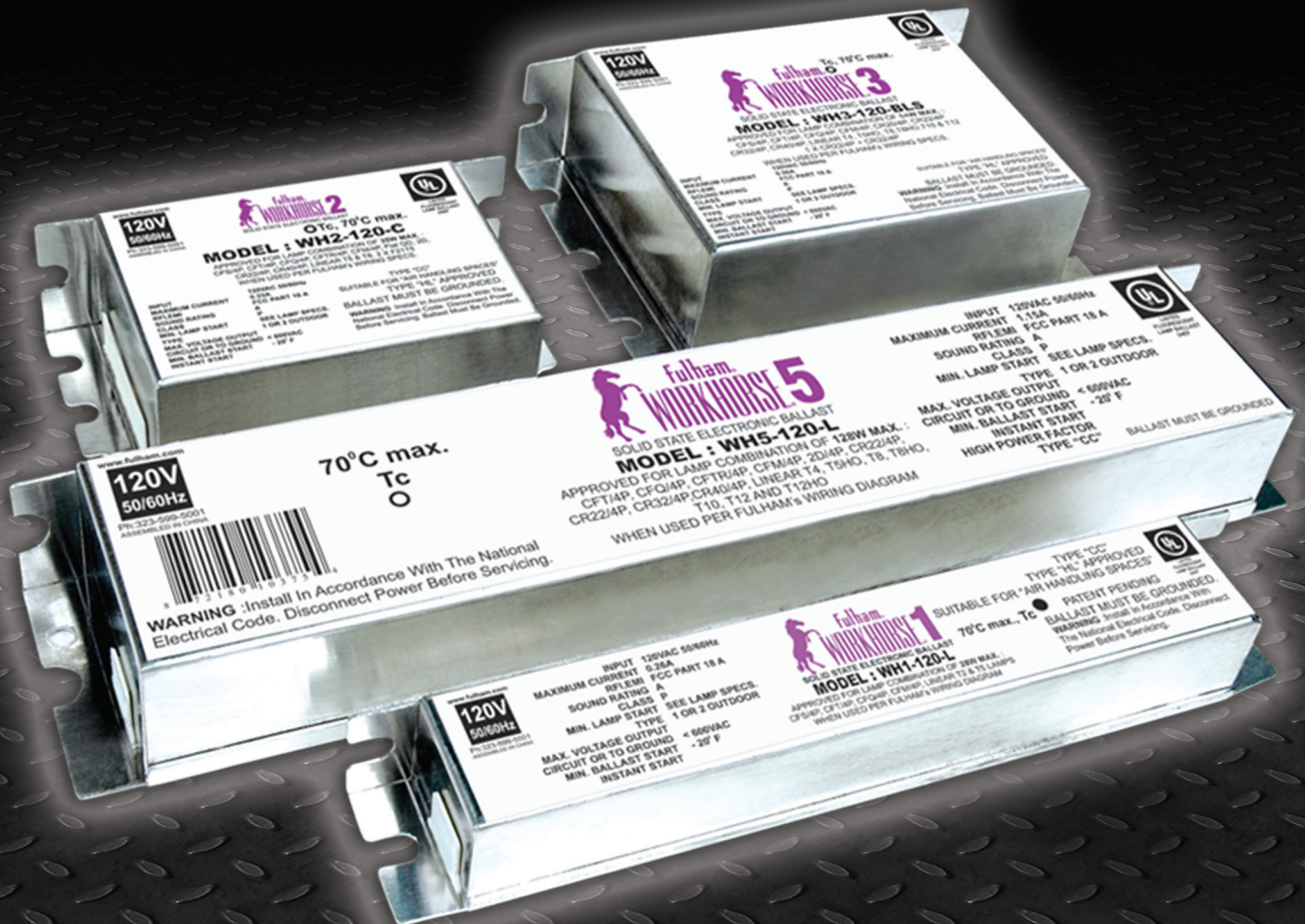


HARNESS THE POWER OF THE WORKHORSE®

LAMP CAPATIBILITY & WIRING DIAGRAMS

10 BALLASTS OPERATE 132 LAMPS IN 860 COMBINATIONS

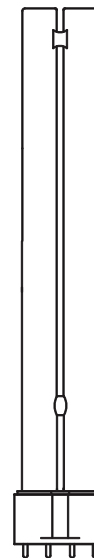
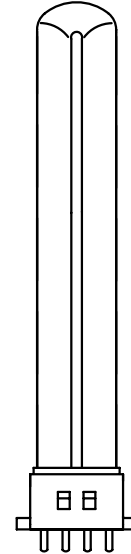


1. Find your lamp type.
2. Find the quantity and wattage of lamps.
3. Look across and find the ballast you need.
4. The colored number represents wiring diagram.

LAMPS	WORKHORSE								WHAM		LONGHORSE								
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WM 1	WM 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6	
TWIN																			
1 X 5W	3	2				2					15	2	3	2		2			
2 X 5W			1			1			9					1		1			9
3 X 5W									8										8
4 X 5W					7				7								7		7
1 X 7W	3	2									15	2	3	2					
2 X 7W		1				1			9			1	1		1				9
3 X 7W									8										8
4 X 7W									7										7
1 X 9W	3	2									15	2	3	2					
2 X 9W		1				1						1	1			1			
3 X 9W									8										8
4 X 9W									7										7
1 X 11W	3										15	2	3						
2 X 11W		1				1						1	1		1				
3 X 11W									8										8
4 X 11W									7										7
1 X 13W		3	2	2		2			14			3	3	2	2				14
2 X 13W			1	1	9				11					1		9			11
3 X 13W					8		8												8
4 X 13W					7		7												7
1 X 18W		3	2	2	14	2			14			3	3	2	2				14
2 X 18W			1	1	9				9					1		9			9
3 X 18W					8		8												8
4 X 18W							7												7
1 X 24W		3	2	2	14	3			14			3	3	2	3	14			14
2 X 24W				1	9		9	11							1	9			11
3 X 24W							8												8
1 X 27W		3	2	2	14	3			14			3	3	2	3	14			14
2 X 27W					9		9	11								9			11
1 X 28W PA				3	14				10						3		14		10
2 X 28W PA					11												11		
1 X 36/39W			2	2	14	3			10						2	3	14		10
2 X 36/39W							9	11		22						9			11
3 X 36/39W									8	25									
4 X 36/39W									7	27									
5 X 36/39W										28									
6 X 36/39W										29									
1 X 40W				2	14	2			14						2	2			14
2 X 40W							9	11									9		11
3 X 40W							8		8	25									8
4 X 40W									7	27									
5 X 40W										28									
1 X 50W				3	14	3	14	10							3	3	14		10
2 X 50W								11	11		22						11		11
3 X 50W									8	25									
4 X 50W									7	27									
1 X 55W				3	10		10	12		16					3		10		12
2 X 55W								11	9								11		
3 X 55W									8	26									
1 X 55WPA					10			13									12		13
2 X 55WPA										23									
3 X 55WPA										26									

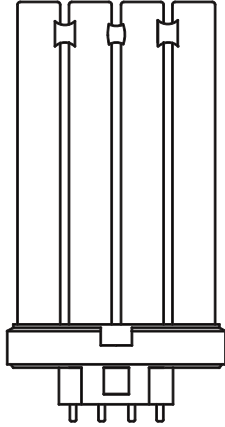
4 PIN ONLY

TWIN

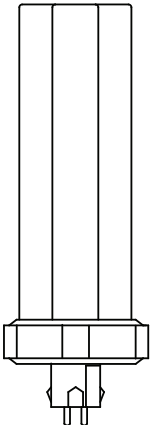


4 PIN ONLY

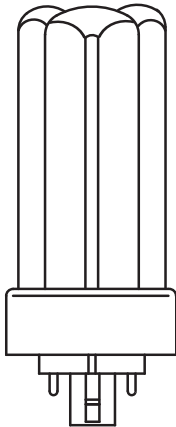
FLAT QUAD



QUAD



TRIPLE

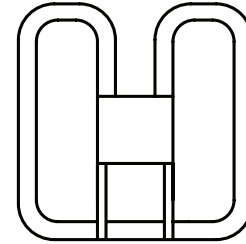


LAMPS	WORKHORSE								WHAM LONGHORSE										
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WM 1	WM 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6	
1 X 96W										17								12	
2 X 96W										24									
FLAT QUAD																			
1 X 18W		3	2	2	14	3		14				3		3	2	3	14	14	
2 X 18W					9			9	11								9	11	
3 X 18W								8									8		
1 X 24W		3	2	2	14	3		14				3		3	2	3		14	
2 X 24W				1	9			9	11						1		9	11	
3 X 24W								8									8		
1 X 28W PA				3	10										3		10	13	
1 X 36W				2	14	3		14	10						2	3	14	10	
2 X 36W					9			9	11								9	11	
3 X 36W										25									
1 X 55W PA					10			13									12	13	
1 X 96W PA																	12		
QUAD																			
1 X 10W	3					2					15	2	3	2		2			
2 X 10W						1		9						1		1		9	
3 X 10W								8										8	
4 X 10W					7			7										7	
1 X 13W	3	2									15	2	3	2					
2 X 13W		1				1						1		1		1			
3 X 13W								8										8	
4 X 13W								7										7	
1 X 18W	3	2				2					15	2	3	2		2			
2 X 18W				1		1		9							1	1		9	
3 X 18W					8			8	8								8	8	
4 X 18W								7										7	
1 X 26W		3	2	2	14	3		14				3		3	2	3		14	
2 X 26W					9			9	11						1		9	11	
3 X 26W								8									8		
4 X 26W								7									7		
1 X 27W PA					10			13									10	13	
TRIPLE																			
1 X 13W	3	2									15	2	3	2					
2 X 13W		1				1						1		1		1			
3 X 13W								8										8	
4 X 13W								7										7	
1 X 18W	3	2				2					15	2	3	2		2			
2 X 18W				1				9							1			9	
3 X 18W					8			8										8	
4 X 18W								7										7	
1 X 26W		3	2	2	14	3		14				3		3	2	3		14	
2 X 26W					9			9	11								9	11	
3 X 26W								8									8		
4 X 26W								7									7		
1 X 32W		3	2	2	14	3		14						3	2	3	14	14	
2 X 32W					9			9	11								9	11	
3 X 32W								8									8		
2-D																			
1 X 10W	3	2									15	2	3	2					
2 X 10W		1				1		9				1		1		1		9	
3 X 10W								8										8	

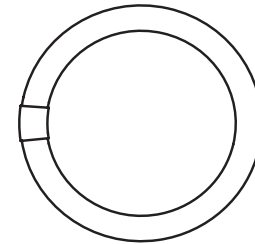
1. Find your lamp type.
2. Find the quantity and wattage of lamps.
3. Look across and find the ballast you need.
4. The colored number represents wiring diagram.

LAMPS	WORKHORSE								WHAM		LONGHORSE							
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WM 1	WM 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6
4 X 10W								7										7
1 X 16W	3	2				2					15	2	3	2		2		
2 X 16W		1	1															9
3 X 16W																		8
4 X 16W					7		7	7									7	7
1 X 21W		2				2								2		2		
2 X 21W				1											1			9
3 X 21W					8		8	8									8	8
4 X 21W								7									7	
1 X 28W		3	2	2		2			14			3		3	2	2		14
2 X 28W				1	9			9	11						1		9	11
3 X 28W								8									8	
4 X 28W								7									7	
1 X 38W				2	14	3		14	14						2	3	14	14
2 X 38W								9	11								9	11
4 X 38W										7								
1 X 55W					12			12		14							12	
T9 CIRCLINE																		
1 X 20W		3	2	2	14	3			14			3		3	2	3	14	14
2 X 20W					9			9	11								9	11
4 X 20W										7								
1 X 22W		3	2	2	14	3			14			3		3	2	3	14	14
2 X 22W					9			9	11								9	11
4 X 22W										7								
1 X 32W			3	3	14				10						3		14	10
2 X 32W					11			9									11	
3 X 32W										8								
4 X 32W										7								
1 X 40W				2	14	3		14	10						2	3	14	10
2 X 40W								9	11								9	11
3 X 40W										8								
4 X 40W										7								
1 X 22+32W				1				9	11						1		9	11
1 X 32+40W									11								11	
T5 CIRCLINE																		
1 X 22W		3	2	2	14	3			14			3		3	2	3		14
2 X 22W					9			9	11								9	11
3 X 22W					8			8									8	
1 X 40W				2	14	3			14						2	3	14	14
2 X 40W								9	11								9	11
1 X 55W OS				3	10				12						3			12
2 X 55W OS									11	9							11	
1 X 22+40W				1				9	11						1		9	11
T2 LINEAR																		
1 X F6	2													2				
2 X F6	1													1				
1 X F8	2													2				
2 X F8	1													1				
1 X F11	2													2				
2 X F11	1													1				
1 X F13	2													2				
2 X F13	1													1				

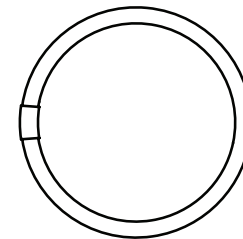
2-D



T9 CIRCLINE



T5 CIRCLINE



T2 LINEAR



1/4" Diameter

LAMPS

WORKHORSE

WHAM

LONGHORSE

	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WH 1	WH 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6
T5 LINEAR																		
1 X F4	3	2											15	2	3	2		
2 X F4		1				1							1		1	1		
3 X F4									8									8
4 X F4									7									7
1 X F6	3	2											15	2	3	2		
2 X F6		1				1							1		1	1		
3 X F6									8									8
4 X F6									7									7
1 X F8	2	2											15	2	2	2		
2 X F8		1				1							1		1	1		
4 X F8									7									7
1 X F13	3	2											15	2	3	2		
2 X F13		1				1							1		1	1		
3 X F13									8									8
4 X F13									7									7
1 X F14	3	2											15	2	3	2		
2 X F14		1				1							1		1	1		
3 X F14									8									8
4 X F14									7									7
1 X F21	3	2											15	2	3	2		
2 X F21		1				1									1	1		
3 X F21									8									8
4 X F21									7									7
1 X F28	3	2											15	2	3	2		
2 X F28						1										1		
3 X F28									8									8
4 X F28									7									7
1 X F35													15		2			
2 X F35						1										1		
3 X F35									8									8
4 X F35									7									7
T5 HO																		
1 X F24 HO		3	2	2	14	3		14							3	2	3	14
2 X F24 HO				1	9		9	11							1		9	11
3 X F24 HO							8										8	
4 X F24 HO							7		27								7	
5 X F24 HO									28									
6 X F24 HO									29									
1 X F39 HO				2	14	3		14							2	3	14	14
2 X F39 HO							9	11									9	11
3 X F39 HO							8		25								8	
4 X F39 HO								7	27									
5 X F39 HO									28									
1 X F54 HO				3	14		14	12		16					3		14	12
2 X F54 HO							11		22								11	
3 X F54 HO								8										
4 X F54 HO								7										
1 X F80 HO								12		16							10	12
2 X F80 HO								9										
T5 UV (LINEAR)																		
1 X 90W								12										
1 X 110W								12										

T5 LINEAR



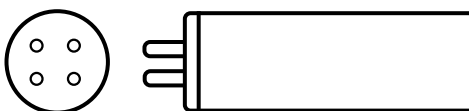
5/8" Diameter

T5 HO



5/8" Diameter

T5 UV LINEAR

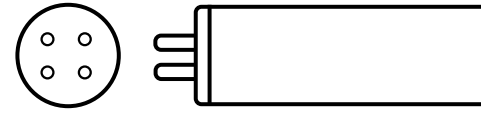


5/8" Diameter

1. Find your lamp type.
2. Find the quantity and wattage of lamps.
3. Look across and find the ballast you need.
4. The colored number represents wiring diagram.

LAMPS	WORKHORSE								WHAM		LONGHORSE								
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WM 1	WM 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6	
T6 UV (LINEAR)																			
1 X 38W								12											
1 X 50W								12											
1 X 55W								12											
1 X 90W									10										
1 X 120W									10										
1 X 150W									10										
T6 SLIMLINE																			
1 X F42	3	2					2						3	2		2			
2 X F42				1			1		9						1	1			9
3 X F42									8										8
4 X F42									7										7
1 X F64							2									2			
2 X F64							1		9							1			9
3 X F64									8										8
T8 LINEAR																			
1 X F13		3	2	2	14	3		14				3	3	2	3				14
2 X F13				1	9			11							1		9		11
3 X F13					8			8											8
4 X F13								7	7	27									
5 X F13										28									
6 X F13										29									
1 X F14		3	2	2	14	3		14				3	3	2	3	14			14
2 X F14					9			11								9			11
3 X F14								8		25						8			
4 X F14								7	7	27									
5 X F14										28									
6 X F14										29									
1 X F15		3	2	2		3		14				3	3	2	3				14
2 X F15			1	1	9			11							1		9		11
3 X F15					8			8											8
4 X F15					7			7											7
5 X F15										28									
6 X F15										29									
1 X F17		3		2		2						3	3	2	2				
2 X F17			1	1				9							1				9
3 X F17					8			8											8
4 X F17					7			7											7
6 X F17										29									
1 X F18		3	2	2	14	3		14				3	3	2	3				14
2 X F18					9			9	11							9			11
3 X F18								8		25						8			
4 X F18								7		27									
5 X F18										28									
6 X F18										29									
1 X F25		3		2		2						3	3	2	2				
2 X F25				1				9							1				9
3 X F25								8											8
4 X F25								7											7
6 X F25										29									
1 X F30		3	2	2	14	3		14					3	2	3				14
2 X F30					9			9	11							9			11
3 X F30								8		25						8			

T6 UV LINEAR



3/4" Diameter

T6 SLIMLINE



3/4" Diameter

T8 LINEAR



1" Diameter

LAMPS	WORKHORSE								WHAM		LONGHORSE								
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WM 1	WM 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6	
4 X F30								7		7									
5 X F30																			
6 X F30																			
1 X F32		2		2		2								3	2	2			
2 X F32				1					9						1				9
3 X F32								8											8
4 X F32								7											7
6 X F32										29									
1 X F40				2		2									2	2			
2 X F40									9										9
3 X F40																			8
1 X F58									10										10
2 X F58									11										11
3 X F58										8									
1 X F70									10										10
2 X F70																			11
T8 SLIMLINE																			
1 X F72								2									2		
2 X F72								1		9							1		9
3 X F72										8									8
4 X F72										7									7
T8 HO																			
1 X F48 HO				3	14			14	10						3		14		10
2 X F48 HO																			11
3 X F48 HO										8									25
4 X F48 HO										7									27
1 X F60 HO				3	14			14	10						3		14		10
2 X F60 HO																			11
3 X F60 HO										8									25
4 X F60 HO																			27
1 X F72 HO				3	14			14	10						3		14		10
2 X F72 HO																			22
3 X F72 HO										8									25
T10 LINEAR																			
1 X F40				3	14	3			10						3	3	14		10
2 X F40									11										11
3 X F40																			25
4 X F40																			27
5 X F40																			28
T10 VHO																			
1 X F48 VHO										12									19
1 X F60 VHO										12									19
1 X F72 VHO										12									19
1 X F96 VHO																			19
T12 LINEAR																			
1 X F14		3	2	2	14	3	14	10				3		3	2	3	14		10
2 X F14					9		9	11									9		11
3 X F14																			25
4 X F14										7									27
5 X F14																			28
6 X F14																			29
1 X F15		3	2	2		3		14				3		3	2	3			14
2 X F15				1	9		9	11							1		9		11

T8 SLIMLINE



1" Diameter

T8 HO



1" Diameter

T10 LINEAR



1 1/4" Diameter

T10 VHO



1 1/4" Diameter

T12 LINEAR



1 1/2" Diameter

1. Find your lamp type.
2. Find the quantity and wattage of lamps.
3. Look across and find the ballast you need.
4. The colored number represents wiring diagram.

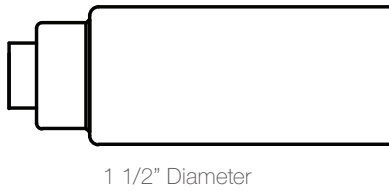
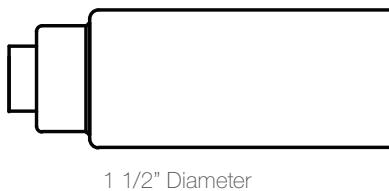
LAMPS	WORKHORSE								WHAM								LONGHORSE					
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WH 1	WH 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6				
3 X F15					8		8										8					
4 X F15							7			27							7					
5 X F15										28												
6 X F15										29												
1 X F20		3	2	2	14	3		14			3		3	2	3	14	14					
2 X F20					9		9	11								9	11					
3 X F20							8			25												
4 X F20							7	7		27												
5 X F20										28												
6 X F20										29												
1 X F25			3	3	14		14	10						3		14	10					
2 X F25					11		9			22						11						
3 X F25								8		25												
4 X F25								7		27												
1 X F30			3	3	14	3	14	10						3	3	14	10					
2 X F30					11		9	11		22						11	11					
3 X F30								8		25												
4 X F30								7		27												
5 X F30										28												
1 X F40				3	14	3	14	10						3	3	14	10					
2 X F40							9	11		22						11	11					
3 X F40								8		25												
4 X F40								7		27												
5 X F40										28												
T12 SLIMLINE																						
1 X F24			3		14	3	14	10			3				3	14	10					
2 X F24					11		9	11		22						11	11					
3 X F24								8		25												
4 X F24								7		27												
5 X F24										28												
1 X F36				3	14	3	14	10						3	3	14	10					
2 X F36					11		9	11		22						11	11					
3 X F36								8		25												
4 X F36								7		27												
5 X F36										28												
1 X F42				3	14	3		10						3	3	14	10					
2 X F42								11		22						11	11					
3 X F42								8		25												
4 X F42								7		27												
5 X F42										28												
1 X F48				3	14	3	14	10						3	3	14	10					
2 X F48							9	11		22						11	11					
3 X F48								8		25												
4 X F48								7		27												
5 X F48										28												
1 X F60				2	14	3	14	10						2	3	14	10					
2 X F60							9	11		22						11	11					
3 X F60								8		25												
4 X F60								7		27												
1 X F64				2	14	3	14	10						2	3	14	10					
2 X F64							9	11		22						11	11					
3 X F64								8		25												
4 X F64								7		27												

T12 SLIMLINE



1 1/2" Diameter

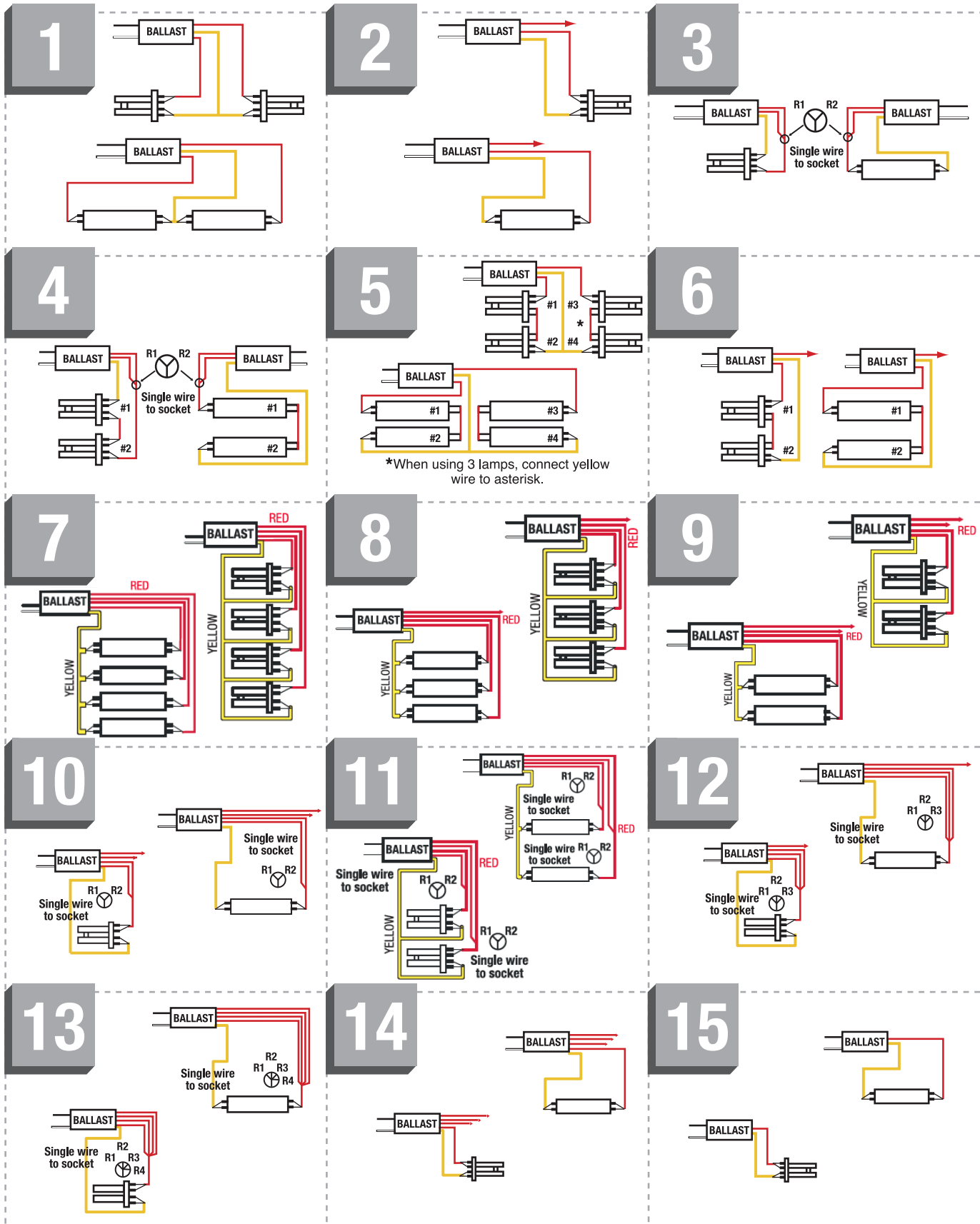
LAMPS	WORKHORSE								WHAM						LONGHORSE					
	WH 1	WH 2	WH 22	WH 3	WH 33	WH 4	WH 5	WH 6	WH 7	WH 8	WM 1	WM 2	LH 1	LH 2	LH 3	LH 4	LH 5	LH 6		
1 X F72				2	14	3	14	10							2	3	14	10		
2 X F72							9	11		22								11	11	
3 X F72									8	25										
4 X F72										27										
1 X F84				2		3	14	10							2	3	14	10		
2 X F84							9	11		22								11	11	
3 X F84										25										
1 X F96 (60W Only)								14	10									14	10	
2 X F96 (60W Only)								9	11	22								9	11	
3 X F96 (60W Only)										8										
T12 HO																				
1 X F18 HO					12		12	13	14									12	13	
2 X F18 HO									11	23										
3 X F18 HO										26										
1 X F24 HO					12		12	13	14									12	13	
2 X F24 HO									11	23										
3 X F24 HO										26										
1 X F30 HO					12		12	13	14									12	13	
2 X F30 HO									11	23										
3 X F30 HO										26										
1 X F36 HO					12		12	13	14									12	13	
2 X F36 HO									11	23										
3 X F36 HO										26										
1 X F42 HO					12		12	13	14									12	13	
2 X F42 HO									11	23										
3 X F42 HO										26										
1 X F48 HO					12		12	13	14									12	13	
2 X F48 HO									11	23										
3 X F48 HO										26										
1 X F60 HO								12	13	14								12	13	
2 X F60 HO									11	23										
3 X F60 HO										26										
1 X F64 HO								12	13	14								12	13	
2 X F64 HO									11	23										
1 X F72 HO								12	13	14								12	13	
2 X F72 HO									11	23										
1 X F84 HO								12	13	14								12	13	
2 X F84 HO									11	23										
1 X F96 HO								12	13	14								12	13	
2 X F96 HO (95W only)									11	23										
T12 VHO																				
1 X F48 VHO									12	19										
1 X F60 VHO									12	19										
1 X F72 VHO									12	19										
1 X F96 VHO									12	19										

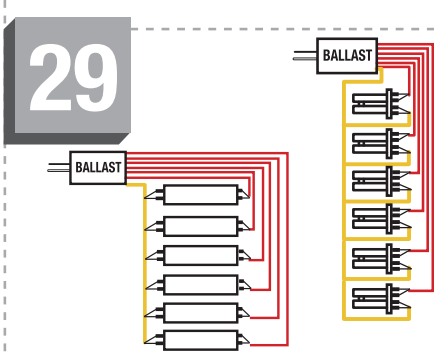
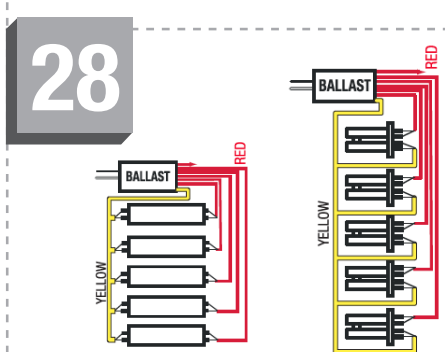
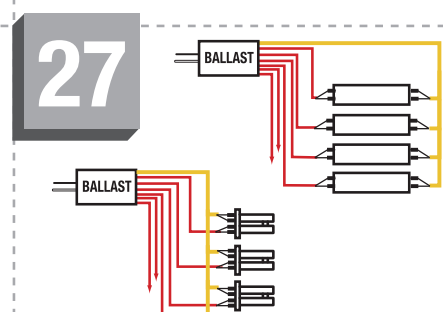
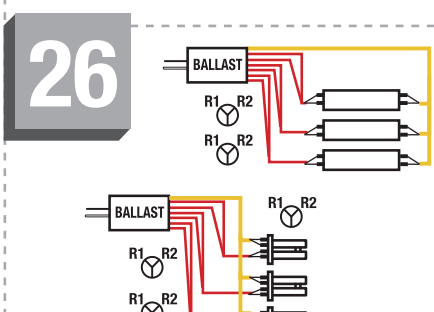
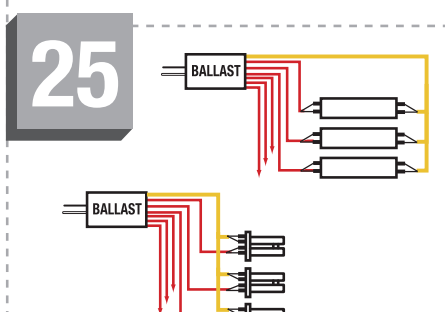
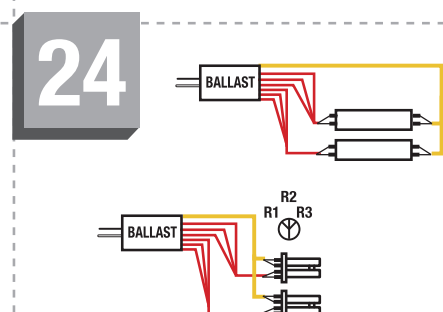
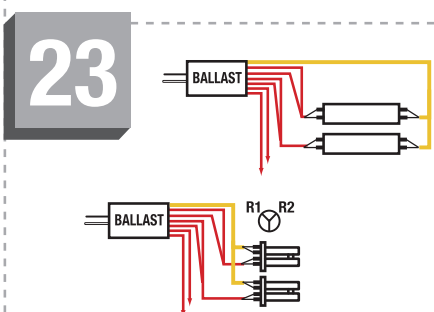
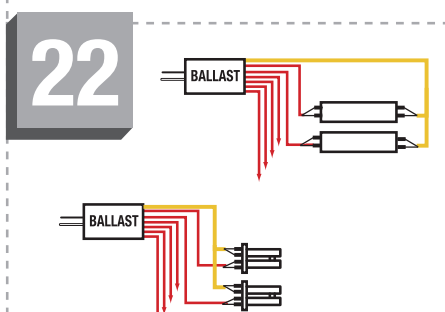
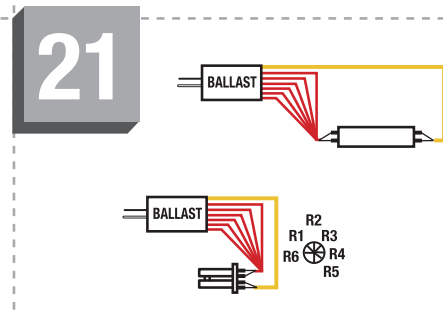
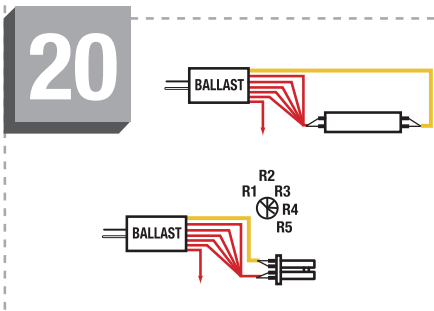
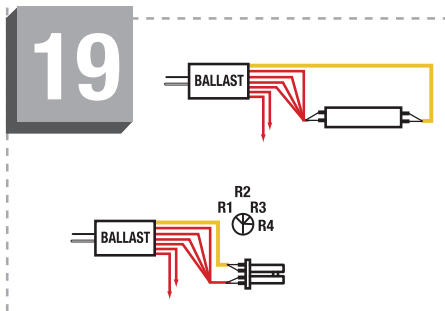
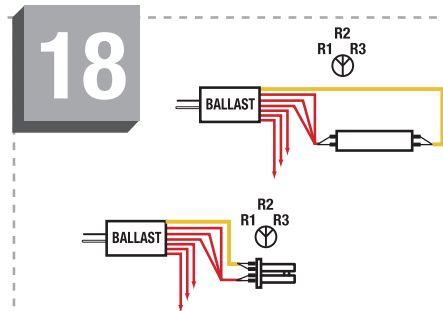
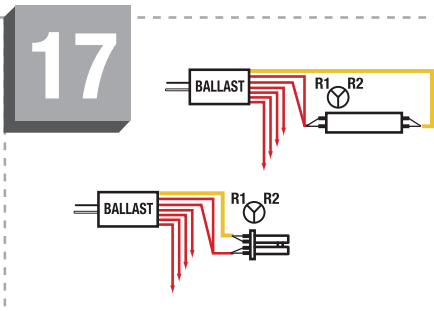
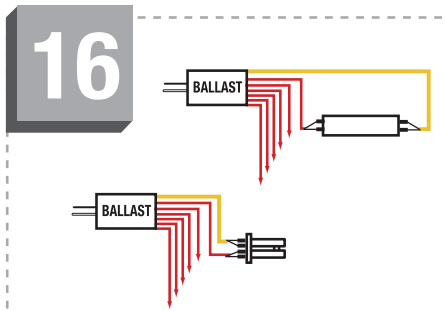


OPERATION & INSTALLATION TIPS

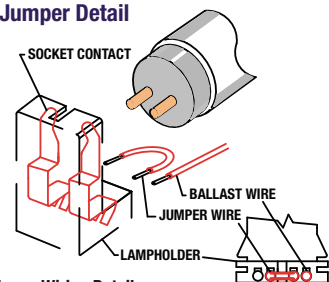
1. Connect both pin sets of the socket before connecting "RED" & "YELLOW" wires.
2. Ground case in accordance with the "National Electric Code."
3. With Linear lamp use a starting aid.
4. Ballast case temperature can not exceed 70°C.
5. Remote mounting distance varies with lamp type. Contact customer service.
6. Ballast can not be used with dimmer switch but can be used with occupancy sensor. (Note: Sensor will shorten lamp life.)

7. Cap and insulate any unused red power wire. → = Cap
8. When connecting two red power wires, they must be joined to make one wire before attaching to the socket.
9. BLS (Back Leads with Studs) Dimensions:
Stud Length: 5/8", Stud Size: 8/32, Center to Center: 2"
10. Running lamps in series will reduce the turn-on cycles of both lamps. (Configuration diagrams 4, 5, 6)





Wiring Jumper Detail



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