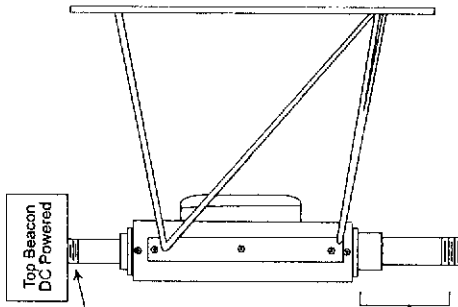
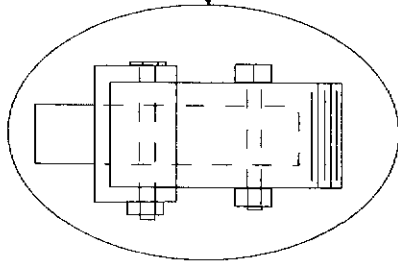


LIGHTED WINDSOCK FRAME with AC CONTROL UNIT

Model 740LWF, 740ACCU
(Optional) 740LWF-WTB, 740LWF-WFAA, 740LWF-DFAA

The pipe extending above the frame is for the installation of a top beacon when ordered. Two bolts and nuts provided. Do not remove.



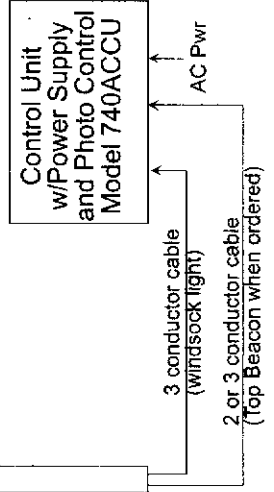
Customer may connect a 1" or larger mounting pipe below pipe supplied using the proper coupling.

Eight (8) foot 1" (ID) Sch 40 mounting pipe supplied "By Others" for mounting

Windsock in a limp position (no wind) hangs down from frame approximately...
C42110 (18"x5"x8") 33 inches
C42210 (18"x8"x8") 66 inches

Wires from windsock frame to Control Unit 10 feet (approximately).

Two feet left for supporting pole (approximately).



FRAME INSTALLATION GUIDE - 18" - TOP BEACON

READ ALL INSTRUCTION BEFORE ATTEMPTING INSTALLATION

- The wiring to the lighted windsock / top beacon is always installed in the windsock frame support pipe. Three different AC powered top beacons are available. Model 740LWF-WTB (Whelen 360 degrees top beacon) Model 740LWF-WFAA (Whelen FAA aircraft anti-collision top beacon) Model 740LWF-DFAA (Dialight FAA obstruction light) Normally the top beacon is shipped loose and must be installed in the field. See attached Mfg's instructions. Check that everything is secure before up righting windsock assembly. Install the mounting pole and Control Unit as shown. AC powered Control Units require 90-264VAC power. The BDS Control Unit supplies 12VDC power to the lights that are automatically turned ON at dusk and OFF at dawn. The Model 740ACCU-PC must be installed outdoors. The Model 740ACCU-DT may be installed indoors. No solar panel supplied. Connect the wires coming from the LED lights assemblies to the connection terminal marked "load". Black wire/s ground or negative (-), red wire/s positive (+). Note: if a third wire (white) is supplied coming from the Windsock or Top Beacon this wire is for changing the lights flash patterns. This wire is normally OPEN and only momentarily connected to +12VDC power to change the flash pattern/s. See attached data sheet for details. Consult factory. Connect AC power to Control Unit to terminal marked "AC Power". All wires should enter the bottom of the Control Unit through the supplied compression fitting. Tighten fitting after wiring is complete. Check all wiring is correct and secure before securing Control Units cover. Check operation of system by applying AC power. The LED lights (load) will turn ON and automatically turn OFF in about 5 minutes. Cover the photo control sensor to simulate night and the lights should come ON. Remove cover from sensor for standard operation.

Changing Windsock Flash Patterns - Multi patterns available

- With LED's active connect white flash pattern wire to +12 volts for more than 1 second will cause the lighthouse to cycle through the flash patterns. When the desired pattern is displayed, allow it to run for more than 5 second. This pattern is selected. This feature is not available for all windsock LED lights or top beacons.

BDS SYSTEMS INC.

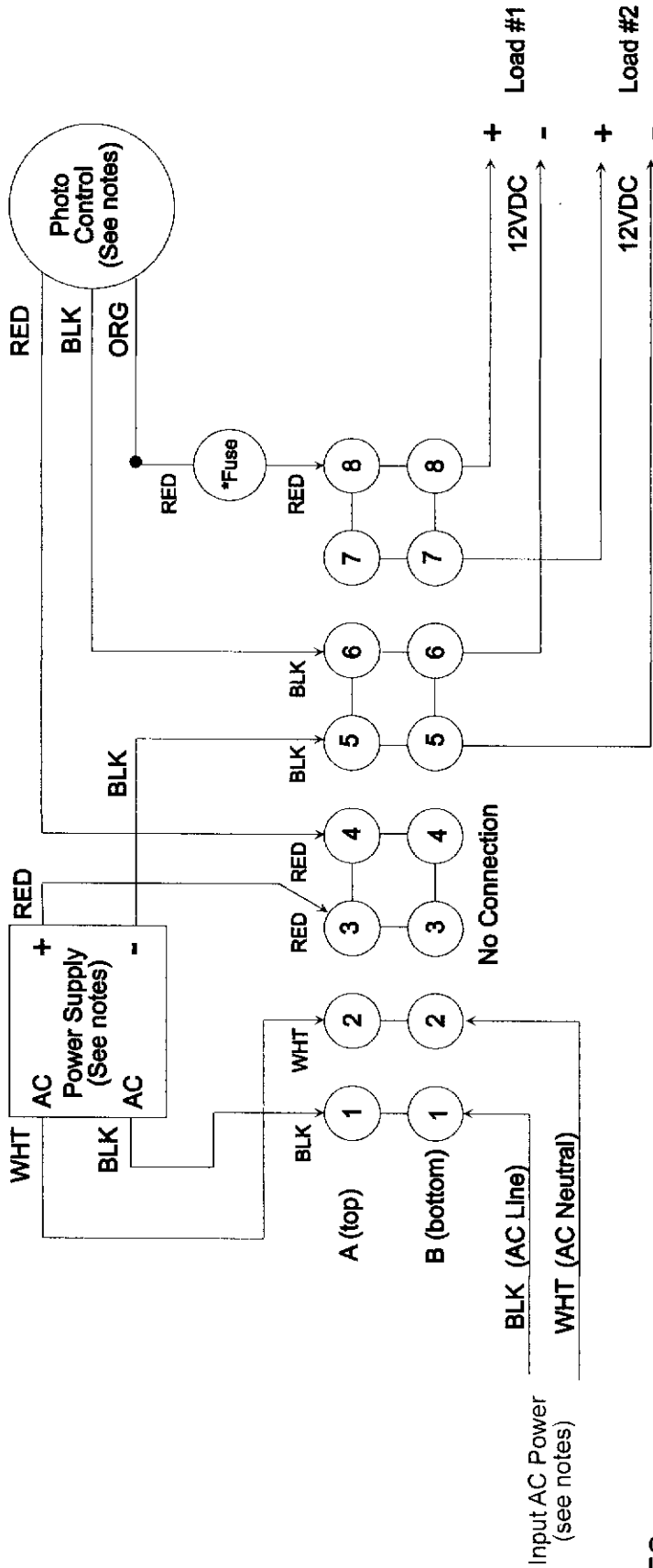
939 NATHANIEL TRAIL • WARWICK, PA 18974

DRAWN KLB	DATE 1/5/06	LIGHTED WINDSOCK INSTALLATION (Mech/Elect)
APPD RBB	DATE 4/19/15	REV LWF+ACCU1_2.des

NO SCALE

LIGHTED WINDSOCK FRAME

AC Powered with 12VDC output for powering lights
Lights turned ON/OFF by a Photo Control Unit



NOTES

1. See attached Lighted Windsock Drawings for installation details.
2. This unit is supplied with a universal input (90VAC- 264VAC) power supply. The power supply output is 12VDC which uses a Photo Control unit for activating the windsock light/s at night. Power supply input 90 - 264VAC, 50-60 Hz, Output 12VDC, 40/60 watt. *(Fuse 5 Amp optional)
3. Turn input power OFF before connecting above wiring.
4. Check all wiring is secure and not exposed before applying power.
5. Testing system. Apply power to unit. The power supplies LED (green) light should light indicating the power supply is receiving power. Check that 12VDC is available at terminal block terminals 5, 7 and 6, 8. When power is first applied the BDS lights are activated assuming everything is correct and will remain ON for 15 - 120 seconds. The Photo Control has a time delay of approximately 15 - 120 seconds. Cover the photo control window to test for night activation. (All power supplies may not have an LED status light).
6. Specifications subject to change without notice.

NO SCALE

BDS SYSTEMS INC.		939 NATHANIEL TRAIL • WARWICK, PA 18974	
DRAWN KLB	DATE 1/8/06	LIGHTED WINDSOCKS INSTALLATION (Mech/Elect)	
APPD RBB	DATE 1/1/12	LWF+ACCU2_1.dsf	REV A

BDS 740LWF Series – AC Powered Systems – Light Settings

740LWF (Lighted Windsock Frame) Field Programmable Flash Patterns

Fifteen (15) different patterns are available. These flash patterns are as follows.

1. Steady burn. Lights ON continuously when power is supplied. BDS default setting.
2. SignalAlert™ - 75fpm and 150fpm - preceded with a microburst flash followed by a specified
 - a. 75fpm, 325ms ON time/OFF time
 - b. 150fpm, 200ms ON-time/OFF time.
3. SingleFlash - 375fpm, 150fpm, 75fpm and 15fpm - single flash patterns.
 - a. 375 is ON for 80ms, OFF for 80ms in a repeated pattern.
 - b. 150 is ON for 200ms, OFF for 200ms in a repeated pattern.
 - c. 75 is ON for 500ms, OFF for 300ms in a repeated pattern.
 - d. 15 is ON for 2 seconds, OFF for 2 seconds (50% duty cycle) in a repeated pattern.
4. DoubleFlash - 150fpm and 75fpm - double flash burst
 - a. 150fpm followed by an OFF time (150-400ms,).
 - b. 75fpm followed by an OFF time (75-350ms).
5. CometFlash® - a burst of 4 light impulses, followed by an OFF time of 350ms.
6. ActionFlash™ - a pattern that repeats a mix of two CometFlash® burst followed by 4 SingleFlash patterns.
7. ModuFlash™ - a sweeping (rising and falling effect) pattern of increasing intensity followed by decreasing intensity.
8. ComAlert™ - a pattern that mixes a combination of CometFlash® and SignalAlert™ for a unique warning pattern.
9. ActionScan™ - scans through all of the above patterns (except steady burn) separated by a series of single flashes.
10. SignalAlert™ - Steady Burn pattern preceded with a SignalAlert™ micro burst flash.

Trademarks and Registered items property of Whelen Engineering Company.

Some top beacons are shipped loose and not attached to the lighted windsocks frames support pipe. If this is the case install the top beacon as follows:

1. The 740LWF-WTB may have the top mounting plate already screwed on to the support pipe. If this is the case proceed as follows. First, carefully feed the wiring from the light assembly down through the lighted windsocks support pipe. Then with the three (3) screws provide screw the top beacon light assembly to the top mounting flange. Do not damage any of the wire during this process. Check that the assembly is secure before proceeding. See instructions shipped with the unit.
2. The 740LWF-WFAA. See instructions shipped with the unit.
3. The 740LWF-DFAA may be shipped loose and has to be installed on top of the lighted windsock support pipe. See instructions shipped with the unit.

740LWF-WTB (Whelen Super LED 360 Degrees Beacon – DC Powered)

This top beacon has 14 different field programmable flash patterns and 4 simulated rotator flash patterns. These flash patterns are as follows:

1. SignalAlert 75 -
2. CometFlash 75 – 75fpm with leading impulse being higher for emphasis - Comet
3. DoubleFlash 75 – 75 double flashes per minute, first burst is higher for emphasis
4. DoubleFlash 150 – 150 double flashes per minute, first burst is higher for emphasis
5. SingleFlash 75 – 75 single flashes per minute (rpm)
6. SingleFlash 150 – 150 single flashes per minute (rpm)
7. SingleFlash 375 – 350 single flashes per minute (rpm)
8. Action Flash – A mix of three CometFlash burst, followed by six RapidRate flashes
9. ModuFlash – impulse rate and intensity modulated (raising and falling) effect
10. ActionScan – Scans through 10 Flash Patterns then a group of single flashes. Repeated.
11. Rotator 50 – simulated rotating beacon 50rpm
12. Rotator 75 - simulated rotating beacon 75rpm
13. Rotator 125 - simulated rotating beacon 125rpm
14. Rotator 250 - simulated rotating beacon 250rpm

740LWF-WFAA (Whelen FAA anti-collision LED Top Beacon – DC Powered)

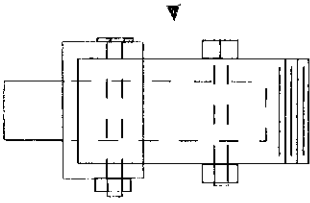
This red LED FAA approved anti-collision top beacon has one (1) flash pattern. On for 0.4 seconds, OFF for 0.7 seconds, (45 flashes per minute) approximately.

740LWF-DFAA (Dialight FAA LED Obstruction Light – DC Powered)

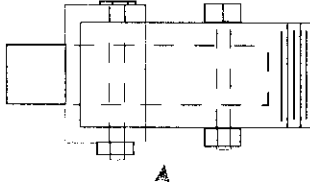
This red FAA approved obstruction top beacon has (1) flash pattern – steady burn. This LED is illuminated as long as 12VDC power is applied to unit.

LIGHTED WINDSOCK FRAME

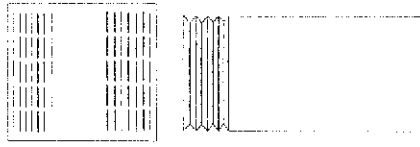
Mounting Pipe Hardware



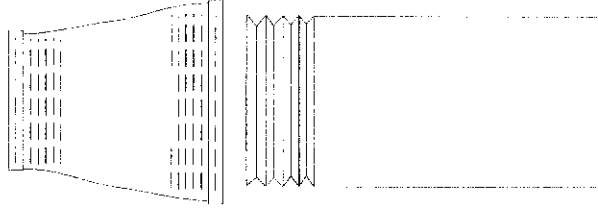
Windsock frame
1" (ID) mounting
pipe connected by
BDS Systems.



1" coupling
supplied
"By Others".



1" support pipe
supplied
"By Others"



1 1/2" X 1" reducer
coupling shown.
Supplied
"By Others"

1 1/2" support pipe
supplied
"By Others"

Using a coupling

Using a reducer

NOTES

1. The above is a guide for installing a BDS lighted windsock frame assembly. The installer must decide whether to use a 1" or larger support pipe for the installation. Everything below the shown pipe connect must be supplied "By Others".
2. The wiring cable that supplies power to the windsock frame and top beacon when ordered is not shown in this drawing. Support for the bottom support pipe is "By Others".
3. The BDS supplied 1" (ID) threaded connection has a 1.315 nominal outside diameter.
4. Galvanized schedule 40 pipe available at plumbing supply houses, Home Depot or Lowes stores is quite suitable.

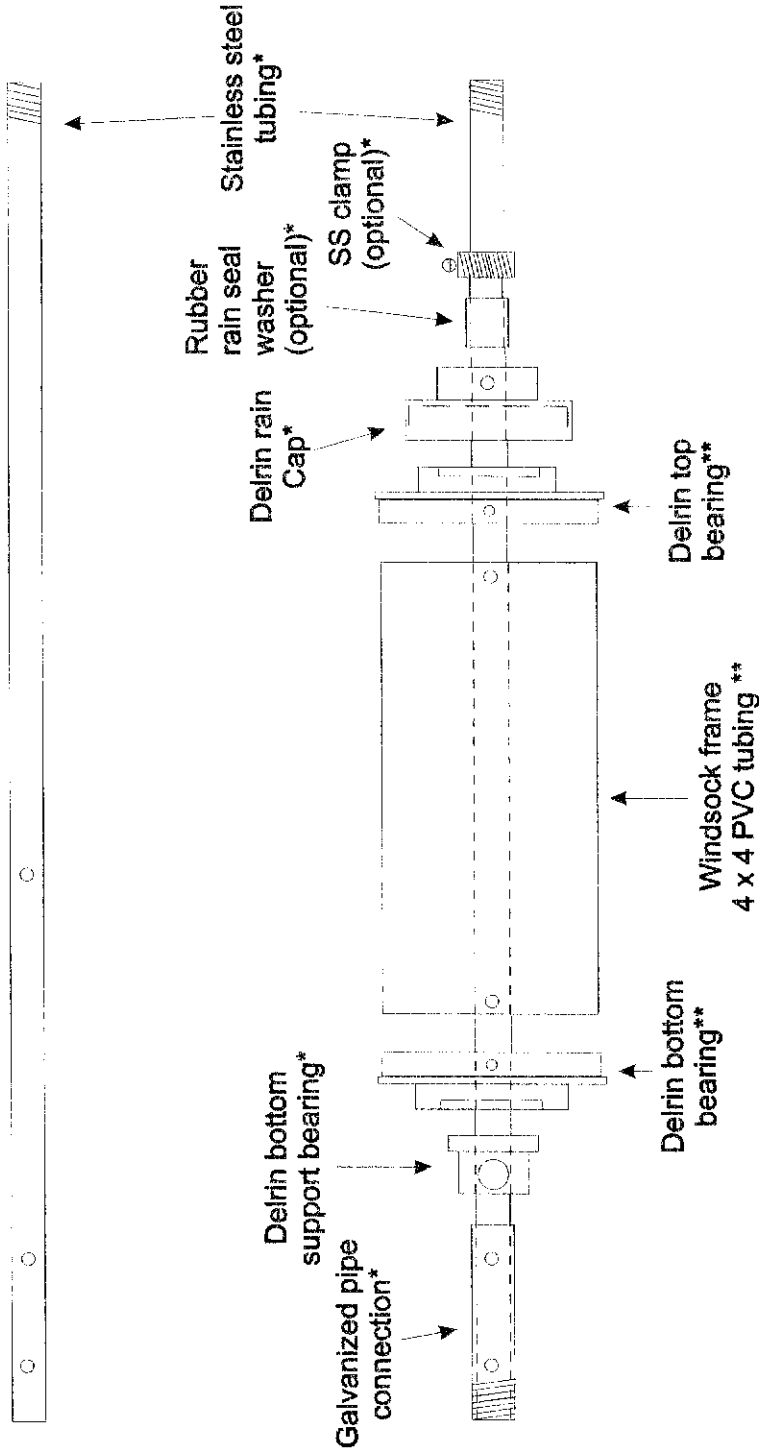
NO SCALE

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939 NATHANIEL TRAIL • WARWICK, PA 18974

DRAWN KLB	DATE 1/20/09	LIGHTED WINDSOCKS INSTALLATION (Mech)	
APPD RBB	DATE 7/1/13	LWFpipeCon1.dsf	
			REV A

BDS WINDSOCK FRAME ASSEMBLY
(Exploded parts view)



NO SCALE

BDS SYSTEMS INC.
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DRAWN KLB	DATE 10/10/11	Windsock frame assembly	
APPD RBB	DATE 7/1/13	LWF740partsviiew.dsf	REV

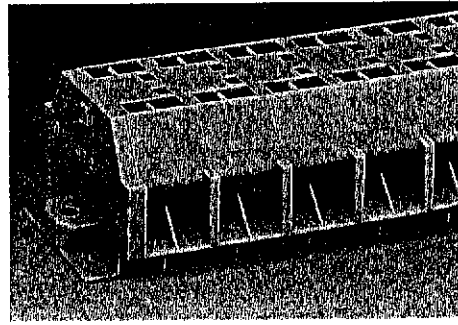
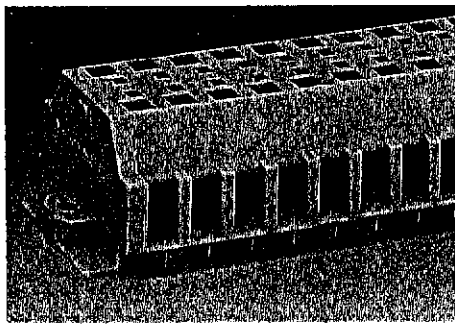
Notes

1. Windsock frame support rods and windsock mounting ring not shown.
2. Miscellaneous screws / bolts not labeled. All parts not shown.
3. Center support tubing shown separately and with parts assembly.
4. Items with single asterisk (*) are stationary and do not move.
5. Items with double asterisk (**) rotate with the direction of the wind.
6. Electronics inside the tubing and LED light assembly not shown.
7. All Delrin parts white. All SS parts 304 stainless unless noted.

Specifications subject to change without notice

www.bdssystem.com/700g.html

215-345-0436



10

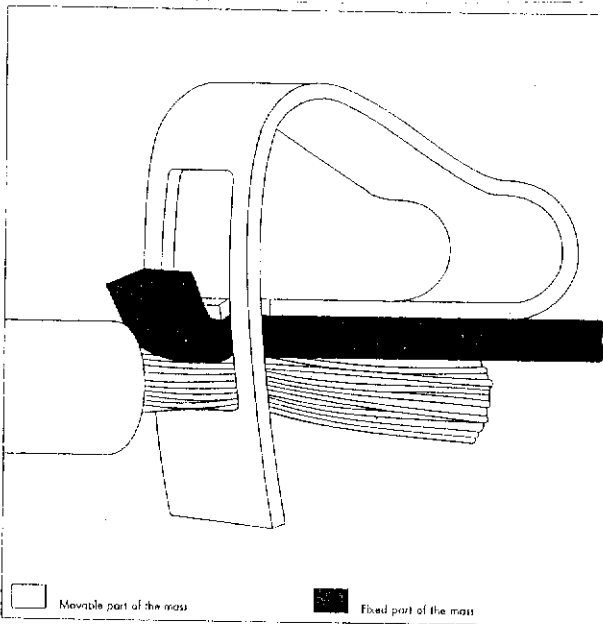
**The WAGO CAGE CLAMP® Connection
for Solid, Stranded and Fine-Stranded Wires**

Vibration and shock resistant

Due to the best possible use of the material characteristics the CAGE CLAMP® spring has very little mass in relation to the high force produced. Additionally, the mass of the spring, the clamped wire and the current bar are divided such that resonances do not occur.

The interaction of these factors results in a connection which has high resistance to vibration and shock, as confirmed in many approval tests. Vibration

and shock neither result in conductor damage nor in a measurable contact interruption.



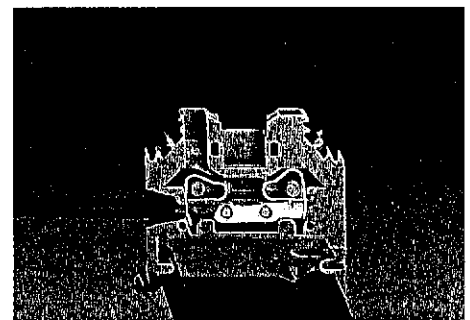
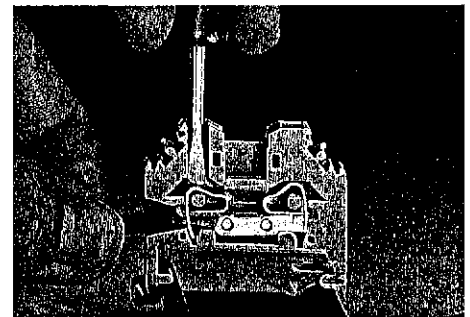
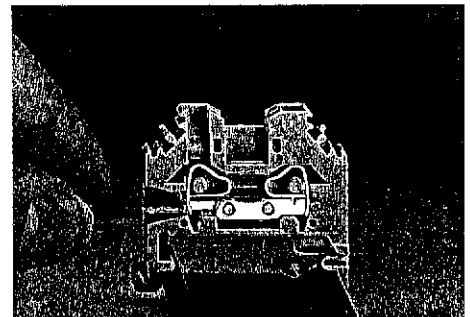
1. Stripped wire is introduced just before the clamping unit.

2. The CAGE CLAMP® spring is pressed down and the wire is introduced into the clamping unit immediately.

3. The CAGE CLAMP® spring is released – the conductor is automatically clamped.

Side-entry:

Depression of the CAGE CLAMP® spring from the front, wire entry from the side.



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 939 NATHANIEL TRAIL • WARWICK, PA 18974
 215-345-0436, bruce@bdssystem.com

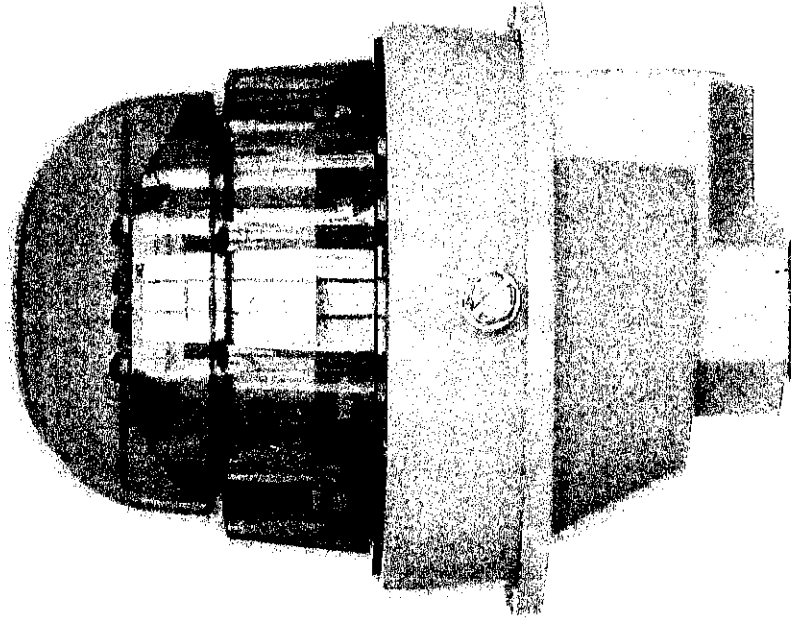
Dialight RTO-1R08-001, 12 Volt DC Obstruction Light
Dialight RTO-1R07-001, 120 Volt AC Obstruction Light

Light Head Assembly
with red lens

Two Holding Screws
(one each side)

Wire Base Housing

Reducer Bushing
(1" to 3/4")



Plug installed
but not used

Assembled View

NOTES

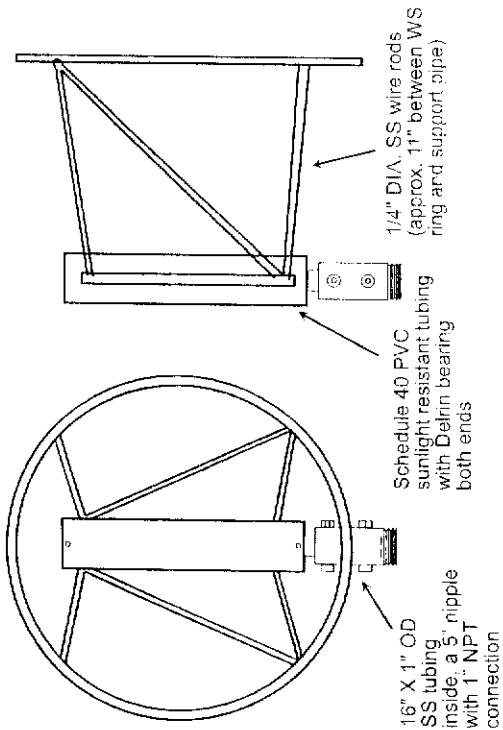
1. Carefully remove packing material from light assembly.
2. Check unit for correct power input voltage and wire accordingly.
3. Loosen the two (2) holding screws and remove the base from head assembly.
4. Screw wire base housing onto the threaded pipe on top of windsock frame.
5. Feed wires from light assembly down through base housing on windsock frame.
6. Place head assembly on top of base housing and tighten the holding screws.
7. Check unit is secure and wires are not damaged.

NO SCALE

BDS SYSTEMS INC.
 939 NATHANIEL TRAIL • WARWICK, PA 18974

DRAWN KLB	DATE 1/30/08	Installing a Dialight RTO on Lighted Windsock Frame	REV C
APPD RBB	DATE 1/4/16	BDSRTO12_120lit.des	

FRAME ASSEMBLY (Non-lighted)



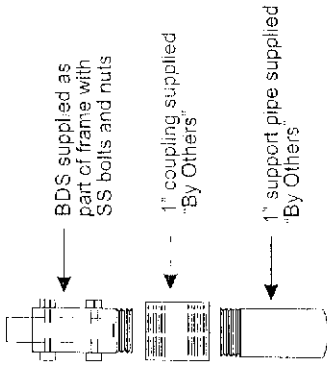
FRAME INSTALLATION (B18 frame shown, B24 / B36 similar)

1. Bottom frame connection supplied with a 1" NPT SS pipe nipple for easy installation. (details shown at right)
2. Install on 1" or larger support pipe using proper couplings supplied "By Others". Check all screw connections. Recommend 6" or longer support pipe.
3. Install windsock on frame using self-locking nylon ties.
4. No parts to lubricate or service. No part will rust or corrode.
5. Windsock should be installed in an open free air space - not near fans, stacks or other locations which will result in unreliable wind readings.

Schedule 40 PVC sunlight resistant tubing with Delrin bearing both ends

1/4" DIA. SS wire rods (approx. 11" between WS ring and support pipe)

Triple thickness, 2 hems W#2 brass grommets on 4" centers



BDS supplied as part of frame with SS bolts and nuts

1" coupling supplied "By Others"

1" support pipe supplied "By Others"

FRAMES

MODEL	PART NO.	MAT'L (Nylon)	MOUTH (IN)	BODY (LENGTH) (IN)	TAIL (OUT)
WF18	C421-10	INT'L ORANGE	18"	5'0"	8"
WF18	C422-10	INT'L ORANGE	18"	8'0"	8"
WF24	C423-10	INT'L ORANGE	24"	8'0"	12"
WF36	C425-10	INT'L ORANGE	36"	10'0"	12"
WF36	C427-10	INT'L ORANGE	36"	12'0"	12"

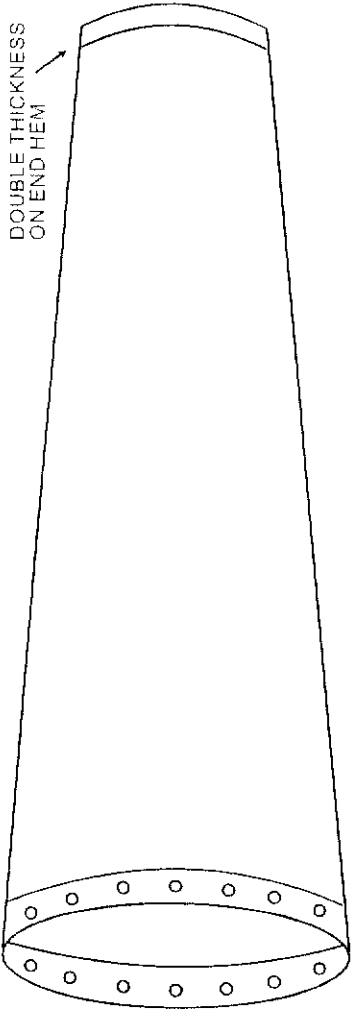
WINDSOCKS

MODEL	PART NO.	MAT'L (Nylon)	MOUTH (IN)	BODY (LENGTH) (IN)	TAIL (OUT)
WF18	C421-10	INT'L ORANGE	18"	5'0"	8"
WF18	C422-10	INT'L ORANGE	18"	8'0"	8"
WF24	C423-10	INT'L ORANGE	24"	8'0"	12"
WF36	C425-10	INT'L ORANGE	36"	10'0"	12"
WF36	C427-10	INT'L ORANGE	36"	12'0"	12"

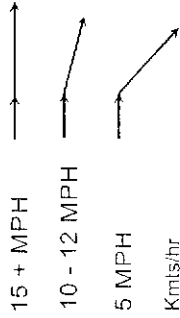
Pricing and specifications subject to change without notice.

In this new drawing (WINDS17.des) the frames model labeling has been changed to better reflect the frames description. No change in pricing.

WINDSOCK



WINDSOCK ANGLE & APPROXIMATE WIND SPEED



Miles/hr X 1.609 = Kmts/hr

NOTES

- All standard International Orange (nylon), other materials available
- Windsocks are FAA approved
- Frames all Stainless Steel or non-corrosive parts. No parts to rust. No ball bearings - Delrin bearings. No maintenance
- Order frames and / or windsocks by model / part number/s
- All pricing in US dollars. Shipping FOB Warwick, PA USA
- Self-locking weather-resistant nylon black ties are supplied when windsock & frame are ordered together on the same order.
- Letters & designs printed on windsocks - consult BDS Systems (n) 18" lighted windsock frames standard, 24" and 36" available
- Lighted windsocks visit: www.bdsystems.com
- All items made in the USA Feet X 0.3048 = mts Inches X 2.540 = cm Cm X 0.3937 = inches Meters X 3.281 = feet

NO SCALE

BDS SYSTEMS INC.
939 NATHANIEL TRAIL • WARWICK, PA 18974

DRAWN	DATE	FRAMES & WINDSOCKS	REV
KLB	11/23/15		
APPD	DATE		
RBB	2/24/17	WINDS17.des	

215-345-0436

BDS SYSTEMS INC.

939 NATHANIEL TRAIL • WARWICK, PA 18974

Thank you for choosing BDS Systems.
After you have installed the lighted windsock we would appreciate it if you could take some digital pictures of the installation and email them to us. Please let us know the location details and purpose of the installation.
Our email address is: bruce@bdssystems.com

Thank you.
Bruce Balderson
BDS Systems Inc.
939 Nathaniel Trail
Warwick, PA 18974-6147 USA
215-345-0436, web site: www.bdssystems.com