



Guard Gear 200

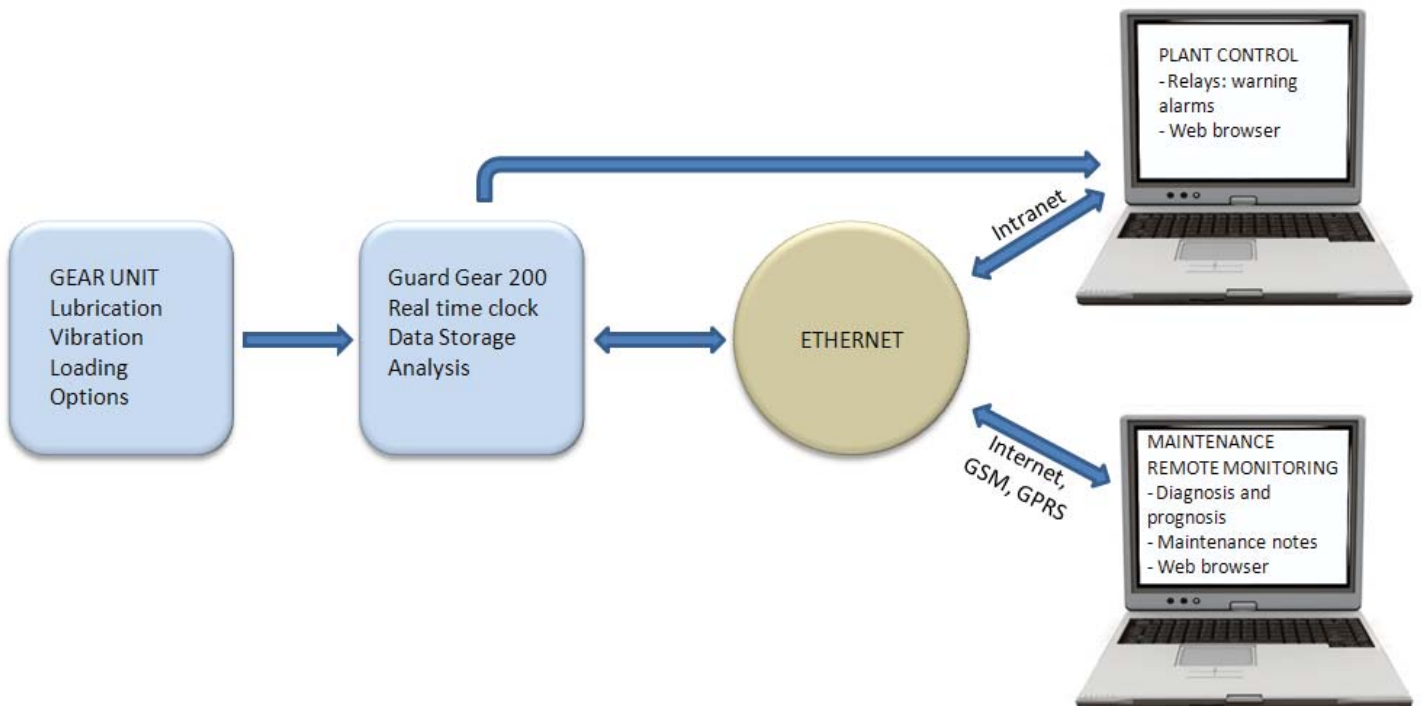
Technical Specification

Condition-monitoring device for gear units

Guard Gear 200 unit is based on the measurements of the operation condition of the gear unit. The real time Guard Gear 200 monitors operation power, function of lubrication system and vibration of the gear unit.

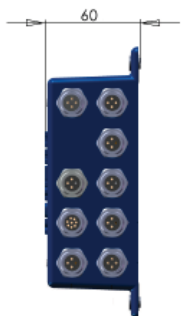
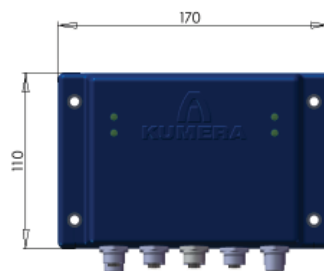
The standard sensors and freely selectable sensors can be connected to Guard Gear 200. Warning and alarm limits can be set to all measurements. When pre-set limits are exceeded, the information is available from unit's LED, warning and alarm relays, and from WEB user interface.

Ethernet bus enables Guard Gear 200 connection to Intranet or Internet. The connection can be wired or wireless.



Mechanical properties

- Operating temperature -40...+80 °C
- Housing material ABS filled with silicone casting
- Housing mounting 4 x M 5 screws
- Protection class IP-66



Connections

Power supply:

- o +18...30 VDC 500 mA
- o 4-pin, male, M12-connector (connector included in delivery)

Sensors:

STANDARD DELIVERY SCOPE

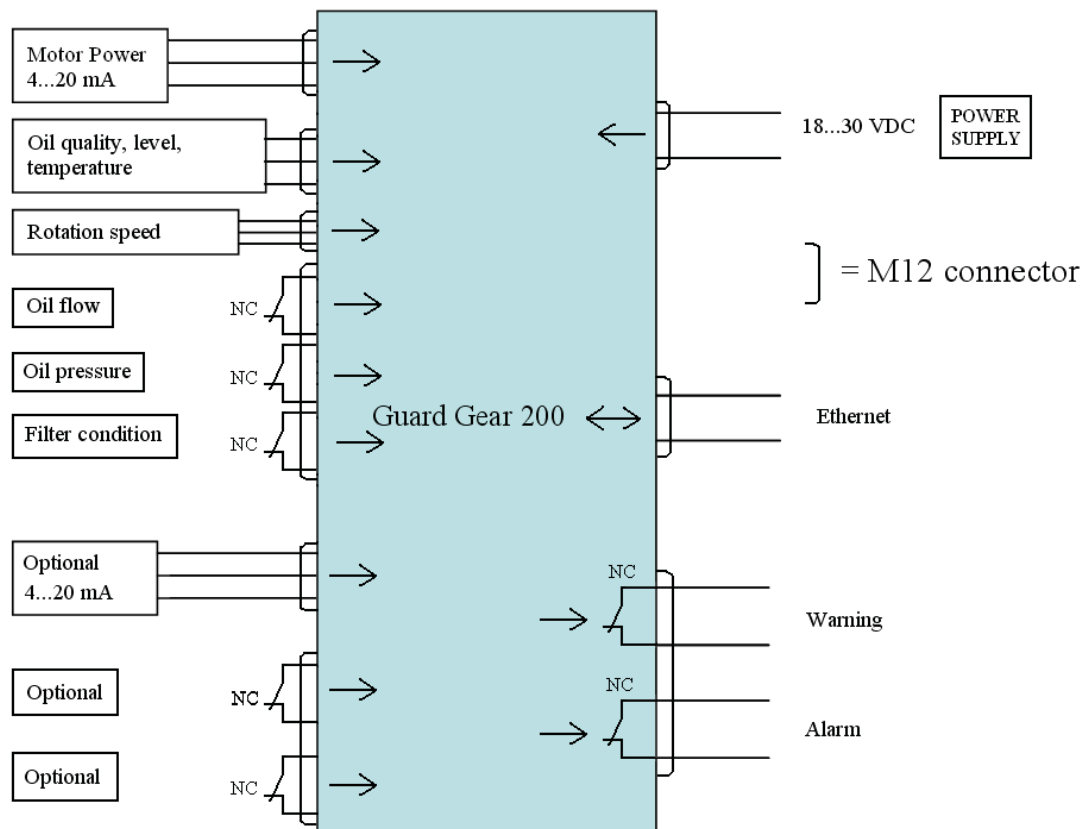
- o Internal two directional vibration measurement
 - Measurement range +8 g
 - Frequency bands 10-40 Hz, 40-400 Hz and 400-1000 Hz
- o Internal temperature measurement
 - -40...+100°C
- o Rotation speed (inductive sensor)
- o Quality, level and temperature of lubrication oil
- o Motor current or power or torque
 - Measurement method must be determined with the customer

OPTIONS

- o Flow of lubrication oil (relay input, NC)
- o Pressure of lubrication oil (relay input, NC)
- o Filter contamination indicator (relay input, NC)
- o Optional: 4- 20 mA current input, supply for sensor +18...+30VDC/30mA
- o Optional: relay input, NC, supply for sensor +18...+30VDC/30mA

Outputs: (connectors included in delivery)

- o Warning: potential free relay +24VDC/100mA
 - 4-pin, male M12-connector, common with "Alarm" - output
- o Alarm: potential free relay +24VDC/100mA
 - 4-pin, male M12-connector, common with "Warning"- output
- o Bus: 10/100Mb Ethernet
 - 4-pin, female M12-connector



User interface

The condition of the gear unit is monitored in real-time from the browser based user interface. Possible warnings and alarms are shown with comments and colors. Guard Gear 200 calculates estimated remaining lifetime of lubrication oil based on measurements.



KUMERA **Guard Gear 200**
2008.10.06 11:43:35

Status Logs Alarms Measurement Customer Device

Status

Gear unit:

| | |
|--------------------------|----------|
| Gear load: | 157.4 |
| Vibration 10 - 40 Hz: | 0.0 mm/s |
| Vibration 40 - 400 Hz: | 0.0 mm/s |
| Vibration 400 - 1000 Hz: | 0.0 mm/s |
| Gear operation hours: | 28 h |
| GG200 temperature: | 24 °C |

Lubrication:

| | |
|---------------------|--------|
| Temperature: | OK |
| Condition: | OK |
| Flow switch: | |
| Pressure switch: | |
| Filter condition: | |
| Level: | NORMAL |
| Estimated lifetime: | OK |

STA-led: 

OIL-led: 

All measurement results are saved into internal memory of Guard Gear 200. It is possible to save measurement results into the text-file for further processing. Measurement results are saved in accuracy of one minute from latest three hours, accuracy of one hour from last 30 days and older measurements during 2 years at accuracy of one day.

The real-time measurement with 10 Hz sampling rate from selectable sensor inputs will be made on-demand.

The customer information will be saved into internal memory of Guard Gear 200. The notes-field is also available for observations from the gear unit or surroundings.

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