

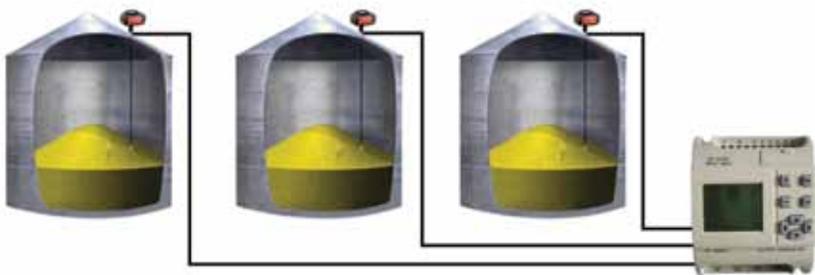
SmartBob AO with 4-20 mA Output to a PLC



The SmartBob AO level sensor features an integrated 4-20 mA analog output for use by facilities that prefer an analog output to a PLC for monitoring bin level measurement data. A simple push-button user interface built into the SmartBob AO circuitry is used to configure the settings for each SmartBob AO. Once setup is complete, measurement data is sent directly to a PLC, with all settings for the bin 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 measurement data is sent directly to a PLC, it eliminates the need for a C-100 or RSU control console or eBob software, as the programming interface and controls are built in to the SmartBob AO circuit board. There is one analog output per SmartBob, with this one-to-one relationship requiring a dedicated connection from each individual SmartBob AO to the PLC.



Each SmartBob AO requires a dedicated connection to the PLC.

SmartBob2 AO

- 4-20 mA analog output direct to a PLC
- 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



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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