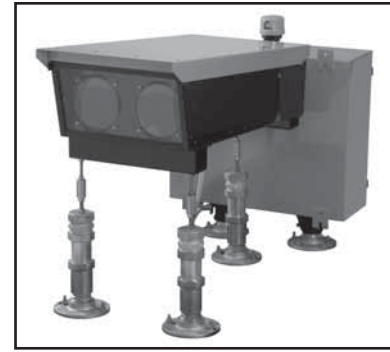


L-880 & L-881 Precision Approach Path Indicator (PAPI)



Compliance with Standards

FAA: L-880 & L-881 AC 150/5345-28 (Current Edition)
ETL Certified
ICAO: Annex 14, Vol. 1, para. 5.3.5.23 to 5.3.5.45
NATO: STANAG 3316

Uses

A PAPI system uses either 2-light channel or 3-light channel units, which offer the pilot information to carry out the approach procedure with the utmost accuracy and safety.

The L-880 PAPI system consists of four light units located at the side of the runway adjacent to the origin of the glide path. The nominal glide slope angle is midway between the angular settings of the central pair of the four units. If an aircraft is on the correct approach path, the pilot will see two red and two white light indicators. If the aircraft approach is too high, an increased number of white light indicators will be seen. If the approach is too low, the pilot will note an increased number of red light indicators.

The L-881 PAPI system is identical to the L-880, except only two light units (instead of four) are used. The nominal glide slope is midway between the angular settings of the two units, and when the pilot is on or close to the correct approach path, the unit nearest the runway will be seen as red and the other unit as white.

The Style A system is for use with either a 220 or 240V AC input voltage. The Style B system is for use on 6.6 or 20A series circuits. A tilt switch assembly is provided on each PAPI unit to de-energize the system in the case that the optical pattern of any light unit is raised between 0.5° and 1.0° or lowered between 0.25° and 0.5° with respect to the setting angle of the unit.

Features

- The use of two lenses in tandem in each light channel makes a sharp transition from white to red (never exceeding three minutes of arc over the full beam width)
- ICAO chromaticity conformity is maintained over the whole width of the red beam
- For Style A systems, a photoelectric control on the master control cabinet automatically provides full intensity during the day and a reduced intensity (5% or 20% of full intensity) at night. A circuit breaker is provided to permit de-energization of the input power for field maintenance.
- Available in 2-lamp or 3-lamp configurations

Ordering Code Style A 44A4733-XXXX

Style

1 = L-880 (4 Box)
2 = L-881 (2 Box)

Interlock Options

1 = With Interlock Relay
2 = Without Interlock Relay

Lamp

1 = 3 Lamp Optical Box
2 = 2 Lamp Optical Box (ETL Certified)

Legs

1 = Three Legs
2 = Four Legs

Ordering Code Style B 44A5860-2XXX

Power

2 = Style B (Current Powered)

Style

1 = L-880 (4 Box)
2 = L-881 (2 Box)

Lamp

1 = 2-Lamp Optical Box (ETL Certified)
2 = 3-Lamp Optical Box

Legs

1 = Three Legs
2 = Four Legs

Notes

Each PAPI system requires a digital aiming device kit, which is ordered separately.

- Interlock Relay Option provides ON/OFF control through current sensing of the runway series circuit during nighttime operations. During daytime, the PAPI is activated at the 100% step.
- Reference NTSB Cert Alert No. 02-08 dated Dec. 12, 2002 regarding prevention of the possibility of dew or frost forming on the light unit optics: At airports where PAPI units are activated when needed and thus are not operated continuously, change airport lighting circuitry to ensure PAPIs are preset to operate continuously on a low power setting, either 5 percent or 20 percent of full intensity as necessary for local site conditions.

Digital Aiming Device Kit

L-880 or L-881 _____ 44A6031

Features (Continued)

- Easy to use digital aiming device
- Lenses protected from sandblast by a hardened front glass shield
- Long-life tungsten halogen lamps are 200W PK30d with a rated life of 1,000 hours at 6.6A
- Interlock Relay Option available for Style A
- Only one PAPI box assembly is used on either a Style A or Style B system, minimizing spare part requirements
- An unique PC board inside the PAPI box indicates if it is tilted or not, minimizing troubleshooting time
- Available in 3-leg or 4-leg configuration
- Reduced cabling between PAPI boxes
- Reduced maintenance. The unit is fully gasketed and remains clean inside. Lamp and filter replacement does not require any tools.
- Condensation water is drained away through wire gauze covered drain holes
- No water can accumulate on the cover, so reflections that could constitute a false optical signal are eliminated
- Corrosion-resistant aluminum, stainless steel hardware, and optical glass are used in the assembly

Features (Continued)

- Fixture uses a black light box with an international orange cover and stainless steel hardware
- Meets both Class I and II temperature ranges:
 - Class I system operates down to -35°C
 - Class II system operates down to -55°C

Electrical Supply

Style A

	Input Voltage 220-240V AC $\pm 10\%$ (VA max.) ¹
L-880 (4-box) 2-lamps/optical box	1,800
L-880 (4-box) 3-lamps/optical box	2,700
L-881 (2-box) 2-lamps/optical box	1,650
L-881 (2-box) 3-lamps/optical box	1,650

Style B

Two Lamp – 6.6A through one 500W isolation transformer

L-880 (4-Box) – Total CCR Load²: 1960VA maximum

L-881 (2-Box) – Total CCR Load²: 980VA maximum

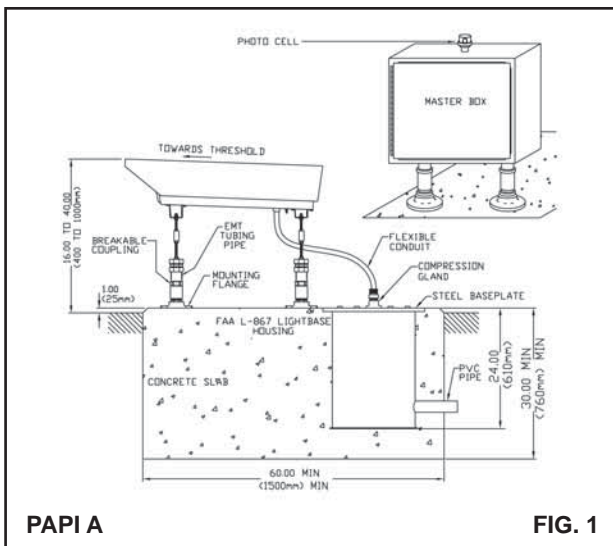
Three Lamp – 6.6A through one 500W and one 200W isolation transformer

L-880 (4-Box) – Total CCR Load²: 3,160VA maximum

L-881 (2-Box) – Total CCR Load²: 1,580VA maximum

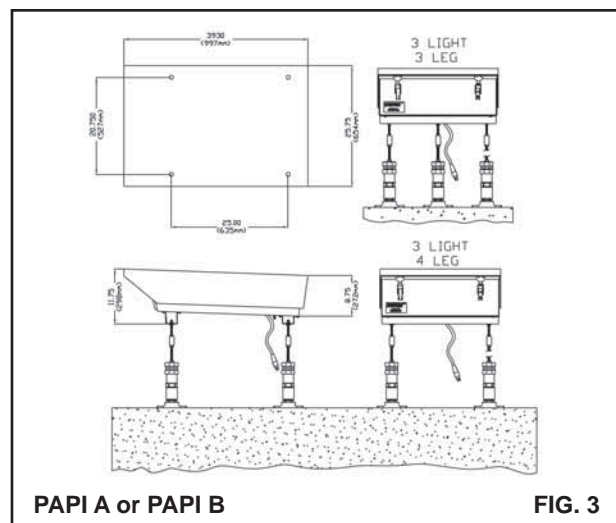
¹ As seen at input of PAPI Master

² Includes PAPI light units and isolation transformers



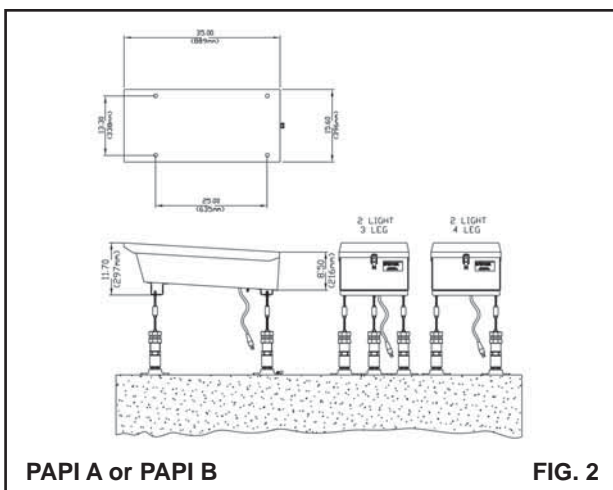
PAPI A

FIG. 1



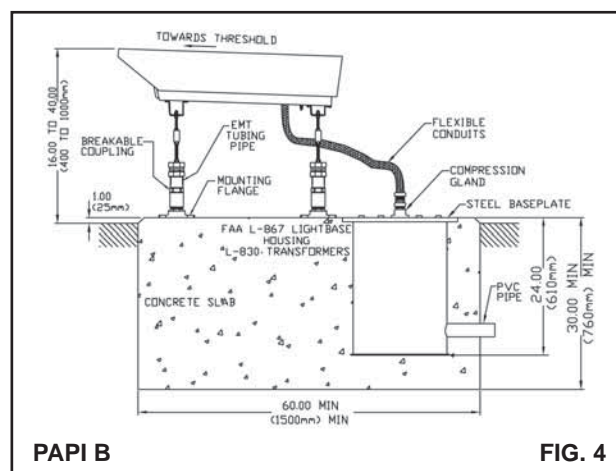
PAPI A or PAPI B

FIG. 3



PAPI A or PAPI B

FIG. 2



PAPI B

FIG. 4

Field Splice Kits*

Part No.	94A0235-3
Style	A – 4-box w/out interlock option 2 or 3 lamp
Qty.	Description
4	Frangible coupling
6	6-pin female plug
4	1-inch (2.54 cm) cable clamp
15	Field splice heat shrink kit 6 inches (15.2 cm) long
30	Butt splices for wire
Part No.	94A0235-4
Style	A – 2-box w/out interlock option 2 or 3 lamp
Qty.	Description
2	Frangible coupling
4	6-pin female plug
2	1-inch (2.54 cm) cable clamp
6	Field splice heat shrink kit 6 inches (15.2 cm) long
12	Butt splices for wire
Part No.	94A0235-1
Style	A – 4-box with interlock option 2 or 3 lamp
Qty.	Description
4	Frangible coupling
6	6-pin female plug
4	1-inch (2.54 cm) cable clamp
15	Field splice heat shrink kit 6 inches (15.2 cm) long
1	Connector secondary plug kit
30	Butt splices for wire
Part No.	94A0235-2
Style	A – 2-box with interlock option 2 or 3 lamp
Qty.	Description
2	Frangible coupling
4	6-pin female plug
2	1-inch (2.54 cm) cable clamp
6	Field splice heat shrink kit 6 inches (15.2 cm) long
1	Connector secondary plug kit
12	Butt splices for wire
Part No.	94A0255-1
Style	B – 2 lamp, 2- or 4-box
Qty.	Description
1	Frangible coupling
1	Cable clamp
1	Wire harness, 44A5913-1
2	Butt splices
1	Heat shrink tubes
Part No.	94A0255-2
Style	B – 3 lamp, 2- or 4-box
Qty.	Description
1	Frangible coupling
1	Cable clamp
1	Wire harness, 44A5913-2
2	Butt splices
1	Heat shrink tubes
Part No.	94A0255-4
Style	B – 3 lamp, 2- or 4-box, ICAO
Qty.	Description
1	Frangible coupling
1	Cable clamp
1	Wire harness, 44A5913-4
2	Butt splices
1	Heat shrink tubes

The information contained in this document is subject to change without notice. ADB reserves the right to make changes and improvements to its products and assumes no responsibility for making these modifications on any equipment previously sold.

Field Splice Kits* (continued)

Part No.	94A0255-5
Style	B – 1 lamp, 2- or 4-box
Qty.	Description
1	Frangible coupling
1	Cable clamp
1	Wire harness, 44A5913-5
2	Butt splices
1	Heat shrink tubes

* One for each optical assembly. Included with PAPI System.

Spare Components

Description	Part No.
Filter, Red ²	63A1019
Filter, Red ²	1438.12.220
Frangible Coupling 2" EMT	44B0180
Frangible Coupling 2" Threaded One End	62A0711
Gasket, Optical Assembly (2-lamp unit)	63A0672
Gasket, Optical Assembly (3-lamp unit)	4071.41.550
Glass, Protective Shield (2-lamp unit)	63A0984
Glass, Protective Shield (3-lamp unit)	63A0671-1
Lamp, 200W, 6.6A, with female leads*	48A0077-1
Lamp driver/tilt sensing PCB (2-lamp and 3-lamp)	44A5857
LC Control Board, PAPI A Only	44A6546-3 ³
Leg Assembly	44C2362S
Master Box, 240V, 4 Box, PAPI A Only	44A4734-1210
Master Box, 240V, 2 Box, PAPI A Only	44A4734-2210
Optical Box, 2-Lamp (ETL Certified)	44A5861-1
Optical Box, 3-Lamp	44A5861-2
SCR Block, 95A, PAPI A Only	28A0011
Shorting Device PCB, 6.6A	44D4538
Spare Lamp Kit ¹	94A0337
Tilt Switch Assembly, PAPI A Only (w/o heater)	44A5863-2
Tilt Switch Assembly, PAPI A Only (with heater)	44A5863-1
Tilt Switch Assembly, PAPI B Only	44A5863

¹ For installations before May 2002. Spare Lamp Kit includes lamp and disconnects to convert power leads so lamp 48A0077-1 can be installed.

² Filter 63A1019 is 6.07" in length and is installed in PAPIs shipped from ADB after January 2005. Filter 1438.12.220 is 6.61" in length and is installed in earlier models. All other dimensions are equal.

³ For PAPI As ordered before Fall 2007, the LC Control Board may have part no. 44D1475/3. This part is now obsolete. To order a retrofit kit, use part no. 94A0549 for both L-880 and L-881. An L-880 unit also requires part no. 94A0548 to replace the T1 transformer.

Precision Approach Path Indicators installed prior to June 1998 have some different spare parts and optional features. Please contact the ADB Sales Department for this information.

Packaging

	2-Lamp	3-Lamp
Net weight:	44 lb (20 kg)	90 lb (41 kg)
In cardboard box:	25.6 x 13 x 40.2 in 65 x 33 x 102 cm	35.8 x 15.6 x 39.8 in 91 x 39 x 101 cm
Gross weight:	46 lb (21 kg)	103 lb (47 kg)
L-880 Master Box:	20 x 24 x 8 in 50.8 x 61 x 20.3 cm	20 x 24 x 8 in 50.8 x 61 x 20.3 cm
Gross weight:	65 lb (29.5 kg)	65 lb (29.5 kg)
L-881 Master Box:	20 x 24 x 8 in 50.8 x 61 x 20.3 cm	20 x 24 x 8 in 50.8 x 61 x 20.3 cm
Gross weight:	25 lb (11.3 kg)	25 lb (11.3 kg)

Note: Quantity of anchoring legs or adjustable frangible legs affects packaging data.