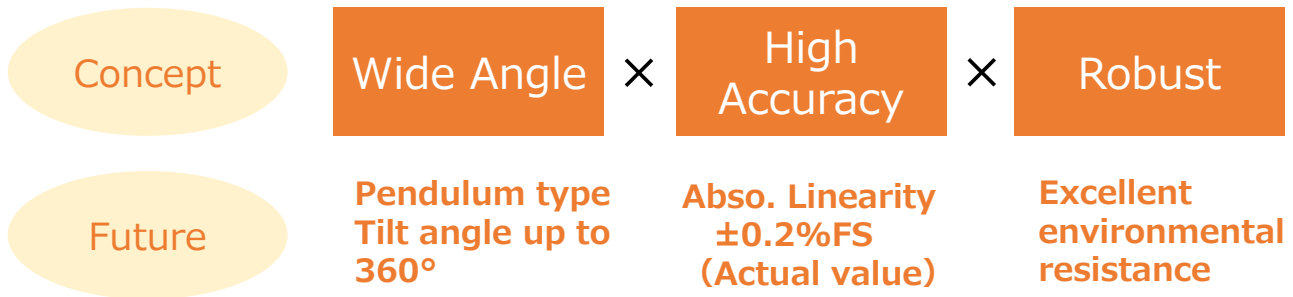


# MIDORI's Wide Tilt Angle Sensor

## WR-7UHA



- WR-7UHA is side surface mounting type and it can **detect 360° angle**. It can be used as controlling of Tilt-angle.
- Linearity is guaranteed value ±0.4% max. **Actual value ± 0.2% max.** (Right)→ are able to detect fine angle.
- WR-7UHA is water-drip proof type **IP67** by **aluminum die-casting housing**. It is suitable for harsh conditions such as outdoor applications.

Linearity (Actual value)

Abs. Lin. (%FS)















Tilt Angle (°)

## MAIN APPLICATIONS

Market	User	Installed	Application
Construction machinery	A Construction machine maker	Hydraulic excavator	Detecting arm angle
Construction machinery	A Construction machine maker	Crane	Detecting boom angle
Industrial vehicle	A Specially equipped vehicle maker	Aerial work platform	Detecting boom angle
Industrial vehicle	A specially-equipped vehicle maker	Detachable equipment vehicle	Detecting arm angle
Civil engineering & construction	A water gate maker	Check valve	Detecting flap angle

⇒For details, please refer "Usage Case" flyer.

# Finding a solution to problem by using W-7UHA

Customer		MIDORI's Suggestion
Problem	Wish	
Tilt Angle sensors which can be used outside is quite expensive.	 The sensor is wanted to be used under harsh conditions such as water and dust.	 Housing of WR-7UHA is aluminum die-casting with IP67.
There are few sensor can measure angle just attach to the machine without mechanical rotation parts.	 Want to detect tilt angle easily.	 WR-7UHA can detect tilt angle without using rotational shaft.
Vibration from the machine give influence to sensor's output.	 Want to use under vibration condition.	 Detecting part of WR-7UHA is pendulum. By changing damper oil viscosity, it can be used under various vibration conditions.
The tilt angle sensor which we use does not have high accuracy.	 Want to control angle position more precisely.	 Absolute linearity of WR-7UHA is $\pm 0.2\%FS$ (Actual value) so it is good for controlling fine position.
Output increase direction is changed by mounting direction of the sensor. Our using sensor is not match output direction we want.	 Want to choose output increase direction meeting our mounting position.	 WR-7UHA can be choose output increase direction types on request.
By each mounting places, various angle types of sensors are needed.	 Want to choose certain tilt angle range for our usage.	 WR-7UHA can be chosen tilt angle from $90^\circ$ to $360^\circ$ on request.
By each mounting places, various reference angle positions are required.	 Want to choose reference angle position for our usage.	 WR-7UHA can be chosen reference angle position on request.

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