Belt Misalignment Sensor for Bucket Elevator

SMARTsaa has developed entirely new range of Belt Misalignment Sensor for Bucket Elevator.
These sensors find application on bucket elevator to detect misalignment of buckets. Bucket elevators have sidewalls, which a misaligned belt can rub against. Heat generated by this rubbing action can quickly reach a dangerous level, especially near pulleys where the belt side forces are the greatest. The casing may get damaged due to rubbing of the misaligned belt to the side wall of bucket elevator.
Extended range proximity sensors are mounted on the side of the casing. Two sensors are fitted, one on each side on the casing of bucket elevator on a location where bucket sway is maximum.
In normal running condition the bucket is away from the sensing range of the sensor. But when swayed, the bucket face comes in the sensing range and the contact is actuated.
As two sensors are used, one at each side at least one sensor, whenever side the bucket sways at least one sensor will actuate and, positive belt misalignment sensing is done.
Two types are belt misalignment sensors are offered

- Inductive Type : Having nominal sensing range of 50 mm (effective 35 mm) and 80 mm(effective 50 mm), 120 mm (effective 100 mm)
- Magnetic Type : Having sensing range of 50mm

Salient Features:

1. No physical contact
2. No wear and tear, hence long life.
3. Switches for use in hazardous locations are also available.
4. High sensing range
5. No effect of dust, water and mud hence reliable operation

Specification:

- Supply: 10-30 V DC
- O/P: PNP or NPN, NO + NC
- Load current: 200 mA
- Size: Rectangular Block type with mounting bracket and gasket
- Object sensed: Any Ferromagnetic minimum size 150 x 150 x 2 mm
- Sensing Range: Up to 50 mm / 80 mm / 120 mm
- Max operating frequency: 100 Hz
- Operating Temp: 70 degree cent
- Enclosure: ABS Plastic , IP 67

Additional power supply working at 230 V AC and with latching circuit with local reset push button available.



Belt Misalignment Switch, Control Unit



Belt Misalignment Sensor

SMARTsaa Instruments (I) Pvt. Ltd.
(Formerly Smart Sensors And Automations & Protocontrol Instruments (I) Pvt. Ltd.)
E-12, Mangalmurti Industrial Complex, Plot T-80, Industrial Area, MIDC, Bhosari, Pune : 411026. India
www.smartsaa.com, Email : sales@smartsaa.com, info@smartsaa.com, Ph.: 020 27400973 Mob. : 8055169703, 8055169702