL>

- Repeater compass (8 Circuits)
- DC 24V stepper signal (4 Circuits, Max. 1.0A)
- IEC61162 (3 Circuits)
- Running status
- No-volt alarm (Contact)
- Gyro fail (Contact)
- Gyro system fail (Contact)
- Rate of turn (DC 0 to 5V; 3 Circuits)
- Course recorder (Heading/Quadrant DC 0 to 5V; 1 Circuit)



## C. OPERATION UNIT (MKR 024)

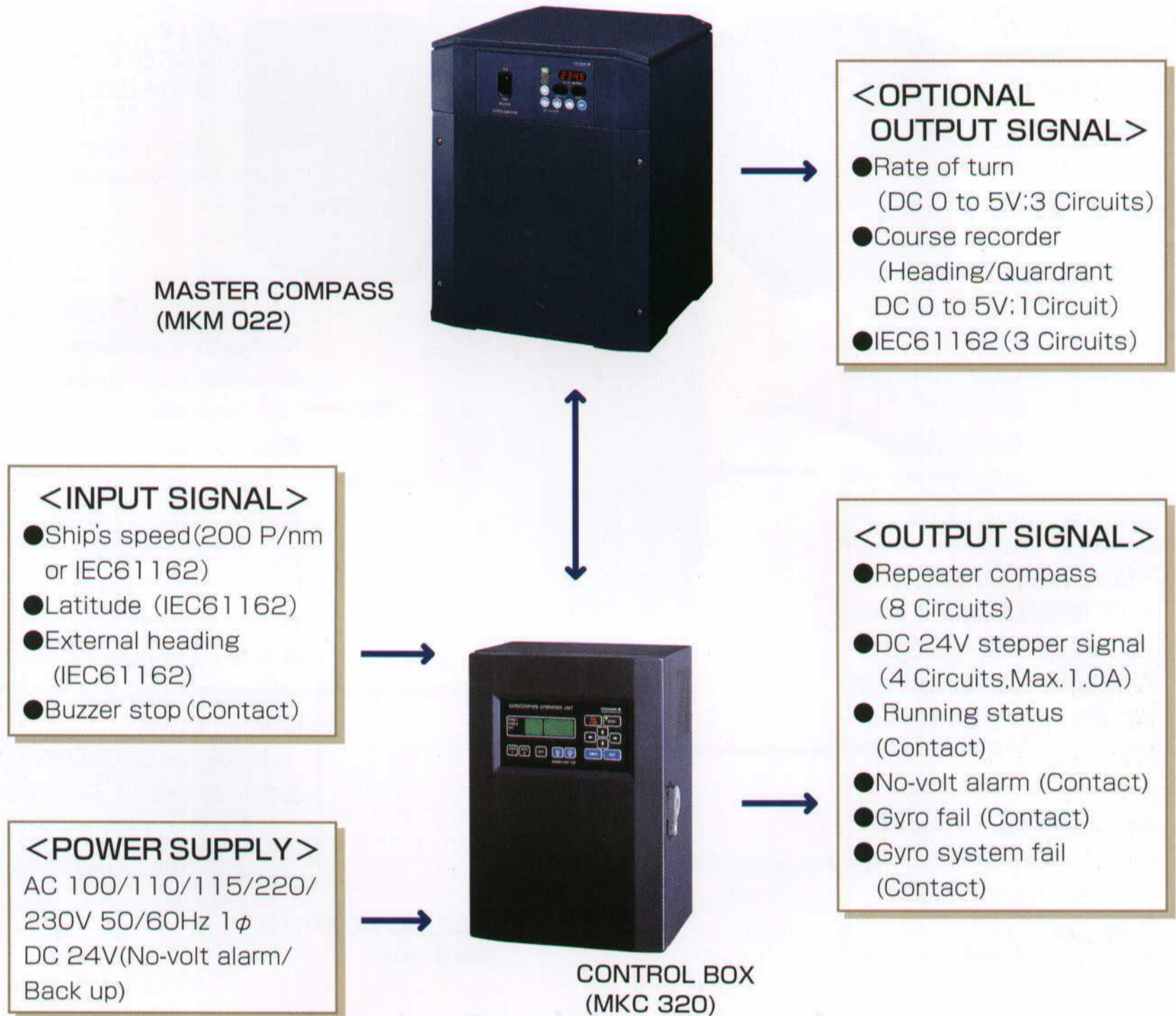




# CMZ700 S type

Various input and output signals can be connected.

## SYSTEM CONFIGURATION



## SPECIFICATION

ACCURACY	Static within $\pm 0.25^\circ \times (1/\cos \text{latitude})$ Dynamic within $\pm 0.75^\circ \times (1/\cos \text{latitude})$
SETTING TIME	Within 5 hours (Operational state is reached in about 2 hours)
Follow-up accuracy	Within $0.1^\circ$ or less
Maximum follow-up speed	Max. $30^\circ/\text{s}$
Mechanical freedoms	Max. permissible roll angle: $\pm 40^\circ$ Max. permissible pitch angle: $\pm 40^\circ$
Permissible acceralation	0.5G 0.5s or less
Operating temprature	$-10^\circ\text{C}$ to $+55^\circ\text{C}$

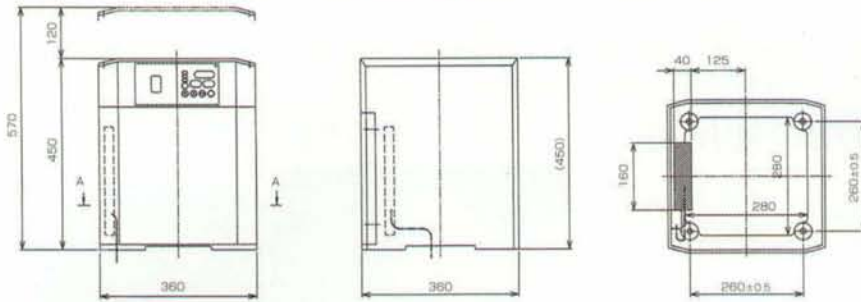
## CONFIGURATION

UNIT SYSTEM	MASTER COMPASS	CONTROL BOX	AC ADAPTER
CMZ700 B	MKM 022	—	(MKR 027)
CMZ700 S	MKM 022	MKC 320	—
CMZ700 D	MKM 022 $\times 2$	MKC 321	MKS 066



# OUTLINE DIMENSIONS

MASTER COMPASS  
(MKM 022) MASS:30kg

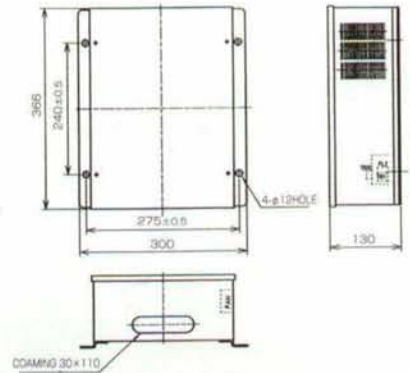
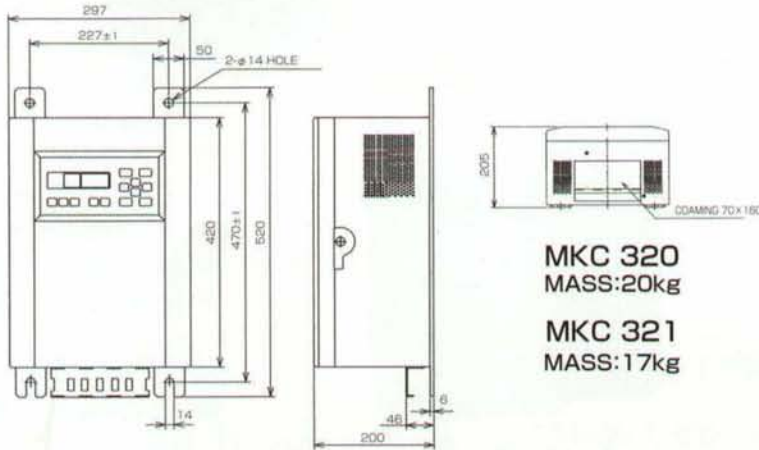


CONTROL BOX  
(MKC 320/321)

AC ADAPTER  
(MKR 027)

MASS:10.5kg

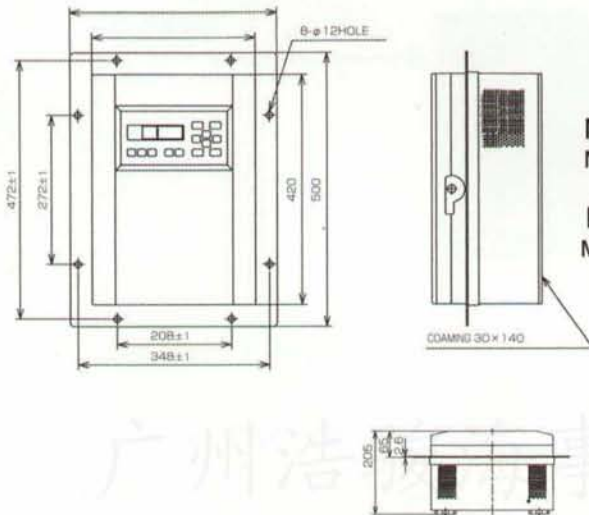
WALL MOUNT



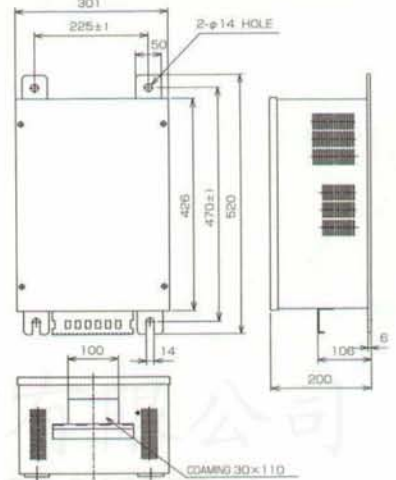
MKC 320  
MASS:20kg  
MKC 321  
MASS:17kg

DUAL AC ADAPTER  
(MKS 066) MASS:20kg

FLUSH MOUNT



MKC 320  
MASS:20kg  
MKC 321  
MASS:17kg



**YOKOGAWA**



Yokogawa Denshikiki Co., Ltd.

URL : <http://www.yokogawa.co.jp/YDK/>



**Caution:** Please read the manual before using this product.

Address : 21st Floor, Shinjuku Park Tower.

3-7-1 Nishi-shinjuku, Shinjuku-ku, Tokyo, 163-1054 Japan

International Sales Dept. Phone : (81) 3-5323-5120 FAX : (81) 3-5323-5555

Service Dept. Phone : (81) 3-5323-5132, 5133 FAX : (81) 3-5323-5555

Domestic Sales Dept. Phone : (81) 3-5323-5123 FAX : (81) 3-5323-5555

Osaka branch Phone : (81) 6-6368-7102 FAX : (81) 6-6368-7103

Imabari branch Phone : (81) 898-22-4559 FAX : (81) 898-33-2005

Fukuoka branch Phone : (81) 92-451-3211 FAX : (81) 92-451-3249

Represented by :

**Guangzhou Faraway Marine Communication Co., Ltd.**

Add. : 1st Floor, No.47 Eastern Great Street, Shaxu, Shiqiao, Panyu, Guangzhou, China

Tel: 0086-20-34615860

Fax: 0086-20-34629455

<http://www.yymarine.com>

E-mail : [gzfaraway@163.com](mailto:gzfaraway@163.com)