

INCH-POUND

MIL-E-85082/1

16 November 1992

SUPERSEDING

MIL-E-81512/1

18 December 1968

MILITARY SPECIFICATION SHEET

ENCODER, SHAFT POSITION TO DIGITAL
CONTACT TYPE, ALTITUDE REPORTING
TYPE 11KUL1267R80A

This specification is approved for use by all Departments and Agencies of the Department of Defense. The requirements for acquiring the Encoders, Shaft Angle to Digital, described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) cited in the solicitation: MIL-E-85082.

TABLE I. Requirements.

Requirements	Value	Unit	Tolerance
Code range	ICAO		
Capacity	-12 to +1267 (-1200 to +126,700)	counts/100 ft feet altitude	maximum
Resolution	80	counts/turn	
Full count revolutions	16	turns	
Voltage interrogation	15	volts DC	maximum
Contact current	5.0	mA/brush	maximum
Starting torque	0.5	oz-in	maximum
Running torque	0.5	oz-in	maximum
Operating speed	20,000	feet/minute	maximum
Slew speed	80,000	feet/minute	maximum
Radial play	0.0015	inches	maximum
End play	0.0015	inches	maximum
Total shaft runout	0.0008	inches	maximum
Perpendicularity	0.0010	inches	maximum
Concentricity	0.0010	inches	maximum
Operating temperature	-55° to +85°	degrees C	min-max
Moment of inertia	N/A	gm-cm ²	maximum
Weight	N/A	oz	maximum

AMSC - N/A

FSC 5990

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MIL-E-85082/1

TABLE II. Part identifying number variant characteristics.

Part Identifying No. <u>1</u> /	A ±0.010	E +0.000 -0.001	G Maximum	Shaft Style	Terminal End	U +0.0000 -0.0001
M85082/1-01A	.125	.440	2.500	Slotted	Wire Leads	.1248
M85082/1-02A	.250	▲	▲	Slotted	Wire Leads	▲
M85082/1-03A	.375	↓	↓	Slotted	Wire Leads	↓
M85082/1-04A	.500			Slotted	Wire Leads	
M85082/1-05A	.625	▼	▼	Slotted	Wire Leads	▼
M85082/1-06A	.750	.440	2.500	Slotted	Wire Leads	.1248

1/ Part identifying number M85082/1-01A shall be the NATO standard.

1/ The suffix letter following the numerical dash number corresponds to the latest modification letter in the type designation.

TABLE III. Part identifying number cross-reference. 1/

SUPERSEDED PART NUMBER	NEW PART IDENTIFYING NUMBERS
MIL-E-81512/1	
M81512/1-01	M85082/1-01A
M81512/1-02	M85082/1-02A
M81512/1-03	M85082/1-03A
M81512/1-04	M85082/1-04A
M81512/1-05	M85082/1-05A
M81512/1-06	M85082/1-06A

1/ All line items shown in Table III refer to equivalent and interchangeable shaft position to digital encoders of the same type designation modification. Part number changes do not affect form, fit or function of the encoders listed therein.

MIL-E-85082/1

TABLE III. Wire termination identification.

	ENCODER SYMBOL NO.	COLOR
	D2	WHITE/YELLOW TRACER
	D4	WHITE/BROWN TRACER
	A1	WHITE
	A2	GRAY
	A4	BLUE
	B1	GREEN
	B2	YELLOW
	B4	ORANGE
	C1	RED
	C2	BROWN
	C4	BLACK
POWER SUPPLY, INTERNAL OR EXTERNAL	POSITIVE POWER LEAD POWER COMMON CASE GROUND IF NECESSARY	WHITE/GREEN TRACER WHITE/BLUE TRACER WHITE/VIOLET TRACER

NOTE:

1. The white and blue lead (power common) shall float with respect to case ground; that is, the wire leads shall not be connected internally.
2. Dimensions H and I shall be 0.062 with a maximum tolerance.
3. Dimension K shall be 0.062 with a maximum tolerance.
4. Rotation for increasing count shall be clockwise.

Custodians:

Navy - AS

Army - AR

Air Force - 85

Preparing activity:

Navy - AS

(Project 5990-0405-1)

Review activities:

DLA - ES