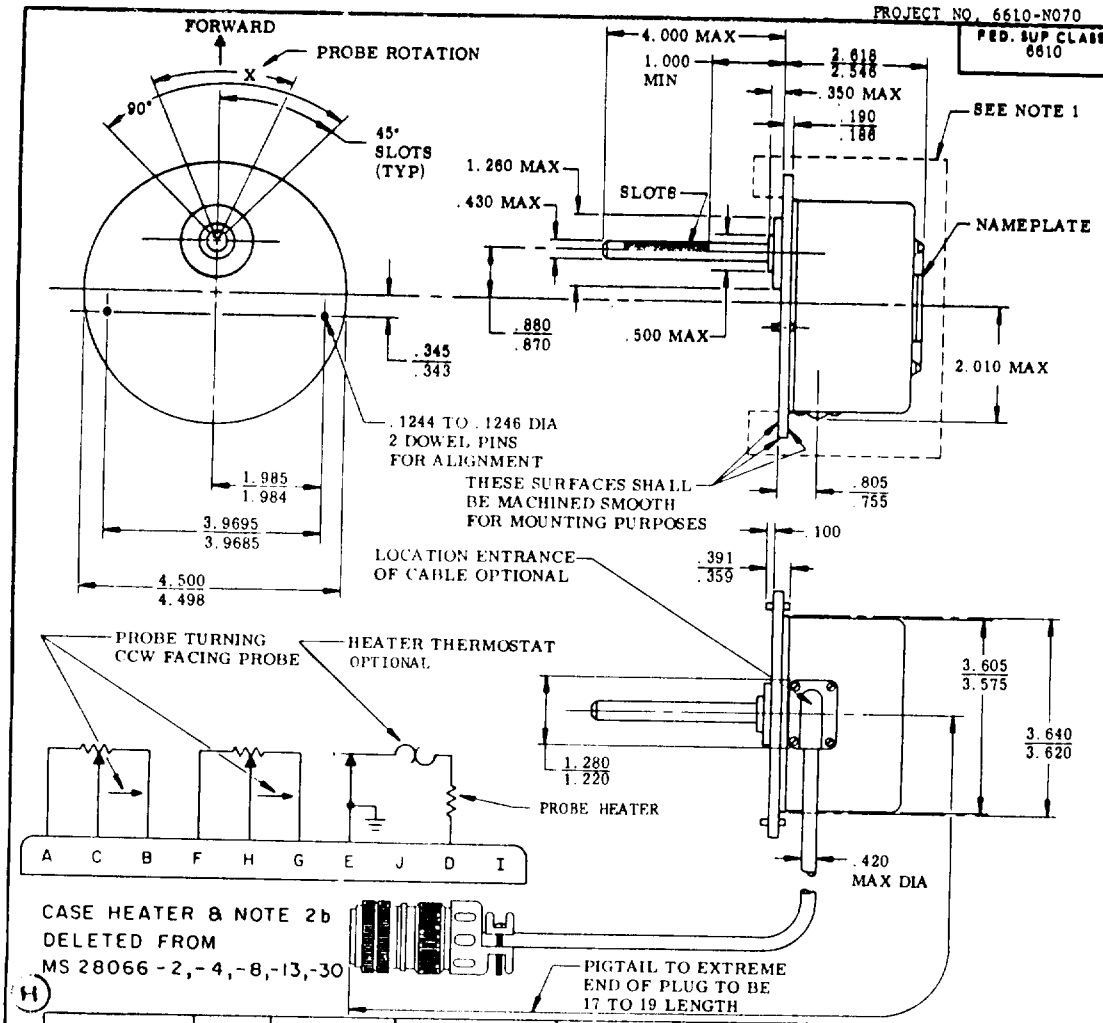
PROJECT NO. 6610-N070

FED. SUP CLASS 6610



MS PART NO.	MAX WT. LBS.	X PROBE ROTATION DEGREES	CONNECTOR	HEATERS VOLTAGE	POTENTIOMETER DATA ABC NOM. RES. OHMS	ABC WIPER TRAVEL % OF TOTAL RES.	FGH NOM. RES. OHMS	FGH WIPER TRAVEL % OF TOTAL RES.
MS28066-2	1.8	30°	MS3106E18-1P	28DC	2750	90	2500	100
-4	1.8	50°	E18-1P	28 DC	2750	90	2500	100
-8	1.8	50°	E18-8P	115 AC	2750	90	2500	100
-13	1.8	50°	E18-8P	115 AC	2750	90	2750	90
MS28066-30	1.8	50°	MS3106E18-1P	28 DC	2750	90	2750	90

NOTES: 1. WITHIN THE INDICATED AREA. THE CASE SHALL BE SEALED TO WITHSTAND A DIFFERENTIAL PRESSURE OF 15 PSI.

2a. THE PROBE HEATER RATING IS 80 WATTS MAXIMUM.

(H) c. THE PROBE HEATER OPTIONAL THERMOSTAT OPENS AT 140°C TO PROTECT THE PROBE FROM OVERHEATING IN STILL AIR.

3. WIPED RESISTANCE IS CENTERED. I.E., 90% WIPED RESISTANCE FOR 100% MECHANICAL TRAVEL X; I.E., 5% UNWIPED EACH END.

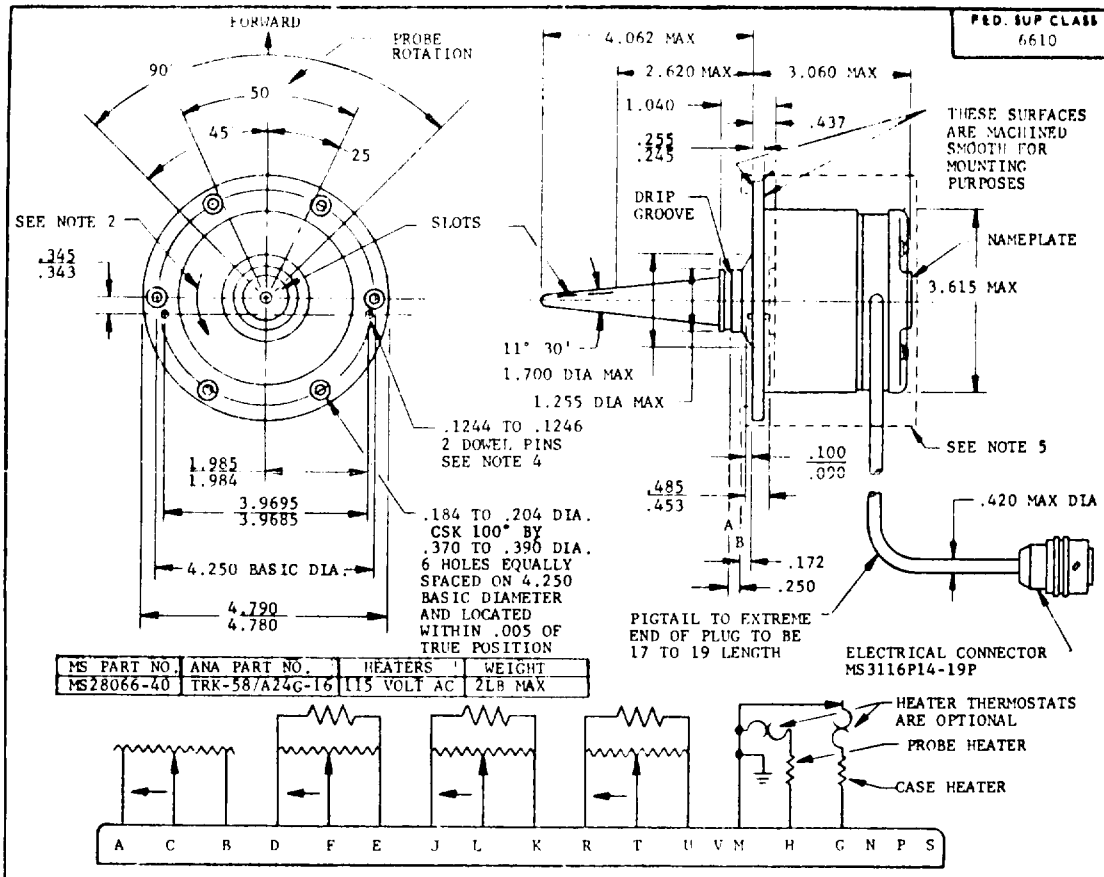
(H) 4. DIMENSIONS IN INCHES; UNLESS OTHERWISE SPECIFIED TOLERANCES: MACHINED ±.010, CAST ±.030, ANGLES ±1°

APPROVED 8 Dec. 55 REVISED (F) 16 FEB '60 (G) 10 NOV 69 (H) 22 August 1973

P.A. NAVY - AS Other Cust	TITLE TRANSMITTER, ANGLE OF ATTACK OR SIDESLIP, LOCAL	MILITARY STANDARD MS28066 (AS)
PROCUREMENT SPECIFICATION MIL-T-19229 (AS)	SUPERSEDES BUAER DWG 52A238B1	SHEET 1 OF 5

DD FORM 1 MAR 72 672-1 (Limited coordination) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

FED. SUP CLASS 6610



MS PART NO.	ANA PART NO.	HEATERS	WEIGHT
MS28066-40	TRK-58/A24G-16	115 VOLT AC	2LB MAX

NOTES FOR PORT MOUNTING ON THE F-4 AIRCRAFT:

1. PROBE TURNS CCW (FACING PROBE) FOR INCREASING ANGLE OF ATTACK WHEN MOUNTED ON PORT SIDE.

2a. POTENTIOMETER WIPER ARM MOVES AS PER ARROW FOR CCW PROBE ROTATION (FACING PROBE).
b. RESISTANCE OF POTENTIOMETER ABC IS 2750 Ω ±10% (WIPER COVERS 90% OF RESISTANCE IN 50° TRAVEL. 5% OF UNWIPED RESISTANCE ON EACH END.)
c. RESISTANCE OF POTENTIOMETER DEF IS 10,000 Ω ±1% (WIPER COVERS 100% OF RESISTANCE IN 50° TRAVEL).
d. RESISTANCE OF POTENTIOMETER JKL IS 10,000 Ω ±2% (WIPER COVERS 100% OF RESISTANCE IN 50° TRAVEL).
e. RESISTANCE OF POTENTIOMETER RTU is 1400 Ω ±1% IN 30° TRAVEL (TAP "R" AT 22.5° AND TAP "U" AT 7.5° FROM AERODYNAMIC CENTER) WITH OVERTRAVEL ON EACH END.
f. THE MAX. CURRENT THRU ANY PORTION OF THESE POTENTIOMETERS SHOULD NOT EXCEED 30 MILLIAMPERES.

3a. THE PROBE HEATER RATING IS 115 WATTS. THE PROBE HEATER OPTIONAL THERMOSTAT OPENS AT 140°C TO PROTECT THE PROBE FROM OVERHEATING IN STILL AIR.
b. THE CASE HEATER RATING IS 50 WATTS. THE OPTIONAL THERMOSTAT CLOSES WHEN THE INTERNAL CASE TEMPERATURE IS 30°C AND OPENS AT 55°C.

4a. THE DOWEL PINS ARE PROVIDED FOR ACCURATE ANGULAR LOCATION OF THE TRANSMITTER.
b. THE TRANSMITTER MUST BE INSTALLED SO THAT THE AXIS OF THE PROBE IS APPROXIMATELY PERPENDICULAR TO THE PLANE CONTAINING THE LOCAL AIRSPEED VECTOR.
c. THE PRECISE LOCATION AND ANGULAR POSITION OF THE TRANSMITTER MUST BE DETERMINED SEPARATELY FOR EACH AIRCRAFT MODEL.
d. THE TRANSMITTER SHALL MEASURE LOCAL ANGLE OF ATTACK TO AN ACCURACY OF 0.1 DEGREE PROVIDED THE LOCAL AIRSPEED IS IN EXCESS OF 90 KNOTS (INDICATED).

5. WITHIN THE AREA INDICATED, THE CASE OF THE TRANSMITTER IS SEALED TO WITHSTAND A DIFFERENTIAL OF 15 PSI.

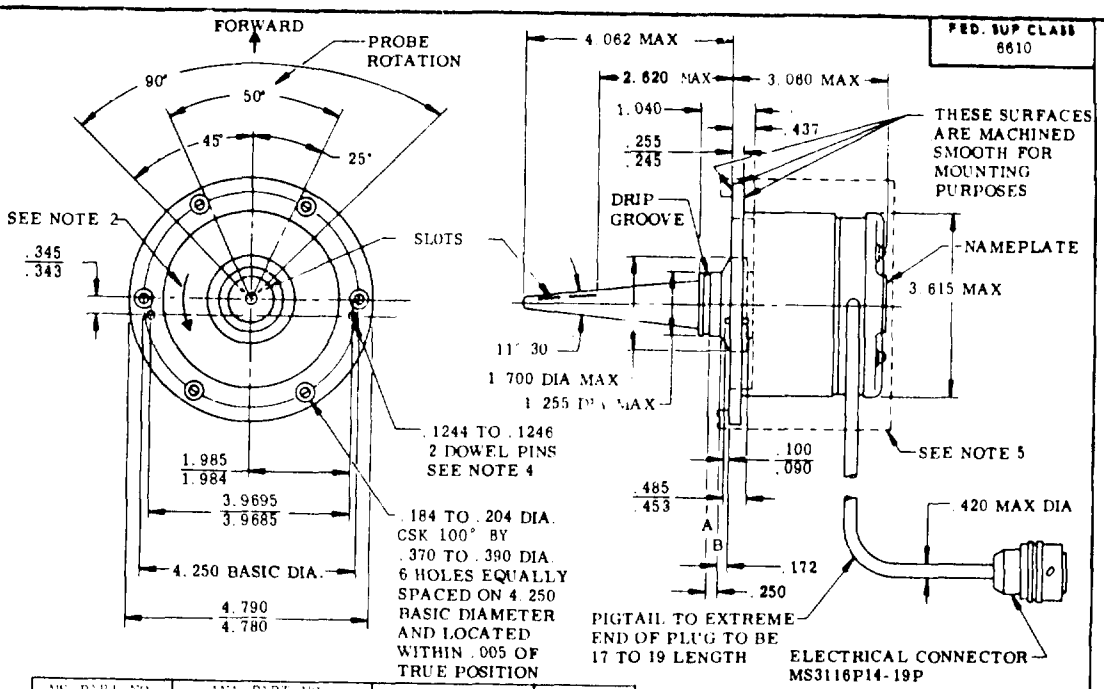
6. IT IS ESSENTIAL THAT THE TRANSMITTER BE INSTALLED SO THAT THE AIRCRAFT SKIN IS LOCATED BETWEEN "A" AND "B".

7. DIMENSIONS IN INCHES UNLESS OTHERWISE STATED. ALLOWABLE TOLERANCES: MACHINED ±.010, CAST ±.030, ANGLES ±1°.

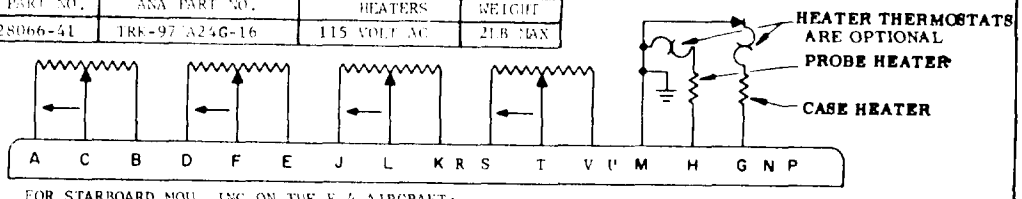
APPROVED 6 DEC 55 REVISED (H) FOR CHANGES SEE SHEET 1

P.A. NAVY - AS Other Cust	TITLE TRANSMITTER, ANGLE OF ATTACK OR SIDESLIP, LOCAL	MILITARY STANDARD MS28066(AS)
PROCUREMENT SPECIFICATION MIL-T-19229 (AS)	SUPERSEDES	SHEET 1 OF 8

FED. SUP CLASS 6610



MS PART NO.	ANA PART NO.	HEATERS	WEIGHT
MS28066-41	TRE-97 A24G-16	115 VOLT AC	2LB MAX



NOTES FOR STARBOARD MOUNTING ON THE F-4 AIRCRAFT:

1. PROBE TURNS CW (FACING PROBE) FOR INCREASING ANGLE OF ATTACK WHEN MOUNTED ON STBD SIDE.

2a. POTENTIOMETER WIPER ARM MOVES AS PER ARROW FOR CCW PROBE ROTATION (FACING PROBE).
b. RESISTANCE OF POTENTIOMETER ABC IS 2750 Ω ±10% (WIPER COVERS 90% OF RESISTANCE IN 50° TRAVEL. 5% OF UNWIPED RESISTANCE ON EACH END.)
c. RESISTANCE OF POTENTIOMETER DEF IS 10,000 Ω ±1% (WIPER COVERS 100% OF RESISTANCE IN 50° TRAVEL).
d. RESISTANCE OF POTENTIOMETER JKL IS 10,000 Ω ±2% (WIPER COVERS 100% OF RESISTANCE IN 50° TRAVEL).
e. RESISTANCE OF POTENTIOMETER STV IS 1400 Ω ±1% IN 30° TRAVEL (TAP "V" AT 22.5° AND TAP "S" AT 7.5° FROM AERODYNAMIC CENTER) WITH OVERTRAVEL ON EACH END.
f. THE MAX. CURRENT THRU ANY PORTION OF THESE POTENTIOMETERS SHOULD NOT EXCEED 30 MILLIAMPERES.

3a. THE PROBE HEATER RATING IS 115 WATTS. THE PROBE HEATER OPTIONAL THERMOSTAT OPENS AT 140°C TO PROTECT THE PROBE FROM OVERHEATING IN STILL AIR.
b. THE CASE HEATER RATING IS 50 WATTS. THE OPTIONAL THERMOSTAT CLOSES WHEN THE INTERNAL CASE TEMPERATURE IS 30°C AND OPENS AT 55°C.

4a. THE DOWEL PINS ARE PROVIDED FOR ACCURATE ANGULAR LOCATION OF THE TRANSMITTER.
b. THE TRANSMITTER MUST BE INSTALLED SO THAT THE AXIS OF THE PROBE IS APPROXIMATELY PERPENDICULAR TO THE PLANE CONTAINING THE LOCAL AIRSPEED VECTOR.
c. THE PRECISE LOCATION AND ANGULAR POSITION OF THE TRANSMITTER MUST BE DETERMINED SEPARATELY FOR EACH AIRCRAFT MODEL.
d. THE TRANSMITTER SHALL MEASURE LOCAL ANGLE OF ATTACK TO AN ACCURACY OF 0.1 DEGREE PROVIDED THE LOCAL AIRSPEED IS IN EXCESS OF 90 KNOTS (INDICATED).

5. WITHIN THE AREA INDICATED THE CASE OF THE TRANSMITTER IS SEALED TO WITHSTAND A DIFFERENTIAL OF 15 PSI.

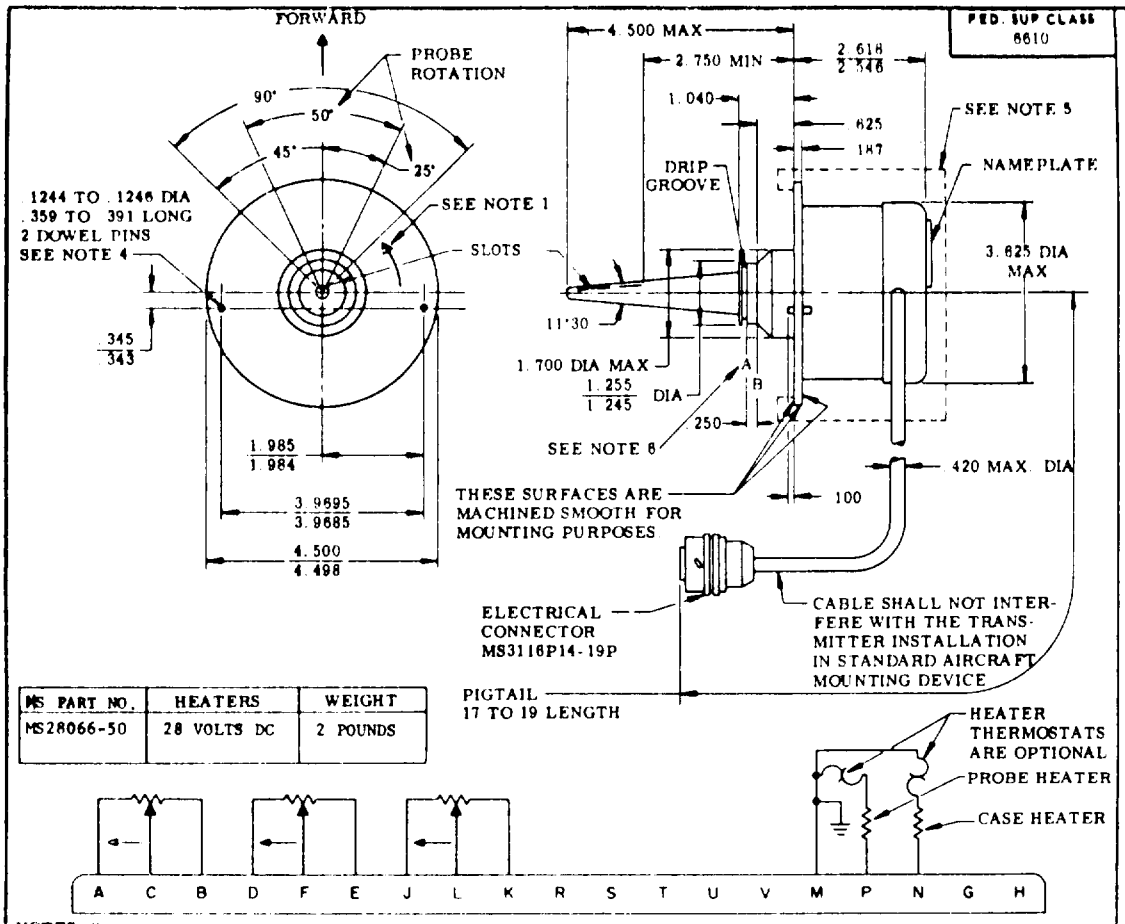
6. IT IS ESSENTIAL THAT THE TRANSMITTER BE INSTALLED SO THAT THE AIRCRAFT SKIN IS LOCATED BETWEEN "A" AND "B".

7. DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED. TOLERANCES: MACHINED ±.010, CAST ±.030, ANGLES ±1°.

APPROVED 8 Dec. 55 REVISED (H) FOR CHANGES SEE SHEET 1

P.A. NAVY - AS Other Cust	TITLE TRANSMITTER, ANGLE OF ATTACK OR SIDESLIP, LOCAL	MILITARY STANDARD MS28066(AS)
PROCUREMENT SPECIFICATION MIL-T-19229 (AS)	SUPERSEDES	SHEET 3 OF 5

FED. SUP CLASS 6610



MS PART NO.	HEATERS	WEIGHT
MS28066-50	28 VOLTS DC	2 POUNDS

NOTES FOR PORT MOUNTING ON THE A-6 AIRCRAFT:

1. PROBE TURNS CCW (FACING PROBE) FOR INCREASING ANGLE OF ATTACK WHEN MOUNTED ON PORT SIDE OF AIRCRAFT.

2a. POTENTIOMETER WIPER ARM MOVES AS PER ARROW FOR CCW ROTATION (FACING PROBE).
b. POTENTIOMETER ABC RESISTANCE IS 2750 OHMS ±5% AT 75° F (WIPER COVERS 90% OF RESISTANCE IN 50° WIPER TRAVEL WITH 5% OF UNWIPED RESISTANCE ON EACH END).
c. POTENTIOMETER DEF RESISTANCE IS 2750 OHMS ±5% AT 75° F (WIPER COVERS 90% OF RESISTANCE IN 50° WIPER TRAVEL WITH 5% OF UNWIPED RESISTANCE ON EACH END).
d. POTENTIOMETER JKL RESISTANCE IS 2500 OHMS ±1% AT 75° F (WIPER COVERS 100% OF RESISTANCE IN 50° WIPER TRAVEL).
e. MAX. CURRENT THRU ANY PORTION OF THESE POTENTIOMETERS IS 30 MILLIAMPS.

3a. THE PROBE HEATER RATING IS 115 WATTS. THE PROBE HEATER OPTIONAL THERMOSTAT OPENS AT 140° C TO PROTECT THE PROBE FROM OVERHEATING IN STILL AIR.
b. THE CASE HEATER RATING IS 50 WATTS. THE OPTIONAL THERMOSTAT CLOSES WHEN THE INTERNAL CASE TEMPERATURE IS 30° C AND OPENS AT 55° C.

4a. THE DOWEL PINS ARE PROVIDED FOR ACCURATE ANGULAR LOCATION OF THE TRANSMITTER.
b. THE TRANSMITTER MUST BE INSTALLED SO THAT THE AXIS OF THE PROBE IS APPROXIMATELY PERPENDICULAR TO THE PLANE CONTAINING THE LOCAL AIRSPEED VECTOR.
c. THE PROPER LOCATION AND CORRECT ANGULAR POSITION OF THE TRANSMITTER MUST BE DETERMINED SEPARATELY FOR EACH AIRCRAFT MODEL.
d. THE TRANSMITTER SHALL MEASURE LOCAL ANGLE OF ATTACK TO AN ACCURACY OF 0.1° PROVIDED THE LOCAL AIRSPEED IS IN EXCESS OF 90 KNOTS INDICATED.

5. WITHIN THE INDICATED AREA, THE CASE OF THE TRANSMITTER IS SEALED TO WITHSTAND A DIFFERENTIAL PRESSURE OF 15 PSI.

6. IT IS ESSENTIAL THAT THE TRANSMITTER BE INSTALLED SO THAT THE AIRCRAFT SKIN IS LOCATED BETWEEN "A" AND "B".

7. DIMENSIONS [illegible] OTHERWISE SPECIFIED TOLERANCE [illegible] ±.010, [illegible] ±.030, ANGLES ±1°.

APPROVED 8 Dec 55 REVISED (1) FOR CHANGES SEE SHEET 1

P.A. NAVY - AS Other Cust	TITLE TRANSMITTER, ANGLE OF ATTACK OR SIDESLIP, LOCAL	MILITARY STANDARD MS28066(AS)
PROCUREMENT SPECIFICATION MIL-T-19229 (AS)	SUPERSEDES	SHEET 4 OF 5

DD FORM 672-1 (Limited coordination) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

This [illegible] approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and [illegible] for use by all other military activities [illegible] employing the standards where suitable.

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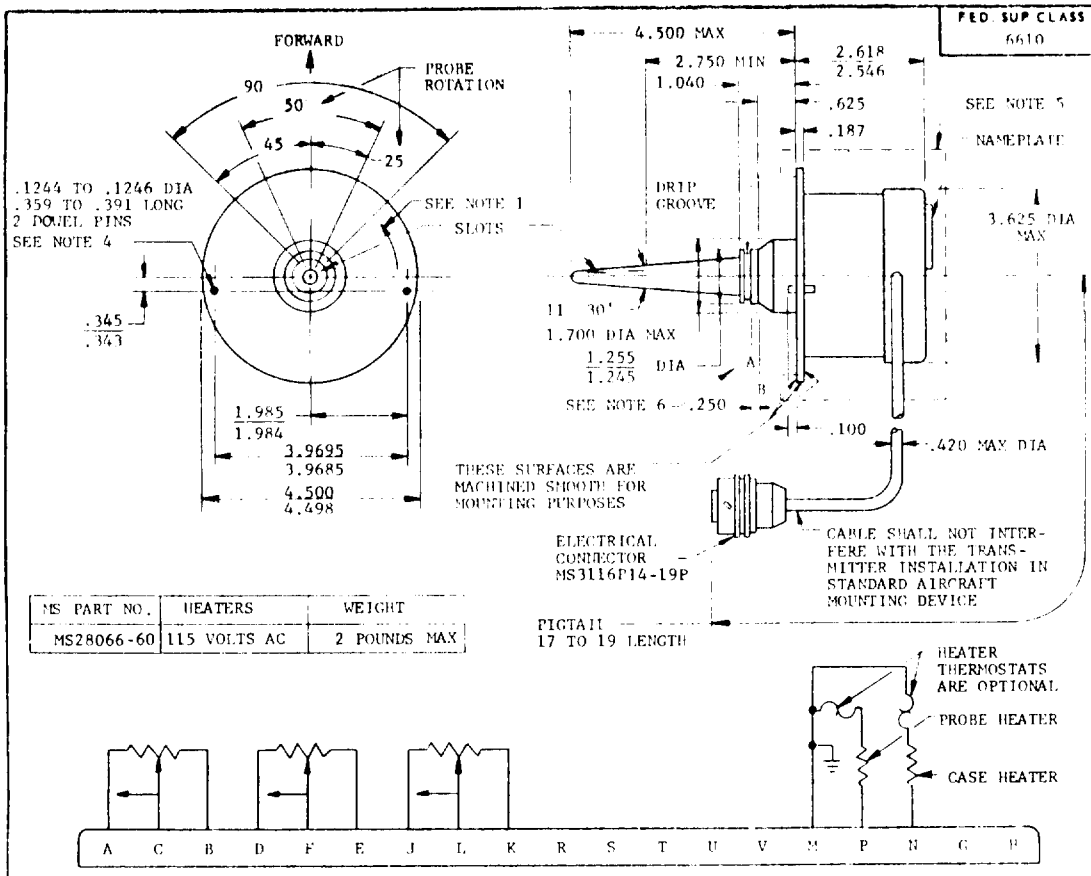

MS PART NO.	HEATERS	WEIGHT
MS28066-60	115 VOLTS AC	2 POUNDS MAX

NOTES FOR PORT MOUNTING ON RA-5C AIRCRAFT:

1. PROBE TURNS CCW (FACING PROBE) FOR INCREASING ANGLE OF ATTACK WHEN MOUNTED ON PORT SIDE OF AIRCRAFT.

2a. POTENTIOMETER WIPER ARM MOVES AS PER ARROW FOR CCW ROTATION (FACING PROBE).
b. POTENTIOMETER ABC RESISTANCE IS 2750 OHMS ±5% AT 75°F (WIPER COVERS 90% OF RESISTANCE IN 50° WIPER TRAVEL WITH 5% OF UNWIPED RESISTANCE ON EACH END).
c. POTENTIOMETER DEF RESISTANCE IS 1400 OHMS ±1% AT 75°F (WIPER COVERS 100% OF RESISTANCE IN 30° WIPER TRAVEL WITH 10° OVERTRAVEL ON EACH END).
d. POTENTIOMETER JKL RESISTANCE IS 2500 OHMS ±1% AT 75°F (WIPER COVERS 100% OF RESISTANCE IN 50° WIPER TRAVEL).
e. MAX. CURRENT THRU ANY PORTION OF THESE POTENTIOMETERS IS 30 MILLIAMPS.

3a. THE PROBE HEATER RATING IS 115 WATTS. THE PROBE HEATER OPTIONAL THERMOSTAT OPENS AT 140°C TO PROTECT THE PROBE FROM OVERHEATING IN STILL AIR.
b. THE CASE HEATER RATING IS 50 WATTS. THE OPTIONAL THERMOSTAT CLOSES WHEN THE INTERNAL CASE TEMPERATURE IS 30°C AND OPENS AT 55°C.

4a. THE DOWEL PINS ARE PROVIDED FOR ACCURATE ANGULAR LOCATION OF THE TRANSMITTER.
b. THE TRANSMITTER MUST BE INSTALLED SO THAT THE AXIS OF THE PROBE IS APPROXIMATELY PERPENDICULAR TO THE PLANE CONTAINING THE LOCAL AIRSPEED VECTOR.
c. THE PROPER LOCATION AND CORRECT ANGULAR POSITION OF THE TRANSMITTER MUST BE DETERMINED SEPARATELY FOR EACH AIRCRAFT MODEL.
d. THE TRANSMITTER SHALL MEASURE LOCAL ANGLE OF ATTACK TO AN ACCURACY OF 0.1° PROVIDED THE LOCAL AIRSPEED IS IN EXCESS OF 90 KNOTS INDICATED.

5. WITHIN THE INDICATED AREA, THE CASE OF THE TRANSMITTER IS SEALED TO WITHSTAND A DIFFERENTIAL PRESSURE OF 15 PSI.

6. IT IS ESSENTIAL THAT THE TRANSMITTER BE INSTALLED SO THAT THE AIRCRAFT SKIN IS LOCATED BETWEEN "A" AND "B".

7. DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED TOLERANCES: [illegible] ±.010, [illegible] ±.030, ANGLES 1°.

APPROVED [illegible] REVISED [illegible] SEE SHEET 1

P A NAVY - AS Other Cust	TITLE TRANSMITTER, ANGLE OF ATTACK OR SIDESLIP, LOCAL	MILITARY STANDARD MS28066(AS)
PROCUREMENT SPECIFICATION MIL-T-19229 (AS)	SUPERSEDES	SHEET 5 OF 5

DD FORM 1 MAR 72 672-1 (Limited coordination) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

OMB Approval No. 22-R255

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DOCUMENT IDENTIFIER AND TITLE MS28066(AS)H TRANSMITTER, ANGLE OF ATTACK OR SIDESLIP, LOCAL

NAME OF ORGANIZATION AND ADDRESS

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

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