

# ADSF™

## RFID loss prevention system



### Benefits:

- Improved store aesthetics, by having a store entrance free from obstacles
- Shrinkage reduction
- Combination of loss-prevention and product identification in one system
- Provides data to detect which product suffer more theft attempts
- Very quick detection
- Continuous detection field
- One master unit can be connected to 1,2 or 3 slave units, which reduces costs
- Plug and play installation

### Applications:

- Loss prevention at retail stores
- Loss prevention at warehouses
- Product tracking at backdoors, entrances, corridors, etc.

### Product overview

ADSF is a loss prevention system based on RFID UHF. It comprises an antenna with an embedded reader, controller and alarm combining loss-prevention and RFID functions in one system.

ADSF detects the tagged items that pass below the antenna, verify if those items have been paid, and triggers an acoustic and/or visual alarm if any item has not been paid.

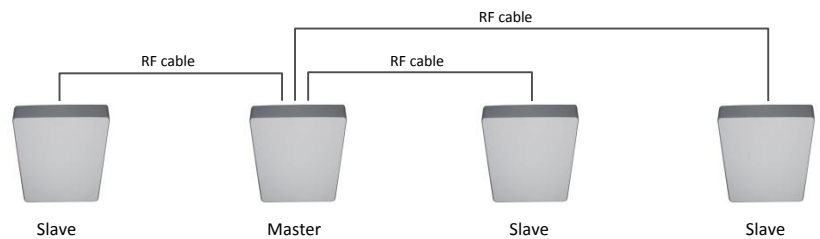
ADSF can use four configurations for checking if a tagged item has been paid:

- Checks the EAS bit of NXP chips
- Checks if the EPC code includes a pre-defined pattern that signals that the product has or not been paid
- Checks against the POS database if the product has been paid
- Checks bulk theft: trigger an alarm if a certain number of tags belonging to the same category are read in a certain time period (e.g. a few seconds).

ADSF comprises a master unit and several slave units:

- The master unit has an integrated reader, a controller, an alarm, a visual alarm indicator and one directive antenna.
- Each slave unit comprises one directive antenna and a visual alarm indicator.

As shown in the following illustration, up to 3 slave units can be connected to one master unit. This reduces costs for stores with wide entrance.



ADSF works with any hard and soft Gen2 RFID UHF tags.

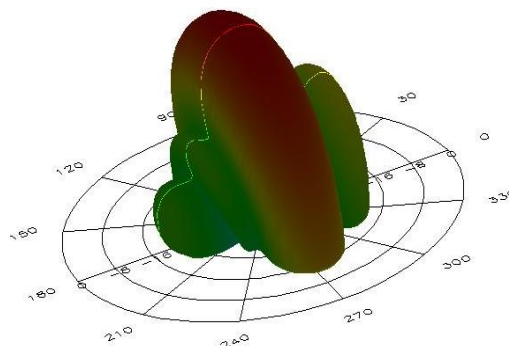
ADSF includes configurable parameters for minimizing false alarms.

ADSF can be ordered in 2 models:

- Model with suspended wires
- Model with a ceiling mount

### Radiation pattern

To minimize the detection of products inside the store, ADSF has a radiation diagram wide in one direction and narrow in the other (perpendicular) direction





### Specifications

|                               |  |
|-------------------------------|--|
| Operating Frequency           | ETSI (EU) (865.6 - 867.6) MHz<br>FCC (NA, SA) (902 – 928) MHz<br>TRAI(India) (865 - 867) MHz<br>MIC (KR) (910 – 914) MHz<br>ACMA (AU,NZ) (920 – 926) MHz<br>SRRC-MII (P.R.China) (920 – 925) MHz<br>Brazil (902 – 907.5) MHz and (915 – 928) MHz<br>Peru (916–928) MHz |
| Detection Height              | 2 - 3 m (recommended)<br>Maximum: 4 m<br>(Use above heights with caution. Read distance depends highly on tag model and products being used)   |
| Radiation pattern             | Fan beam   |
| Beam width                    | 20° / 90°  |
| Polarization                  | Circular   |
| Alarm Light                   | Light Emitting Diode (LED)   |
| Alarm Audio                   | Signal Buzzer  |
| Radiation angle               | Fan shape<br>20° (narrow direction) / 90° (broad direction)<br>-15 dB side lobes   |
| Alarm function Preset         | System gives audio and light alarm by detection of any of the EAS supported modes  |
| Power supply                  | Power over Ethernet<br>Optional: External power supply   |
| Energy Consumption            | 6 W max., 1,5 W stand by, 0,5 W sleep modus, <5µA power down   |
| Reader Power                  | max. 31,5 dBm (may be limited to conform to some regulations)  |
| Radiated power                | 2 W ERP, 3.2 W EIRP  |
| Anticollision                 | Yes  |
| Interface                     | Ethernet   |
| Transponder Protocol Standard | EPC Class1 Gen2  |
| Conformity                    | EN 50364, EN 301 489, EN 302 208 (LBT), EN 300 220   |
| Temperature range             | -20°C to +55°C   |
| Dimensions                    | 880 mm x 220 mm x 56 mm<br>34.6 inches x 8.7 inches x 2.2 inches   |
| Antenna weight                | Master unit: 4.300 g<br>Slave unit: 3.900 g  |
| Material Housing              | Aluminum and methacrylate  |
| Color                         | Off white  |
| Human exposure                | EN 50364   |
| EMC                           | EN 301 489, EN 300 220   |
| Air Interface (EU)            | EN 302 208 v1.2 (DRM)  |

### Benefits:

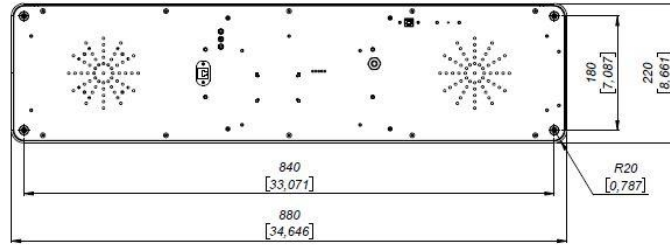
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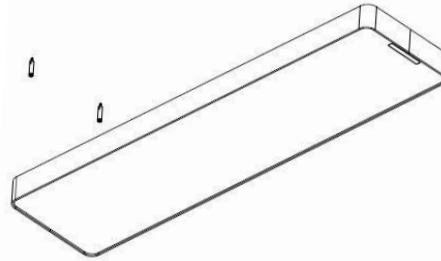


### Mechanical specifications (suspended wires model)

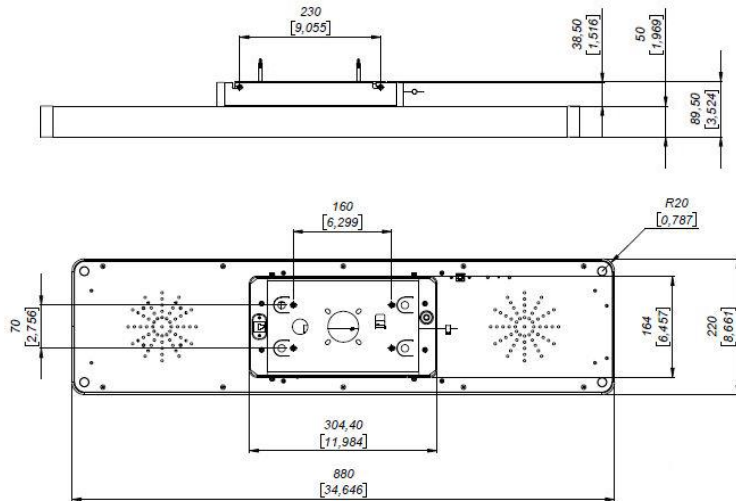


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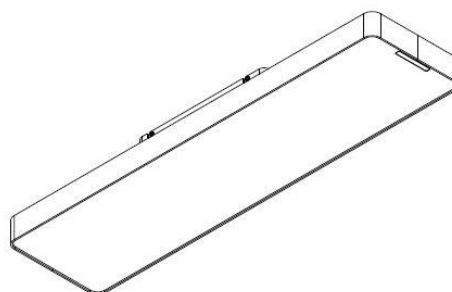


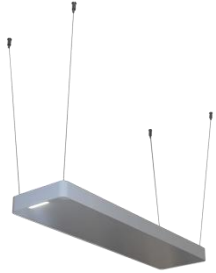
### Mechanical specifications of the ceiling mount model



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### Product codes for ordering

| ADSF | - | o | t | m | - | FF | - | mmm |   |
|------|---|---|---|---|---|----|---|-----|---|
|      |   |   |   |   |   |    |   |     | <b>o = overhead</b>   |
|      |   | o |   |   |   |    |   |     | overhead  |
|      |   |   |   |   |   |    |   |     | <b>t = type</b>   |
|      |   |   | m |   |   |    |   |     | master  |
|      |   |   | s |   |   |    |   |     | slave   |
|      |   |   |   |   |   |    |   |     | <b>m = mount</b>  |
|      |   |   |   | c |   |    |   |     | Ceiling mount (attached to the ceiling or suspended with a pole, pole not included) |
|      |   |   |   | s |   |    |   |     | Suspended with metallic wires (included)  |
|      |   |   |   |   |   |    |   |     | <b>FF = frequency band</b>  |
|      |   |   |   |   |   | EU |   |     | ETSI  |
|      |   |   |   |   |   | US |   |     | FCC   |
|      |   |   |   |   |   | CH |   |     | China   |
|      |   |   |   |   |   |    |   |     | <b>Model</b>  |
|      |   |   |   |   |   |    |   | 100 | model number  |

For example:

- **ADSF-omc-EU-100:**
  - ADSF
  - Overhead
  - Master unit
  - Ceiling mount (attached to the ceiling or suspended with a pole)
  - ETSI frequency band
  - Model 100

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Information in this publication supersedes all earlier versions. Specifications subject to change without notice.