



MODEL 1118A/1119A Distance Measuring Equipment

With more than a decade of performance in over 600 locations throughout the world, the Selex ES DME continues to offer field-proven reliability and ease of operation. The Model 1118A/1119A is the DME of choice for the FAA.

PRODUCT OVERVIEW

Sold and in operation in more than 55 nations, Selex ES Distance Measuring Equipment (DME) has a field-proven record of performance for en route and precision approach landing applications. Available in low and high power configurations (Models 1118A and 1119A, respectively), Selex ES's DMEs offer highly reliable operation, advanced performance and ease of maintenance. Selex ES's DMEs interface to any ILS and VOR system available today, and meet or exceed ICAO Annex 10 recommendations.

ADDITIONAL FEATURES INCLUDE:

- Dual and Single Equipment
- Either transmitter selectable for main or standby
- Comprehensive RMM
- Fault Diagnostics
- Remote Certification/Control
- Dual Independent Monitoring
- Traffic Load Monitoring

SPECIFICATIONS

MECHANICAL

Weight: 450 lbs (204 kg)

Dimensions: 72"H x 24"W x 24"D (183 cmH x 61cmW x 61cmD).

ENVIRONMENTAL

Temperature: -10°C to +55°C indoor equipment, -50° to +70° outdoor equipment.

Relative Humidity: Up to 95% (non-condensing) indoor equipment. Up to 100% for outdoor equipment.

Altitude: 0 to 4573 m (0 to 15,000 ft) MSL.

Duty Cycle: Continuous.

Wind: Up to 100 mph (161 km/h).

ELECTRICAL

Primary Power: 85-264 V AC, 47 to 63 Hz, single phase.

Power Consumption: 1118A - single equipment: 110 VA, dual equipment: 205 VA. 1119A - single equipment: 235 VA, dual equipment: 445 VA.

Equipment includes independent power supplies for main and standby equipment. Power supply failures indicated at control and monitor port by aural & visual alarms.

Operating Frequency Band: 960 to 1215 MHz.

Frequency Accuracy and Stability: $\pm 0.0005\%$ for the assigned channel.

Power Output: 1118A ≥ 100 watts (adjustable from 50-106W).
1119A ≥ 1000 watts (adjustable from 500-1000W).

Transmitter Pulse: X channel pulse spacing $12 \pm 0.1 \mu\text{s}$, Y channel pulse spacing $30 \pm 0.1 \mu\text{s}$.

Pulse Shape Rise and Decay: $2.5 \mu\text{s} \pm 0.5 \mu\text{s}$

Pulse Width: $3.5 \pm 0.5 \mu\text{s}$.

Transmit Pulse Count: 700 to 5400 pps.

System Time Reference: Selectable: first or second pulse.

System Time Delay: X channel $50 \pm 0.02 \mu\text{s}$ (adjustable from 35-56 μs), Y channel $56 \pm 0.2 \mu\text{s}$ (adjustable from 50-62 μs).

Dynamic Range: -110 dBW/m^2 (-94 dBm , -124 dBW)
to -22 dBW/m^2 (-6 dBm , -36 dBW).

Receiver Sensitivity: 70% replies at -124 dBW (-94 dBm , -110 dBW/m^2) at cabinet antenna connector.

System Shutdown: Reply delay error exceeds $0.5 \mu\text{s} \pm 0.2 \mu\text{s}$.
Pulse spacing error exceeds $0.5 \mu\text{s} \pm 0.2 \mu\text{s}$. A fall of 6 dB or more of minimum transponder receiver sensitivity. RF power reduced by 3 dB VSWR $> 4.0:1$. Continuous ident longer than 5 seconds. Lack of ident greater than 65 seconds. Reply efficiency falls below 70%. Transmitter count (PRF) falls below 700 pps or exceeds 6000 pps (upper limit adjustable).

Built-in Test Equipment (BITE): Accessible via RS232 and USB terminal interface.

RMM: Includes a personal computer and PMDT software to provide monitoring and control of the DME, specifically providing the capabilities of monitor automated tests. The software provides user-friendly Windows™ menus. Over 40 parameters can be collected and displayed with pre-alarms and alarms. Security is assured by the incorporation of a 4 level password system.

RMM is capable of providing fault isolation down to the LRU from the local and remote sites with unlimited range over telephone lines.

ANTENNA

Several antenna choices are available to meet a broad range of siting requirements. The choices range from a standard omnidirectional antenna for ILS, VOR, or DME stand alone service to a high-gain directional antenna, for co-location on an ILS glideslope tower. The choice of antenna is made when the proposal is



submitted to meet site- unique customer requirements as determined by Selex ES engineers. All antennas operate over the entire DME band without tuning, are vertically polarized, and meet ICAO Annex 10 requirements for enroute and terminal service.



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