



## Sultan CraneMaster Anti-Collision Systems

### Description

The Sultan CraneMaster Anti-Collision system offers major advantages when control and position functions are required for large moving machinery.

### Points of Difference

#### Why Use Sultan CraneMaster Anti-Collision System?

##### Advantages

- Immune to dust, particles in suspension, fog, rain
- Self-cleaning and ensures that the face of the units always remains clean
- Can use Flexible Polyurethane cones that are immune to rock impacts etc.

### Typical Systems

5 kHz and 10 kHz systems will not crosstalk for purposes of mounting more than one unit on a single machine.

#### 5 kHz

- AWR234SUXXXCM
- AWRT05S4XXXC6XX
- C10-05-4
- FA10A-4

#### 10 kHz

- AWR234SUXXXCM
- AWRT10S4XXXC6XX
- C10-10-4
- FA10A-4

### Principle of Operation

The Sultan CraneMaster utilises specially designed transducers that are unaffected by either high wind or rain. HAWK transducers are the most powerful transducers available. The system can employ two separate frequencies to eliminate the cross talk problems associated with other such products. The dual frequency approach allows for greater reliability and a much faster response time, which provides a greater level of confidence in the operation of the system.

The Sultan CraneMaster series emits a high powered acoustic wave transmit pulse which is reflected from the adjacent crane or impeding obstacle

The reflected signal is processed using specially developed software to enhance the correct signal and reject false or spurious echoes.

The CraneMaster automatically detects approaching cranes and can be programmed with up to 5 distance based relay alarms for collision, slow down warnings etc as well as continuous distance monitoring via 4-20mA or industry standard protocols.

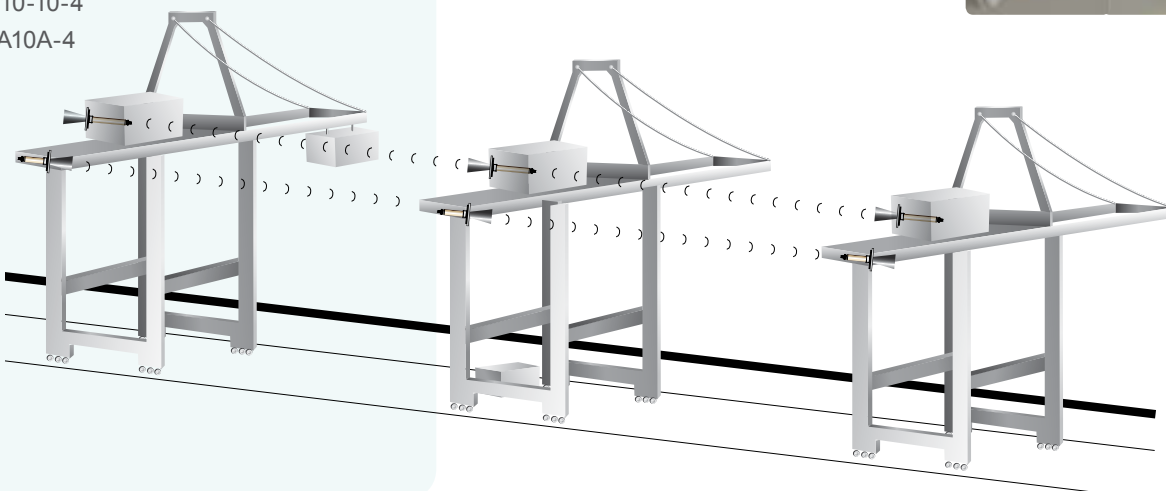
### Primary Areas of Application

- Crane
- Heavy Machinery Anti-Collision
- Position Detection

### Features

- Non contact measurement
- High Power per pulse
- Continuous 4-20mA measurement
- Up to 5 programmable relay alarms
- Wide range of communications: DeviceNet, GosHawk, HART, Modbus, Profibus DP, Foundation Fieldbus & Profibus PA
- Auto compensation for dust, steam and losses
- Protection class IP67, NEMA 4x (IP68 Transducer)
- Programmable fail safe mode
- 3G remote setup options / config
- Universal Supply: 4 Wire AC / DC
- Certifications: ATEX, IECEx, CE, CSA

#### Acoustic Cleaning





## Sultan Machinery Positioning System

### Description

The Sultan Machinery Positioning System is a non contact, two piece Master and Slave distancing transmitter for ranges up to 195 metres.

### Typical System

#### Master

- AWR234SUXXXX
- AWRT04S4XXXC6XX
- C10-04-4
- FA10A-4

#### Slave

- AWR234SUXXXPS
- AWRT04S4XXXC6XPS
- C10-04-4
- FA10A-4

### Principle of Operation

The Sultan Positioning System is generally mounted on moving machinery. It emits a high powered acoustic wave transmit pulse between two points.

The pulse is detected by a Slave transducer mounted on a fixed position which immediately emits a pulse back to the Master on the moving machinery.

The Master transmitter calculates transit times and provides a 4-20mA output proportional to the position of the moving machinery in relation to the Slaves fixed position.

There is NO wiring requirement between the Master and Slave transducers, which allows for easy retrofit to existing shuttle conveyors, cranes, stackers, reclaimers, etc.

Dust, background noise, wet atmosphere, high winds can be compensated for by proper selection of operating frequency of the transducer e.g. use lower frequency transducers where high dust, high wind conditions prevail.

### Primary Areas of Application

#### Mining:

- Shuttle conveyor positioning
- Stacker / reclaimer positioning
- Stacker / reclaimer collision protection
- Transfer conveyor positioning

#### Power Stations:

- Shuttle conveyor positioning
- Transfer conveyor positioning
- Bunker discharge wagon positioning

#### Smelters:

- Crane collision control - positioning

#### Container Ports / Port Cranes:

- Crane collision control - positioning

### Features

- Non contact position control
- Low installation costs, low purchase price
- Ranges to 195m (640ft) with 4 kHz version
- Does not rely on any mechanical connection that may slip because of the material on the rails (Encoder problems)
- Communications: HART, GosHawk, Modbus, Profibus and Fieldbus
- On power-up, instantly knows its position
- No interconnecting cable required between the Master and Slave transducers
- No wearing parts, no maintenance costs.
- Easy alignment adjustment (not critical like laser instruments)
- Easy to retrofit existing machines
- Not affected by reflecting surfaces e.g. roof struts, brackets, guard rails, trailing cables
- Either Master or Slave can be mounted on moving machinery.

#### Acoustic Cleaning

