



Intertek Testing Services

ETL SEMKO

INDUSTRIAL PRODUCTS DEPARTMENT

Test Report: **CONFIDENTIAL REPORT OF DUST AND WATER INGRESS
TESTS CARRIED OUT ON A SIREN/SPEAKER**

Report Number: 01005813

Report Date: October 2001

Items Tested: Siren/Speakers

Tested on behalf of: European Safety Systems

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**CONFIDENTIAL REPORT OF DUST AND
WATER INGRESS TESTS CARRIED OUT ON A SIREN/SPEAKER**

1 APPARATUS

Beacons, sirens and speakers as shown in figure 1, 2 and 3 below:

Figure 1 MB05 Beacon & ML15 Loudspeaker



Figure 2 MA112 Sounder & ML15 Loudspeaker



Figure 3 MA121 Sounder & ML25 Loudspeaker



2 TESTS

The beacons, sirens and speakers, models MA112 (ML15), MA121 (ML25) and MB05 (MB10) shown on page 2, were tested for their ability to resist the ingress of dust and water in accordance with the requirements for a Degree of Protection IP66 and 67 as specified in BS EN 60529: 1992 inc AMDs 1 and 2.

3 RESULTS

3.1 Dust Test (IP6X)

Date of test: 5th October 2001.

Lab Ambient temperature 20±5°C

TEST FOR PROTECTION AGAINST:

Access to Hazardous parts

The 1mm test pin was applied to the outer surface of the enclosures, as detailed in Section 1. The pin did not penetrate the enclosures.

Solid foreign objects

The samples were placed in a dust chamber and subjected to an atmosphere saturated with dust under the following conditions.

Date of test: 5th October 2001.

Ambient temperature	20°C
Enclosure depression	20mb
Air flow	Negligible
Enclosure size	N/A
Test duration	8hours

The samples were subjected to the test conditions with the following results.

Sample	Result	Notes
MA112	Pass	No ingress of dust
ML15	Pass	No ingress of dust
MA121	Pass	No ingress of dust
ML25	Pass	No ingress of dust
MB05	Pass	No ingress of dust
MB10	Pass	No ingress of dust

3.2 Water Test (IPX6)

Date of test: 8th October 2001.

Ambient temperature	15°C
Distance to sample	2.5-3 m
Water flow	100Litre/min
Test duration	3 min
Water temperature	15°C

The samples were subjected to the water jet as specified in the standard from a variety of directions.

Sample	Result	Notes
MA112	Pass	No ingress of water
ML15	Pass	No ingress of water
MA121	Pass	No ingress of water
ML25	Pass	No ingress of water
MB05	Pass	No ingress of water
MB10	Pass	No ingress of water

3.3 Water Test (IPX7)

Date of test: 8th October 2001.

Ambient temperature	15°C
Depth of sample	1 m
Test duration	30 min
Water temperature	15°C

The samples were subjected to the water immersion as specified in the standard.

Sample	Result	Notes
MA112	Pass	No ingress of water
ML15	Pass	No ingress of water
MA121	Pass	No ingress of water
ML25	Pass	No ingress of water
MB05	Pass	No ingress of water
MB10	Pass	No ingress of water

4 CONCLUSIONS

The European Safety Systems beacon, sirens and speakers, models MA112 (ML15), MA121 (ML25) and MB05 (MB10) were tested and found to comply with the requirements for a Degree of Protection IP66 and 67 as specified in BS EN 60529: 1992 inc AMDs 1 and 2.

The results and conclusions apply only to the particular samples tested.