

Sign Ballast Footage Chart

UNIVERSAL® USB Fluorescent Sign Ballast Matrix																														
No. of Lamps Per Ballast	TOTAL LAMP FOOTAGE REQUIRED																													
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48						
1-2		USB-0412-12																												
1-4				USB-0816-14																										
					USB-1024-14																									
2-4								USB-1632-24																						
4-6										USB-2036-46																				
										USB-2048-46																				
No. of Lamps Per Ballast	TOTAL LAMP FOOTAGE REQUIRED																													
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48						
1-6	USB-0218-16																													
						USB-1232-16																								
						USB-1048-16																								
SIGNA® Electronic Sign Ballast Matrix																														
No. of Lamps Per Ballast	TOTAL LAMP FOOTAGE REQUIRED																													
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48						
1-2	ESB216-12																													
2-4		ESB432-14																												
4-6				ESB848-46																										
1-4					ESB1040-14																									

Plastic Sign Ballasts LEAD LENGTHS (Inches)

Catalog Number	White	Black	Blues	Reds	Yellows	Browns	Oranges	Orange Blacks	Blue Whites	Red Whites
PLASTIC SIGN BALLASTS - HIGH OUTPUT 800mA RS LAMPS - 120 Volts - 60 Hz										
TWO LAMP BALLASTS										
USB-0412-12	24	24	38	38	48					
FOUR LAMP BALLASTS										
USB-0816-14	36	24	65	40	39	56			48	
USB-1024-14	24	24	79	48	75	83			57	
USB-1632-24	24	24	80	54	60	80			72	
SIX LAMP BALLASTS										
USB-2036-46	24	24	50	80	70	38	50	50	38	
USB-2048-46	24	24	80	80	70	50	50	50	50	
MAX-3 HIGH OUTPUT SIGN BALLASTS 800mA RS LAMPS - 120 Volts - 60 Hz										
ONE TO SIX LAMP BALLASTS										
USB-0218-16	24	24	60	60	60	60	60	60	60	
USB-1232-16	24	24	80	60	60	80	60	60	72	
USB-1048-16	24	24	80	80	70	50	60	60	50	
SIGNA ELECTRONIC SIGN BALLASTS- T12 RAPID START HIGH OUTPUT LAMPS - 108 to 305 VOLTS - 50/60 Hz										
ONE TO SIX LAMP BALLASTS										
ESB216-12			68	68						
ESB432-14			80	80					80	80
ESB848-46			80	80			80	80	80	80

Note: Maximum volts above ground, any lead 590 volts.

HIGH OUTPUT BALLASTS



- Provide ultra-reliable low-temperature starting (as low as -20°F)
- Support 1 to 6 lamps
- Ideal for rugged outdoor sign cabinet applications
- Class P thermally protected

STANDARD HIGH OUTPUT SIGN BALLASTS

Catalog Number	Total Lamp Footage	Start Temp (°F)	Max. Line Cur.	Max. Input Watts	Open Circuit Volt.	Wiring Diagram	Dimen. Chart Ref.	Weight (lbs.)
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PLASTIC SIGN BALLASTS - HIGH OUTPUT 800mA RS LAMPS - 120 Volts - 60 Hz

TWO LAMP BALLASTS

USB-0412-12	4' min. - 12' max.	-20	1.35	160	500	1a, 2a	1	8
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FOUR LAMP BALLASTS

USB-0816-14	8' min. - 16' max.	-20	1.90	220	590	4a, 6a, 9, 1b	2	12
USB-1024-14	10' min. - 24' max.	-20	2.70	325	720	4a, 6a, 9, 1b	3	14
USB-1632-24	16' min. - 32' max.	-20	3.50	420	950	4a, 6a, 9	4	16

SIX LAMP BALLASTS

USB-2036-46	20' min. - 36' max.	-20	4.00	480	600	5a, 7, 7a	4	18
USB-2048-46	20' min. - 48' max.	-20	5.00	600	720	5a, 7, 7a	4	18

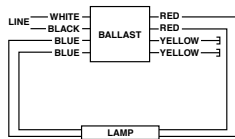


Diagram 1a

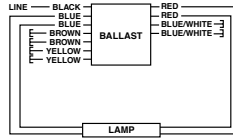


Diagram 1b

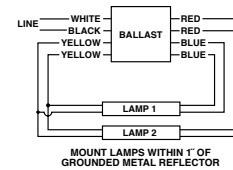


Diagram 2a

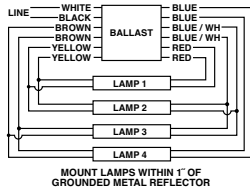


Diagram 4a

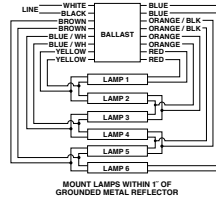


Diagram 5a

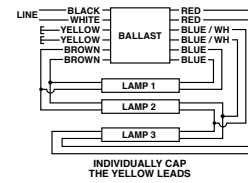


Diagram 6a

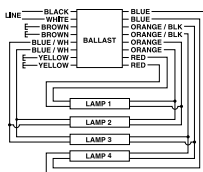


Diagram 7

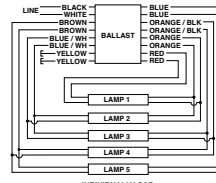


Diagram 7a

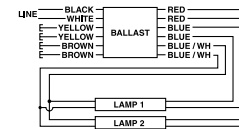
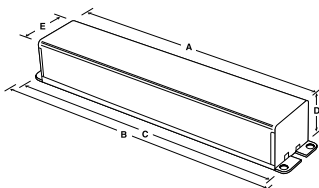


Diagram 9



PLASTIC SIGN FLUORESCENT BALLASTS DIMENSION CHART - STANDARD CASE (INCHES)

Ref. #	A	B	C	D	E
1	10 37/64"	11 45/64"	11 9/64"	1 3/4"	3 3/16"
2	10 37/64"	11 45/64"	11 9/64"	2 43/64"	3 3/16"
3	13 3/16"	14 5/16"	13 3/4"	2 43/64"	3 3/16"
4	15 3/16"	16 11/16"	16 1/8"	2 43/64"	3 3/16"

Diagrams Notes:

Note 1: When operating a two-lamp ballast on one lamp insulate each yellow lead.

Note 3: When operating a four-lamp ballast on three lamps insulate each yellow blue/white, and brown lead.

UNIVERSAL® MAX-3 HIGH OUTPUT SIGN BALLASTS

- Superior fill material coats all components and fills all voids to dissipate heat for cooler operation, longer life.
- Supports 1 to 6 lamps, 2 to 48 feet total length
- Low watt-loss steel lamination and all-copper coils assure cooler, more efficient operation and performance.
- Class P thermally protected



MAX-3 BALLASTS

Catalog Number	Total Lamp Footage	Start Temp (°F)	Max. Line Cur.	Max. Input Watts	Open Circuit Volt.	Wiring Diagram	Dimen. Chart Ref.	Weight (lbs.)
MAX-3 HIGH OUTPUT SIGN BALLASTS 800mA RS LAMPS - 120 Volts - 60 Hz								
ONE TO SIX LAMP BALLASTS								
USB-0218-16	2' min. - 18' max.	-20°	2.00	240	625	3, 4, 5, 6, 7, 8	1	15
USB-1232-16	12' min. - 32' max.	-20°	3.50	410	970	3, 4, 5, 6, 7, 8	1	16
USB-1048-16	10' min. - 48' max.	-20°	4.80	570	800	1, 2, 3, 4, 7, 8	2	18

See page 6-3 for Lead Lengths

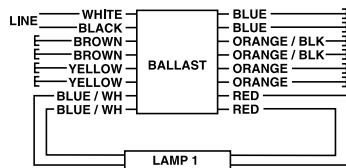


Diagram 1

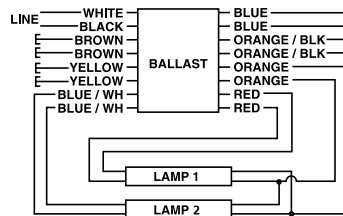


Diagram 2

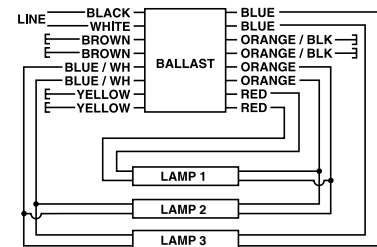
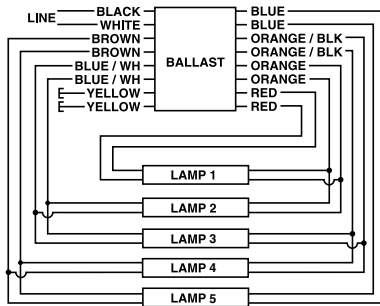


Diagram 3



INDIVIDUALLY CAP THE YELLOW LEADS

Diagram 4

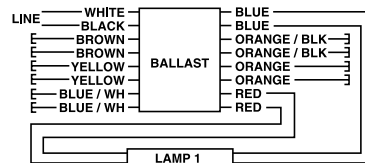


Diagram 5

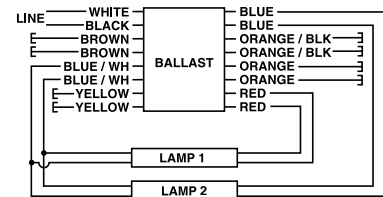


Diagram 6

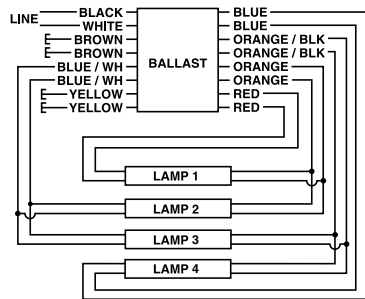


Diagram 7

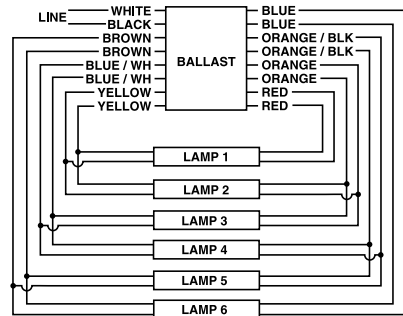
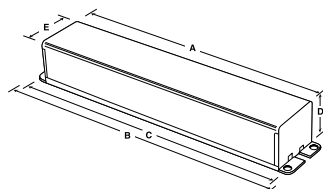


Diagram 8



MAX-3 SERIES HIGH OUTPUT SIGN BALLASTS DIMENSION CHART

Ref. #	A	B	C	D	E
1	13 ³ / ₁₆ "	14 ⁵ / ₁₆ "	13 ³ / ₄ "	2 ⁴³ / ₆₄ "	3 ³ / ₁₆ "
2	15 ⁹ / ₁₆ "	16 ¹¹ / ₁₆ "	16 ¹ / ₈ "	2 ⁴³ / ₆₄ "	3 ³ / ₁₆ "

Diagrams Notes:

Note 1: When operating a two-lamp ballast on one lamp insulate each yellow lead.

Note 2: When operating a three-lamp ballast on two lamps insulate each yellow and blue/white lead.

Note 3: When operating a four-lamp ballast on three lamps insulate each yellow blue/white, and brown lead.