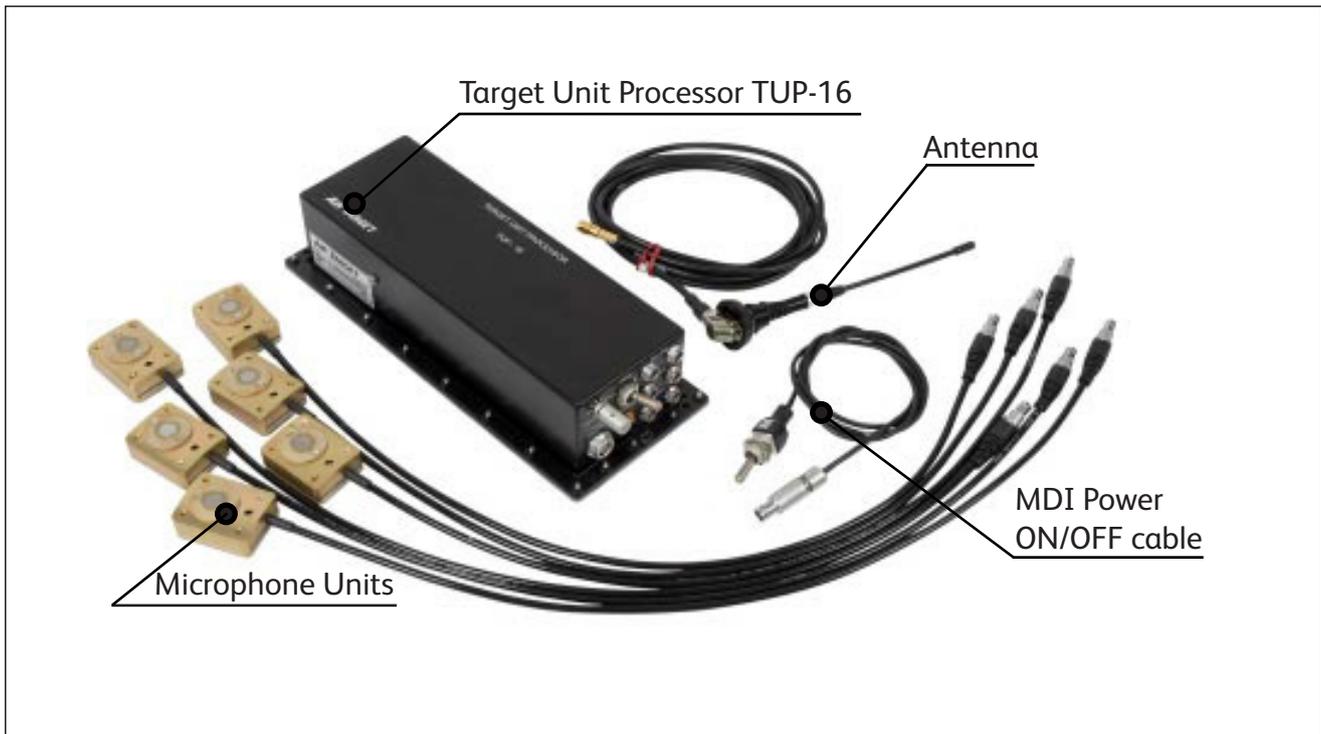


MISS DISTANCE INDICATOR AS-135/12U



This data sheet describes the general universal 12-sector miss distance indicator (MDI) model AS-135/12U which is designed to be installed in target drones or hard targets. The universal MDI can very easily be modified to fit all type of targets available on the market.

The MDI is intended for all target courses, i.e. it is possible to fire at a target coming from any direction. The MDI measures the miss distance and angular position in 12-sectors of a passing supersonic projectile.

The MDI detects acoustically the shock wave generated by a supersonic projectile. The miss distance is determined by the amplitude of the shock wave while the angular position is determined from the time information from the hit order of the indicator's six pressure sensors.

The miss distance and angular position of the projectiles are measured in real time and the data is transmitted as raw data signals via the special designed VHF/UHF transmitter to the scoring station.

Since raw data is used, all calculations are made in the scoring station.

A recalculation of the scoring result, with later more accurate parameters, can easily be made in the scoring station for further improved accuracy.

The MDI consists of six separate pressure sensors (microphone units), a Target Unit Processor TUP-16, antenna and cables. The shape of the microphone housing is made to fit the inner diameter of the target body.

The MDI is powered from its internal rechargeable battery, but can be powered externally.

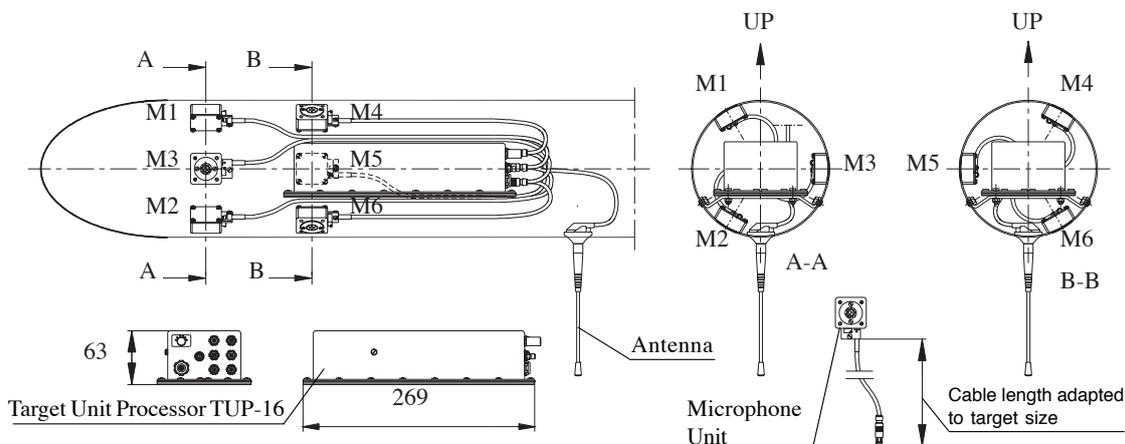
The Target Unit Processor TUP-16 is waterproof.

The antenna which is mounted on the drone/hard target fuselage will ensure safe transmission.

Hayes TRX-2, Dornier SK-6 and SCRAB I & II are examples of targets/drones where the MDI AS-135/12U has been installed in.

TECHNICAL DATA

Installation example of AS-135/12U in an cylindrical target body



TARGET UNIT PROCESSOR TUP-16

Power supply	Built-in rechargeable 12V battery, 2.1 Ah
External supply	+10 to 14 VDC
Power consumption	Stand by condition 320 mA Transmitting condition appr. 670 mA
Transmitter frequency	400 - 470MHz band
Channel separation	50 kHz
Power output	Approx. 0.8 W
Carrier frequency deviation	2.5 kHz \pm 0.5 kHz
Modulation	2-level FSK 4800 baud
Sensitivity switch	6 positions
CRC	Cyclic Redundancy Checksum, a method for ensuring data quality
Measurements H x W x D	63 x 110 x 269 mm, (connectors excluded)
Weight	Appr. 1.25 kg

SCORING DATA

Scoring resolution	12 sectors (30 Degr. each)
Scoring range	Up to 40 m depending on caliber size
Scoring capacity	100 rounds per second
Scoring calibers	5.56 to 5"+, and mis-siles providing they are supersonic when passing the target (Min, Mach 1.3)
Miss distance accuracy	\pm 1 m or \pm 15 % of the actual miss distance, whichever is the greatest

ENVIRONMENTAL DATA

Operation temperature	-30 C to +55 C
Storage temperature	-40 C to +70 C
Humidity	8 to 90 % RHNC (TUS-24/12U IP67)

MICROPHONE UNIT COMPLETE (6 EA/MD)

Measurements	36 x 46 x 20 mm
Weight	Appr. 0.085 kg/unit (incl. 59 cm cable with connector)