DESIGN MODIFICATIONS

THIS DOCUMENT IS NOT CONTRACTUAL AND CONTAINS INFORMATION CORRESPONDING TO THE LEVEL OF TECHNOLOGY AT THE DATE OF RELEASE. SAITRONIX RESERVES THE RIGHT TO MODIFY AND/OR IMPROVE THE PRODUCT, WHOSE CHARACTERISTICS ARE DESCRIBED IN THESE DOCUMENTS, AS REQUIRED BY NEW TECHNOLOGY AT ANY TIME. IT IS THE PURCHASER'S RESPONSIBILITY TO INFORM HIMSELF, NO MATTER WHAT THE CIRCUMSTANCES, OF THE PRODUCT'S MAINTENANCE CONDITIONS AND REQUIREMENTS. SAITRONIX RESERVES ALL RIGHTS, ESPECIALLY THOSE ARISING FROM OUR GENERAL DELIVERY CONDITIONS.

DOCUMENT INFORMATION

IN CASE OF DISPUTE BETWEEN A NON-ENGLISH VERSION OF THIS PUBLICATION AND ITS CORRESPONDING ENGLISH VERSION, THE ENGLISH ONE IS THE ONLY LEGAL VERSION.

IT IS IMPORTANT TO KEEP THIS MANUAL FOR THE LIFETIME OF THE EQUIPMENT AND TO PASS IT ON TO ANY SUBSEQUENT OWNER OR USER.

SAITRONIX
2-10-168,E.CNAGAR,CHERLAPALLY,
HYDERABAD, TELANGANA,
INDIA

+ 040-27261150,51

+ 040-27261152

www.saitronix.in

PREPARED BY : **DESIGN DEPT**

VERIFIED BY : **NAT**

TECHNICAL DETAILS OF SAITRONIX ANGLE/TILT POSITION TRANSMITTER/ROTARY ENCODER

APT-36	
GENERAL	
Technology	❖ Rugged Hall effect non -contact type sensor ❖ Not sensitive to temperature or humidity ❖ No degradation element in the construction of Hall Effect sensor because of which result of the output doesn't get affected over a period of time.
Version	Industrial & Rolling Stock Grade
Model	AT-36
Sensor Type	Closed Loop
MEASURING INPUT & POWER SUPPLY	
Angle Measuring Range	0……360°C
Span Measuring Range	0….180°C(Capable of measuring both clockwise & Counter Clockwise without direction selection)
Operating Voltage	12- 30 V DC
Polarity protection	Yes
Current consumption	60mA @ 24V DC
OUTPUT	
Output	Current Model : 0-24mA current output. *Configurable outputs :- BCD/GREY Code ; Voltage Output
Output Type	Load Independent DC Current
Output Curve (4-20 mA)	Standard : Linear Curve Non-Standard : V Curve(i.e. 4 -20mA in both clock wise & Counter clock wise direction)
Output Load	Max 1000 Ohms Resistive & 40mH Inductive
Output Short Circuit Protection	Yes
Output current ripple	0.3 % Peak to Peak
Output Response Time	< 20msec
ACCURACY DATA	
Accuracy	Less than ≤ 1% on full scale
Reproducibility	≤ 0.1%
ENVIROMENTAL CONDITIONS	
IP	67
Operating Temperature	-25 to 70 °C
Relative Humidity	98%
EMI/C ,surge, Environment & vibration test compliance as per IEC60571	Yes
SPECICAL FEATURES	
Zero Set Facility	Simple small permanent magnet (supplied along with unit) placement on side of the encoder enclosure at zero set location will do the zero setting of the angle transmitter with ≤ 0.1 degree resolution.
Span Set Facility	Simple small permanent magnet (supplied along with unit) as above will be used to set span as required by the user.
Additional Features	❖ LED Indication for Zero Setting & Span Setting ❖ LED Indication for output disconnection error ❖ Inbuilt Self Diagnosis check .

APPLICATIONS OF SAITRONIX ANGLE POSITION TRANSMITTERS

Wind and solar energy plants:- •

- Horizontal nacelle alignment to determine the wind direction, monitor the rotor blade position and speed of the rotor
- Exact alignment of solar panels and parabolic mirrors.

POWER PLANTS :-

- Guide vanes, throttle valves and slidegates of power plants • Exact positioning and monitoring of guide vanes, turbine controls, throttle valves and slidegates

Shipping :-

- Exact determination of rudder and propeller position

Crane vehicles, fork-lift trucks and heavyduty vehicles:-

- Exact positioning of crane jibs and the fork of fork-lift trucks • Precise position measurement in industrial and dockside cranes as well as swivel measurement in heavy-duty vehicles

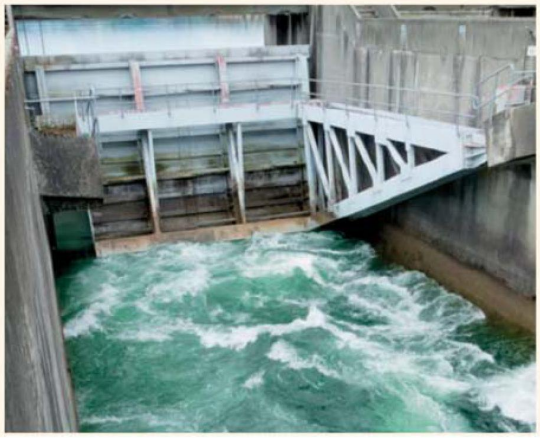
Dredgers and drilling equipment :-

- Measurement of suction arm depths in suction dredgers • Acquisition and positioning of dredger arms and depth measurement in rotary drilling equipment

Water Management :-

Drop weight throttle flap

Drop weight throttle flaps are arranged at the turbine intake to protect the turbine. In case of a sudden failure, the flaps close very quickly thus ensuring that the turbine does not run in overspeed. The exact position of the flap is monitored by inclination transmitters.



Weir position for inlet and outlet control

A Tainter gate is a controllable retaining weir regulating the inlet or outlet of a body of water. It consists of a plate and a support structure mounted on a trunnion. The plate is lowered into the water or drawn up by rods or chains. The pivot point of the plate may be above or below the weir. Inclination transmitters are used for exact positioning and monitoring of the opening angle of the weir gate.