

SmartBob AO with 4-20 mA Output



The SmartBob AO is a weight and cable-based, stand-alone continuous level sensor featuring direct analog output. A simple push-button user interface built into the SmartBob AO circuitry is used to configure the bin parameters and assign the functionality of the relays.

As all programming is done within the device, the SmartBob AO eliminates any need for additional operator interface displays or software loaded onto a PC. Once programmed, the parameters for the bin are saved in the non-volatile memory of the SmartBob AO.

Continuous Bin Level Monitoring

The SmartBob AO with built-in 4-20 mA output can easily replace any 4-20 device by simply installing the SmartBob on the top of the bin and wiring the sensor to the existing 4-20 input. When the SmartBob AO takes a measurement, it automatically transmits an updated analog signal containing the measurement data. The SmartBob AO can be programmed to initiate a measurement utilizing an internal timer to take readings at a predetermined time interval or an external start input can be used to take a measurement immediately, should one be needed. Two configurable relay outputs can be used to alert to measurement status or high, low or error alarms.



The SmartBob AO features a direct 4-20 mA analog output.

SmartBob2 AO

- Direct 4-20 mA analog output
- Alternative to using consoles or software
- Simple user interface to configure the sensor
- Measures bins automatically in timed intervals
- Two relays configurable with four different options
- Initiate measurements via interval timer or external start input
- Two current source options for supplying power to 4-20 current loop

SmartBob AO



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Simple Setup & Configuration



Configurable Relays

Select any two!

1. Measurement status
2. High level alarm
3. Low level alarm
4. Error alarm



Seven Simple Settings

Takes just minutes!

1. Interval timer
2. Units of measure
3. 4 mA drop distance
4. 20 mA drop distance
5. Maximum drop distance
6. Relay 1 function
7. Relay 2 function



The SmartBob AO level sensor requires standard 115 VAC or 230 VAC power. There are two current source options for supplying power. The recommended option is to use an isolated 4-20 mA current loop which uses the PLC to provide power. Alternatively, a non-isolated 4-20 mA current loop can utilize the SmartBob sensor to provide power for the loop.

Level & Status Data

The SmartBob AO features two relays that are configurable by the user. There are four different relay options that can be selected in any combination including measurement status (measurement in process), high level alarm, low level alarm or error alarm (Bob did not take a measurement). Other competitive devices only feature a single relay option, making the SmartBob AO more flexible by providing additional status data to the user. Other benefits of the SmartBob AO include the output of a 22 mA error signal if the SmartBob AO should encounter a “stuck top” or “stuck bottom” condition and a soft start feature that reduces wear on the motor.

The interval timer is used to program the SmartBob AO to initiate a measurement in pre-determined time intervals such as every two, four or eight hours. An external start input can be used to initiate a measurement on demand. Additionally, an override input feature can be used to turn the measurement feature off, disabling the measurement function. The override feature is useful when filling tanks to avoid covering the SmartBob probe with material or to stop measurements when a bin is undergoing maintenance or cleaning.

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