Analog Meter Monitoring System

CVAWS0A CC Series



Retrofittable to existing meters for measuring pointer movement.

Enables remote monitoring and management by removing need for on-site meter observation.



Installation example



Standard management app screen

Attach a special magnet to the pointer on a meter dial and magnetically measure the pointer's movements. This removes the need to take readings in person, thereby enabling remote monitoring and management. The system offers better energy and space efficiency than camera-based systems, as well as outstanding compatibility with indoor and outdoor environments. It is easily retrofitted to existing equipment. Less of a burden on workers and fewer reading and transcription errors support efforts to improve operational efficiency while creating accurate records.

IoT Needs

- Reduction of in-person meter reading workloads
- Effective utilization through data collection/storage
- Remote monitoring services for ascertaining remaining levels
- Abnormal level monitoring and safety/security

Labor Savings

Reduce the on-site work burden

Accuracy

Keep accurate records without reading /transcription errors

Data History

Accumulate past data to identify trends and make observations

Safety

Keep workersout of danger by reducing access to high, cramped or dark places, or adverse environments

Detection

Receive alerts when readings exceed a set threshold

System Outline



Retrieve readings using an analog meter monitoring device



Communication

Low power, low cost with Sigfox communication



Server

Alps Alpine management system



Visualization

User

Existing management app

Alps Alpine
Standard management system app

BLE



Initial Settings

Smartphone Tablet

- Transmit angle data measured using a magnetic sensor
- Convert angle data to a meter reading on a cloud
- Retrieve and display meter readings with a visualization app

Specifications



1-Channel Sensor Type CVAWS0A001□



2-Channel Sensor Type CVAWS0A002□

Magnetic Sensor

L:28.5mm W:16.0mm H:15.0mm Cable length:1m

Power/Communication Box

L:89.9mm W:68.0mm

H: 22.4mm (max.: 30.5mm)

Operating temperature	-20°C to +60°C	
Communication format	Sigfox/BLE*	*BLE is used only for initial setup
Power	Primary battery	Approx. 3,000mAh
Battery life	Approx. 3 years	1 transmission per hour in 25°C environment
Dust/water resistance	IP64 level	
Measurement frequency	Once every 30 minutes (most frequent)	Setting adjustable
Measurement accuracy	±2%	At full scale, with initial settings
Suitable meter size	60-150mm dia.	Depends on meter type/design
Sensor data	Angle data	1ch or 2ch



