

KV-5020

Marine Wind Vane/Anemometer

Features

- Built-in NMEA output indispensable for ocean going vessels.
- Stepping motor-driven pointers that are resistant to vibration and offer fairly accurate indication.
- LED illumination with dimmer for long life.
- Digital indicator accommodates signals of your choice (optional).
- Simplified vessel speed/course signal transmitter (optional) can be installed (using GPS / magnetometric sensor).
- Additional indicators can also be installed.

**VDR
capable**

Product overview

The KV-5020 marine wind vane/anemometer sends both wind direction and speed signals simultaneously from the transmitter for remote observation.

The transmitter is a windmill type and is used in combination with the wind speed/direction indicator. The indicator, which has an analogue face, receives and processes the transmitter signals to drive the pointers.

Wind speed/direction transmitter



Optional equipment

KV-5025 true wind speed/direction indicator



Remote dimmer switch



Simplified vessel speed/course signal transmitter



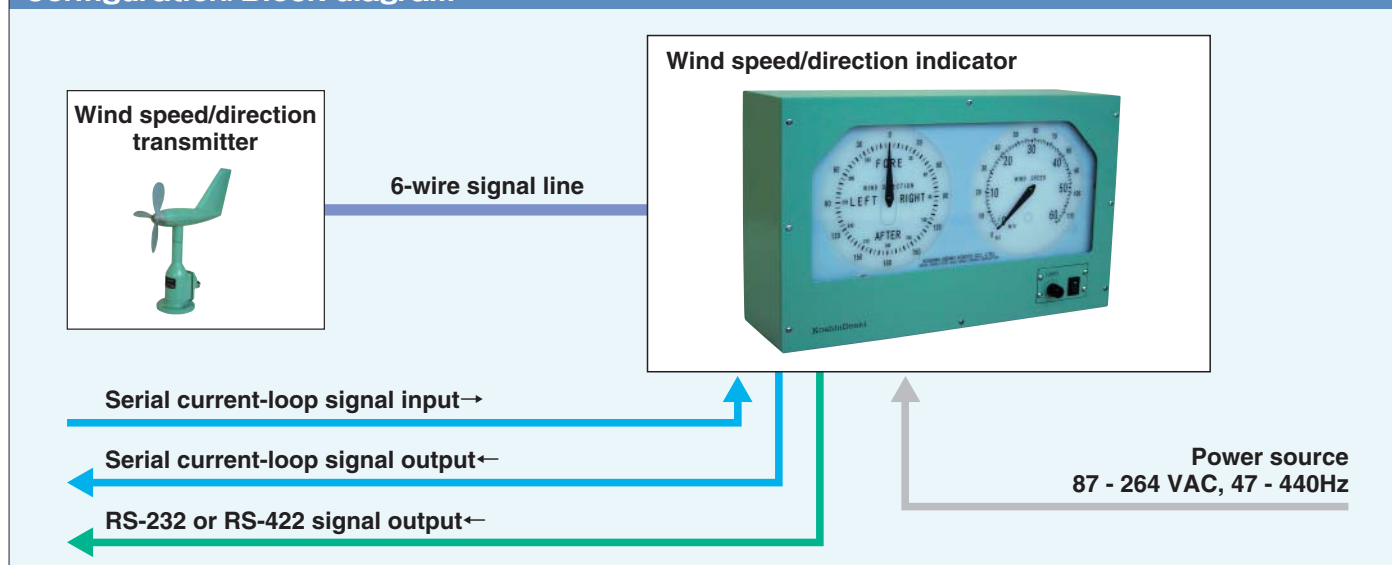
Wind speed/direction indicator



KOSHIN DENKI KOGYO CO., LTD.

Japan Meteorological Agency's oceanographic research ship Keifu Maru
(on which Koshin Denki's marine weather observation devices are used)

Configuration/Block diagram

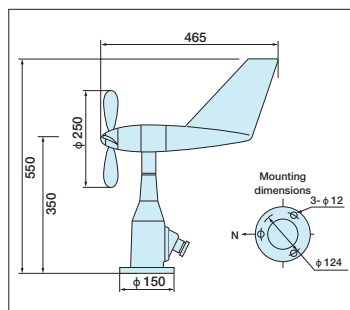


Specifications/Ratings

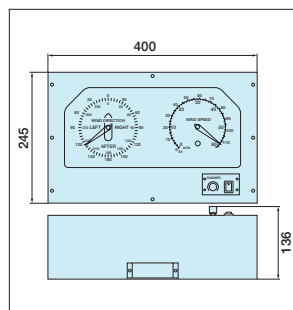
Wind speed/direction transmitter

| Type | Propeller |
|---------------------------|--|
| Wind speed detection | Optical pulse; Brushless |
| Wind direction detection | 8-bit optical encoder; Serial signal output |
| Start wind speed | 2m/s or less |
| Wind speed resistance | 90m/s (in wind tunnel tests) |
| Measurement range | Wind speed: 2 - 60 m/s |
| Wind direction | All directions |
| Measurement accuracy | Wind speed: 10m/s or less: Within ± 0.5 m/s 10m/s or more: Within $\pm 5\%$ Wind direction: Within $\pm 5^\circ$ |
| Cable | 6-core shielded cable |
| Cable connection method | Via terminal |
| Weight | Approx. 2.5kg |
| Coating color | Munsell 2.5G7/2 Semi-glossy |
| Working temperature range | -20 to $+50^\circ\text{C}$ |

Wind speed/direction transmitter



Wind speed/direction indicator



Wind speed/direction indicator

| | |
|--------------------|---|
| Measurement range | All directions (0 - 360°) |
| Wind speed | 0 - 60 m/s or 0 - 115 kt |
| Indicator type | Relative wind direction (instantaneous) : Indicating range: 0 - 360° Relative wind speed (instantaneous) : Indicating range: 270° (60m/s) kt or m/s |
| Computation type | CPU vector operation Data sampling rate: 0.25sec. (for both wind speed and direction) Data processing: instantaneous, second smoothing |
| Input signal | Dedicated wind speed/direction signals (6-wire) Wind direction: 256-segment, 8-bit gray code serial signal Wind speed: 24 pulses / rev. Serial current loop |
| Output signal | RS-232 or RS-422 Serial current loop |
| Pointer driver | Wind speed and direction pointers directly driven by stepping motors. 0.9° / step (corresponding to 0.2m/s wind speed) |
| Response time | 2.4sec. per 180° (corresponding to 40m/s wind speed) |
| Lighting | LED (with dimmer) |
| Power source | 87 - 264 VAC, 47 - 440 Hz |
| Coating color | Munsell 2.5G7/2 semi-gloss |
| Weight | Approx. 7.5kg |
| Outer dimensions | 400 (W) x 245 (H) x 120 (D) |
| Ambient conditions | Working temperature range: -10 to $+50^\circ\text{C}$ Working humidity range: 20 - 95% (no condensation) |

Optional equipment

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|---|
| Remote dimmer switch |
| KV-5025 true wind speed/direction indicator |
| Simplified vessel speed/course signal transmitter |



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