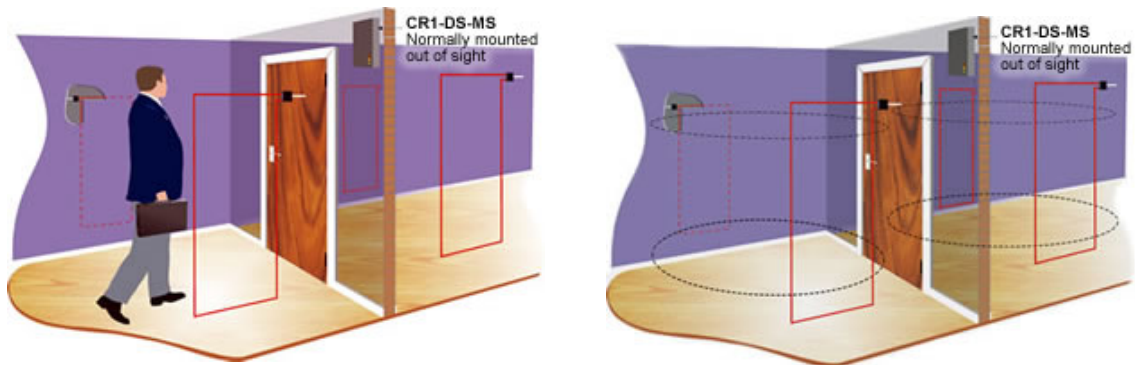# Cryptag® Census®
CR1-DS-MS Direction Sensing Reader

Features

- Hands Free Operation (up to 3.0 metres with external aerial);
- Highest Probability of Tag Identification;
- Direction Sensing;
- Dual Door Controller;
- 2 x External Pairs of Loop Aerials;
- Tag Battery Low Indication;
- Multiple Tag Reading;
- Secure Data Exchange;
- Reverse Polarity Protection;
- Encrypted Data Communications;
- 1:100 Million Error Rate;
- Wiegand or Clock & Data & Serial Output;
- CE, DTI & FCC Approved.

Details

The CR1-DS-MS reader utilises two external pairs of loop aerials to enable direction sensing at ranges of up to 3 metres or the independent monitoring of two nearby doors using one controller. The highest detection probability is achieved if the detection zones of each of the aerial in a pair are deliberately set to overlap (e.g. using both loops in the pair facing one another). It is compatible with all Cryptag® Census® tags. The radio-frequency communications are scrambled to provide high integrity, and prevents simulated tokens being used.

The CR1-DS-MS reader interrogates each loop pair in turn for the presence of tags (i.e. multiplexing). In the direction sensing case a tag moving from one loop pair to another will have its travel direction identified by the reader. The speed of reading tags is effectively halved by this mechanism.

It is important that each of the detection zones created by the loop pairs should not overlap by more than a few centimetres. If used with the Dual or Inward Twin firmware each loop pair is managed independent of the other and the data relating to tags seen in each zone is processed on a separate output port. Where detection zones overlap tags will be reported from both ports

All CR1 readers provide Wiegand or Clock & Data, as well as RS232 output. Advanced features include local alarm outputs, print option and an optional counter display (See IDN1, EDN1 for further information.).

Specification

Specification	Details
Power requirements	12-26 Volts DC @ 400mA
Dimensions	600 x 300 x 50mm
Weight	1.45kg
Temperature range	-20 to +60°C (non condensing)
Housing	Charcoal Grey Metal Case
LED function	RED internally/externally controlled AMBER internally/externally controlled GREEN internally/externally controlled Noise indication, Data Sent Indication
Output Formats	Wiegand, Clock & Data & RS232
Terminations	2.5mm removable connectors

Order Information

Ordered as **CR1-DS-MS** (**CR1A-DS-MS** - USA system). See Product Review for firmware options.

Applications

The product is suitable for numerous applications, they include but are not limited to:
- Direction Sensing;
- Two Door Controller;
- Time and Attendance;
- Emergency Evacuation Monitoring;
- Personnel Safety;
- Hands Free Access Control;
- Personnel Identification;
- Article Identification.