

HYDAC SOLVES: HAT 1425 "In Pin" Angle Sensor for Mobile Machinery

Initial Challenge

As industries continue to advance, they ask machines to do more complex movements and functions. This increase in advancement drives a need for sensing technologies on these machines, but all too often they are introduced well after the machine is already designed and built, and not optimized for the application. Typically mechanically complex in the installation, and sensitive to external mechanical influences, sensors tend to be an eyesore and often find difficulty surviving in the harsh environments our machines go through daily in the field.

HYDAC Solution

HYDAC attempts to address these issues by utilizing proven robust sensor technologies while innovating on the sensor housing to fit in the machine versus on the machine. The HAT 1425 "In Pin" Angle Sensor is designed to be integrated inside of a hollow pin assembly in the joint of the machine.

Customer Benefits

- Sensor has much greater physical protection from external elements
- Efficient and accurate feedback
- Highly robust to handle harsh environment conditions
- Particularly suited for integration inside of joints and in bolts
- Asymmetrical bolt pattern insures simplified and consistent installation with no additional calibration needed
- Functional safety SIL 2 according to EN 61508 and PL d according to ISO 13849
- Instrument parameters can be viewed and configured via the CANopen object directory using standard CAN software

Images show typical sensor installations. Note complexity in design and exposure to possible damage in the field.





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