

MGC® Gyro Compass System



KONGSBERG



Software defined switchover solution

The MGC gyro compass solution comprises two or three MGC (Motion Sensor & Gyro Compass) units with the JB7 junction box in an interconnected setup which delivers an unmatched redundant SoU system.

This gyro solution handles several gyros connected to one system. One of those gyros will be the master gyro and the others slave gyros. If the master gyro should fail for some reason, the Switch-over-Unit functionality will cause the system to switch over to the next slave gyro, which will then become the master gyro. Thus, the system output will not stop if one gyro fails and you are guaranteed continuous operation.

The Switch-over-Unit functionality is implemented to increase the heading availability by adding redundancy. When two or more MGC units are set up with the Switch-over-Unit functionality, they are regarded as one gyro system.

The Switch-over-Unit functionality is hosted by the MGC JB7 junction box. Each MGC unit is interconnected between the JB7 junction boxes for shared serial ports and minimum one Ethernet port

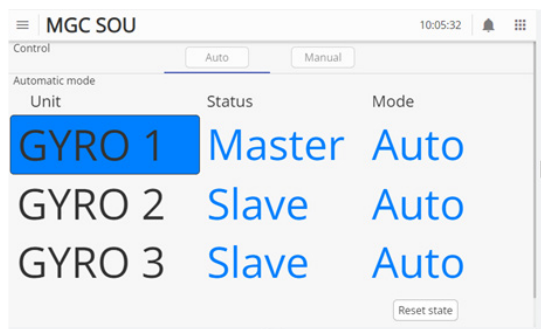
Product components

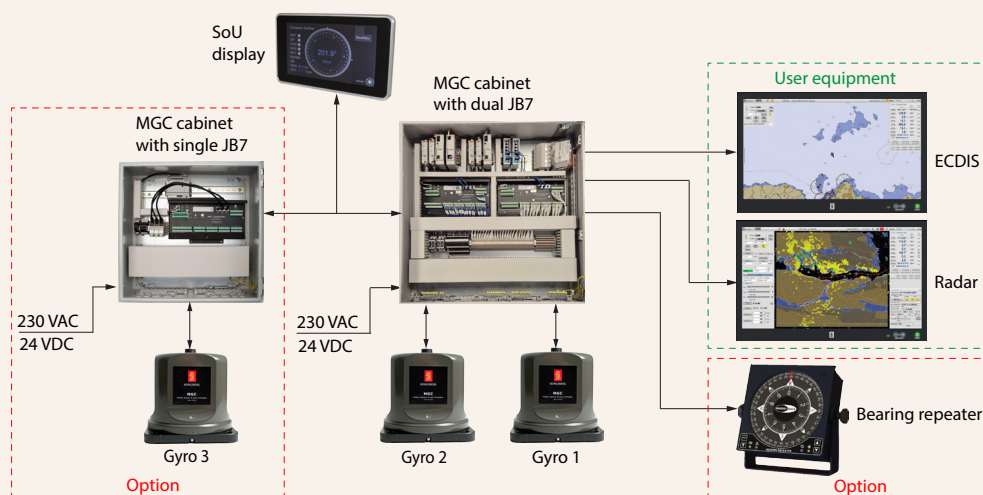
The gyro compass system is constructed by interconnecting up to three individual JB7 junction boxes and MGC units, with a minimum of two units. You can select from the following hardware supply options:

- Dual MGC JB7 Connection Cabinet
- Single MGC JB7 Connection Cabinet

FEATURES

- No additional hardware required
- Software defined SoU solution
- Genuine KONGSBERG navigation equipment
- Automatic and manual heading source selection
- Designed for continuous marine operations
- Easy installation and configuration
- Supports up to 3 connected MGCs
- 32 x IEC 61162 serial data outputs
- Up to 200Hz data rate output
- Solid state technology
- World wide support





SoU with one single and one dual MGC JB7 Connection Cabinet

Technical specifications

MGC® Gyro Compass System

Power specifications

MGC JB7 Connection Cabinets

Dual cabinet

Voltage input 1	100 - 240 VAC, 50 - 60 Hz
Voltage input 2	100 - 240 VAC, 50 - 60 Hz
Voltage input 3	24 VDC (nominal, 18 - 32 VDC)
Voltage input 4	24 VDC (nominal, 18 - 32 VDC)

Power consumption:
50 W (nominal), 250 W, max
16 individually fused 24 VDC outputs available (14 external). Actual power consumption is dependent on external load.

Single cabinet

Voltage input 1	100 - 240 VAC
Voltage input 2	24 VDC (nominal, 18 - 32 VDC)

Power consumption:
25 W (nominal, 125W max)
24 VDC, 5 A, output available for external equipment. Actual power consumption is dependent on external load.

SoU display

Voltage input	10.8 - 32 VDC
Power consumption	10 W, max

Signal distribution specifications

COM 1 through COM 5	Serial port, bi-directional RS-422/IEC 61162-1 & IEC 61162-2
Baude rate	115200 baud, max
COM 6 through COM 8	Serial port, output only through replica ports, RS-422/IEC 61162-1 & IEC 61162-2
Analog channels	3 x, ± 10 V
Ethernet UDP/IP	3 x 10/100 Mbps
Output data rate	200 Hz max
Timing accuracy	< 1 ms
Replica port 1 through 8	Replicates set data from COM 1 through COM 8 For SOU dual cabinet: replica ports 3 to 8 are electronically prepared for SOU function (18 ports in total).

Number of galvanically
isolated outputs per
replica port

3

Weight and dimensions

MGC Sensor Unit	8 kg, 188.9 × 189.5 × 189.5 mm
MGC JB7 Dual cabinet	50 kg, 760 × 760 × 210 mm
MGC JB7 Single cabinet	18.2 kg, 500 × 500 × 210 mm
SoU display	0.86 kg, 119.5 × 201.5 × 65.5 mm

Environmental specifications

MGC Sensor Unit

Operating temperature	-15 °C - +55 °C
Storage temperature	-35 °C - +70 °C
Ingress protection	IP66
Enclosure material	Anodised aluminium

MGC JB7 Connection Cabinets

Ambient temperature range	-15 °C - +55 °C
Storage temperature	-20 °C - +55 °C
Relative humidity	< 50 % at +40 °C
Storage humidity	< 50 % at +40 °C
Ingress protection	IP66
Enclosure material	Sheet steel

SoU display

Operating temperature	-20 °C - +55 °C
Enclosure material	Aluminium, Surtec surface treatment

Specifications subject to change without any further notice.