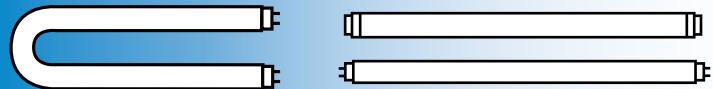


BALLAST SELECTOR GUIDE





No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Line Current (Amps)	Input Power (Watts)	Ballast Factor	Also Operates				
F32T8 & F32T8/U													
1	F32T8 & F32T8/U	120 - 277	B132IUNVHP-N	HP Electronic	IS	0.25 - 0.11	30	0.88	X	X	X	X	X
			B132IUNVEL-N	ULTim8	IS	0.21 - 0.09	25	0.77	X	X	X	X	X
			B132IUNVHE-N	ULTim8	IS	0.25 - 0.11	28	0.87	X	X	X	X	X
			B132PUNVHE-B	ULTim8	PRS	0.24 - 0.11	29	0.86	X	X	X	X	X
2	F32T8 & F32T8/U	120	B232I120RES-M	HomeStar	IS	0.83	56	0.88	X	X	X	X	X
			B232IUNV-C	Std Electronic	IS	0.48 - 0.20	58 - 56	0.88			X	X	X
			B232IUNVHP-N	HP Electronic	IS	0.46 - 0.19	55 - 53	0.88	X	X	X	X	X
			B232IUNVEL-N	ULTim8	IS	0.42 - 0.18	49	0.77	X	X	X	X	X
			B232IUNVHE-N	ULTim8	IS	0.47 - 0.20	55	0.86	X	X	X	X	X
			B232IUNV104-A	Std Electronic	IS	0.54 - 0.24	65 - 64	1.04	X	X	X	X	X
		120 - 277	B232IUNVHEH-A	ULTim8	IS	0.62 - 0.26	74 - 72	1.18	X	X	X	X	X
			B232PUNVEL-B	ULTim8	PRS	0.38 - 0.16	46 - 44	0.71	X	X	X	X	X
			B232PUNVHE-B	ULTim8	PRS	0.46 - 0.20	55 - 54	0.88	X	X	X	X	X
			B232PUNVHEH-A	ULTim8	PRS	0.65 - 0.28	77 - 76	1.17	X	X	X	X	X
			B232I347EL-A	ULTim8	IS	0.15	51	0.78	X	X	X	X	X
			B232I347HE-A	ULTim8	IS	0.17	58	0.88	X	X		X	X
3	F32T8 & F32T8/U	120 - 277	B232P347HE-A	ULTim8	PRS	0.17	58	0.88	X	X	X	X	X
			B332IUNVHP-A	HP Electronic	IS	0.71 - 0.31	84 - 83	0.88	X	X	X	X	X
			B332IUNVEL-A	ULTim8	IS	0.58 - 0.25	70 - 69	0.77	X	X	X	X	X
			B332IUNVHE-A	ULTim8	IS	0.70 - 0.30	83 - 81	0.87	X	X	X	X	X
			B332PUNVEL-A	ULTim8	PRS	0.58 - 0.25	70 - 69	0.71	X	X	X	X	X
			B332PUNVHE-A	ULTim8	PRS	0.70 - 0.30	84 - 82	0.88	X	X	X	X	X
		347 - 480	B332PUNVHEH-A	ULTim8	PRS	0.93 - 0.40	112 - 109	1.15	X	X	X	X	X
			B332IHRVHB-E	ULTim8	IS	0.32 - 0.24	110 - 109	1.18	X	X			
			B432IUNVHP-A	HP Electronic	IS	0.93 - 0.40	112 - 108	0.88	X	X	X	X	X
			B432IUNVEL-A	ULTim8	IS	0.80 - 0.34	97 - 96	0.77	X	X	X	X	X
		120 - 277	B432IUNVHE-A	ULTim8	IS	0.91 - 0.38	109 - 106	0.87	X	X	X	X	X
			B432IUNVHEH-E	ULTim8	IS	1.25 - 0.54	150 - 146	1.15	X	X	X	X	X
			B432PUNVEL-A	ULTim8	PRS	0.76 - 0.33	91 - 90	0.71	X	X	X	X	X
			B432PUNVHE-A	ULTim8	PRS	0.91 - 0.39	109 - 107	0.87	X	X	X	X	X
			B432PUNVHEH-E	ULTim8	PRS	1.20 - 0.50	143 - 141	1.15	X	X	X	X	X
			B432I347EL-A	ULTim8	IS	0.28	101	0.78	X	X	X	X	X
		347	B432I347HE-A	ULTim8	IS	0.32	113	0.88	X	X	X	X	X
			B432P347HE-A	ULTim8	PRS	0.32	113	0.88	X	X	X	X	X

ULTim8 Instant Start are some of the most efficient ballasts in the industry for maximum energy savings.

- Available in high efficiency HE normal (.88), EL low (.77), and HEH high (1.18) ballast factor versions.
- "True" parallel lamp operation: independent lamp operation simplifies troubleshooting, if one lamp fails, the others stay lit.
- Backed by 5 year warranty when operated at 75°C maximum case temperature

ULTim8 Programmed Start ballasts enjoy the same benefits as Instant Start plus:

- Available in high efficiency HE normal (.88), EL low (.71), and HEH high (1.18) ballast factor versions.
- Programmed Start models feature "soft start" technology to provide long lamp life in high cycle applications such as motion sensors.
- Same 5 year warranty as instant or 3 year warranty for HEH models when operated at 90C case temperature.



T8

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Line Current (Amps)	Input Power (Watts)	Ballast Factor	Also Operates		
Long T8											
1	F72T8	120	B244I120HE	High Efficiency	IS	0.42	50	1.03	X	X	
		277	B244I277HE-A	High Efficiency	IS	0.19	52	1.04	X	X	
	F96T8	120 - 277	B259IUNVHP-A	HP Electronic	IS	0.60 - 0.26	72 - 71	1.08			
			B259IUNVEL-A	ULTim8	IS	0.54 - 0.24	64	0.99	X		
		347	B259IUNVHE-A	ULTim8	IS	0.60 - 0.26	71 - 70	1.08	X		
			B259I347HP	HP Electronic	IS	0.20	68	1.05			
2	F72T8	120	B244I120HE	High Efficiency	IS	0.70	82	0.88	X	X	
		277	B244I277HE-A	High Efficiency	IS	0.30	82	0.87	X	X	
	F96T8	120 - 277	B259IUNVHP-A	HP Electronic	IS	0.95 - 0.40	113 - 110	0.88			
			B259IUNVEL-A	ULTim8	IS	0.84 - 0.36	101 - 99	0.78	X		
		347	B259IUNVHE-A	ULTim8	IS	0.93 - 0.39	111 - 108	0.88	X		
			B259I347HP	HP Electronic	IS	0.33	113	0.89			

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Line Current (Amps)	Input Power (Watts)	Ballast Factor	Also Operates		
T8HO											
1	F96T8HO	120 - 277	B286PUNVHE-S	ULTim8	PS	0.80 - 0.36	96	1.00	X		
2	F96T8HO	120 - 277	B286PUNVHE-S	ULTim8	PS	1.57 - 0.67	187 - 184	0.95	X		



T12

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Standard Lamps			Energy Saving Lamps		
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	Line Current (Amps)	Input Power (Watts)	Ballast Factor
F40T12 & F40T12/U											
2	F40T12 & F40T12/U	120	B234SR120M-A	Basic-12	RS	0.63	71	0.9	0.49	59	0.86

T12: HO & VHO

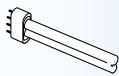


No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Line Current (Amps)	Input Power (Watts)	Ballast Factor	Also Operates		
									F72T12HO	F60T12HO	F48T12HO
Long T8											
1	F96T12HO	227	B295PUNVHE-S	Basic-12	PS	0.88 - 0.38	104 - 103	0.92	X	X	X
	F96T12HOES-95W	227	B295PUNVHE-S	Basic-12	PS	0.73 - 0.32	87	0.92	X	X	X
2	F96T12HO	227	B295PUNVHE-S	Basic-12	PS	1.72 - .72	204 - 197	0.88	X	X	X
	F96T12HOES-95W	227	B295PUNVHE-S	Basic-12	PS	1.45 - 0.61	170 - 167	0.88	X	X	X

T12: SLIMLINE



No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Standard Lamps			Energy Saving Lamps		
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	Line Current (Amps)	Input Power (Watts)	Ballast Factor
1	F48T12	120 - 277	B260IUVH	Basic-12	IS	.39 - .18	47	1.1	.32 - .15	38 - 39	1.1
2						.61 - .27	75 - 74	0.95	.57 - .25	67 - 66	0.93
1	F60T12	120 - 277	B260IUVH	Basic-12	IS	0.49 - 0.22	58	1.1	-	-	-
2						0.77 - 0.33	92 - 91	0.92	-	-	-
1	F72T12	120 - 277	B260IUVH	Basic-12	IS	0.55 - 0.25	68 - 67	1.06	-	-	-
2						0.09 - 0.39	109 - 107	0.91	-	-	-
1	F96T12	120 - 277	B260IUVH	Basic-12	IS	0.70 - 0.31	85 - 84	1.05	0.59 - 0.26	72 - 70	1.03
2		120	B260I120M-A			For use only with Energy Saving Lamps			0.93	107	0.88
2		120 - 277	B260IUVH			1.16 - 0.50	139 - 137	0.88	0.96 - 0.40	112 - 110	0.88



LONG TWIN T5

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Line Current (Amps)	Input Power (Watts)	Ballast Factor	Also Operates		
									F54T5HO	F24T5HO	F39T5HO
1	FT18W/2G11	120 - 277	CT218UNVME	CF Electronic	PRS	0.19 - 0.07	23	1.00			
2			CT218UNVME	CF Electronic	PRS	0.37 - 0.16	42	0.98			
1	FT24W/2G11	120 - 277	C2642UNVME	CF Electronic	PRS	0.22 - 0.10	26	1.01			
			B224PUNV-C	Accustart T5	PRS	0.23 - 0.10	27	1.02		X	X
		347	C2642/347ME	CF Electronic	PRS	0.09	29	0.90			
			C2642UNVME	CF Electronic	PRS	0.40 - 0.18	47 - 49	0.98			
2	FT24W/2G11	120 - 277	C242UNVME	CF Electronic	PRS	0.43 - 0.19	51 - 50	1.02			
			B224PUNV-C	Accustart T5	PRS	0.43 - 0.18	52 - 51	1.00		X	
		347	C242/347ME	CF Electronic	PRS	0.14	49	1.02			
			C242UNVME	CF Electronic	PRS	0.29 - 0.14	34 - 33	0.88			
1	FT36W/2G11	120 - 277	B224PUNV-C	Accustart T5	PRS	0.30 - 0.13	36	0.90		X	X
			B254PUNV-D	Accustart T5	PRS	0.37 - 0.18	45	1.22	X		
2	FT36W/2G11	120 - 277	C242UNVME	CF Electronic	PRS	0.57 - 0.25	64	0.83			
			B239PUNV-D	Accustart T5	PRS	0.59 - 0.26	71 - 70	0.94		X	X
		347	B254PUNV-D	Accustart T5	PRS	0.73 - 0.30	87	1.20	X		
			C242/347ME	CF Electronic	PRS	0.19	64	0.90			
1	FT40W/2G11	120	C240SI120RH	Std Electronic	IS	0.40	40	1.02			
		277	C240SI277RH	Std Electronic	IS	0.17	40	1.02			
		120 - 277	C242UNVME	CF Electronic	PRS	0.40 - 0.18	47	1.08			
			C240PUNVHP-B	HP Electronic	PRS	0.34 - 0.15	41 - 40	1.00			
2	FT40W/2G11	120	C240SI120RH	Std Electronic	IS	0.61	67	0.88			
		277	C240SI277RH	Std Electronic	IS	0.27	67	0.88			
		120 - 277	C242UNVME	CF Electronic	PRS	0.78 - 0.34	93 - 87	1.00			
			C240PUNVHP-B	HP Electronic	PRS	0.63 - 0.27	76 - 73	0.90			
1	FT50W/2G11	120 - 277	B254PUNV-D	Accustart T5	PRS	0.47 - 0.21	57	1.00	X		
		347	B254P347-D	Accustart T5	PRS	0.17	58	1.12	X		
		347 - 480	B254PHRVHB-E	Accustart T5	PRS	0.19 - 0.15	65	1.12	X		
2	FT50W/2G11	120 - 277	B254PUNV-D	Accustart T5	PRS	0.93 - 0.40	111 - 108	1.00	X		
		347	B254P347-D	Accustart T5	PRS	0.31	106	1.10	X		
		347 - 480	B254PHRVHB-E	Accustart T5	PRS	0.33 - 0.25	115 - 114	1.10	X		
3	FT50W/2G11	120 - 277	B454PUNV-E	Accustart T5	PRS	1.49 - 0.64	179 - 177	1.13	X		
4	FT50W/2G11	120 - 277	B454PUNV-E	Accustart T5	PRS	1.98 - 0.84	240 - 235	1.10	X		
			B454PUNVHB-E	Accustart T5	PRS	1.98 - 0.84	240 - 235	1.10	X		
		347 - 480	C242UNVME	CF Electronic	PRS	0.38 - 0.17	46	0.83			
1	FT55W/2G11	120 - 277	B254PUNV-D	Accustart T5	PRS	0.47 - 0.21	56	1.00	X		
			C242/347ME	CF Electronic	PRS	0.13	43	0.83			
		347	B254P347-D	Accustart T5	PRS	0.17	57	0.92	X		
			B254PHRVHB-E	Accustart T5	PRS	0.19 - 0.14	61	0.92	X		
2	FT55W/2G11	120 - 277	B254PUNV-D	Accustart T5	PRS	0.93 - 0.39	112 - 109	1.00	X		
		347	B254P347-D	Accustart T5	PRS	0.30	102	0.90	X		
		347 - 480	B254PHRVHB-E	Accustart T5	PRS	0.33 - 0.24	109 - 108	0.90	X		
3	FT55W/2G11	120 - 277	B454PUNV-E	Accustart T5	PRS	1.45 - 0.62	174 - 171	0.93	X		
4	FT55W/2G11	120 - 277	B454PUNV-E	Accustart T5	PRS	1.91 - 0.80	229 - 223	0.90	X		
			B454PUNVHB-E	Accustart T5	PRS	1.91 - 0.80	229 - 223	0.90	X		

T5: STD & HO



No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Primary Lamp			Also Operates	
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	F14T5	F21T5
2	F28T5	120 - 277	B228PUNV85-D	Accustart T5	PRS	0.48 - 0.21	54 - 53	0.85	X	X
			B228PUNV90-C	Accustart T5	PRS	0.48 - 0.21	58 - 56	0.90	X	X
			B228PUNV95-D	Accustart T5	PRS	0.51 - 0.22	61 - 60	0.95	X	X
			B228PUNV-C	Accustart T5	PRS	0.55 - 0.23	63 - 61	1.00	X	X
			B228PUNV-N	Accustart T5	PRS	0.55 - 0.23	66 - 64	1.00	X	X
			B228PUNV115-D	Accustart T5	PRS	0.59 - 0.25	69 - 68	1.15	X	X

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Primary Lamp			Also Operates	
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	F39T5HO	FT36W/2G11
1	F24T5HO	120 - 277	B224PUNV-C	Accustart T5	PRS	0.19 - 0.10	28	1.02	X	X
2	F24T5HO	120 - 277	B224PUNV-C	Accustart T5	PRS	0.45 - 0.23	53 - 52	1.00	X	X

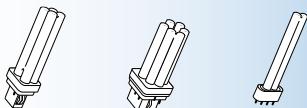
No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Primary Lamp			Also Operates	
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	FT50W/2G11	FT55W/2G11
1	F39T5HO	120 - 277	B239PUNV-D	Accustart T5	PRS	0.32 - 0.18	47	1.02	X	X
2	F39T5HO	120 - 277	B239PUNV-D	Accustart T5	PRS	0.75 - 0.39	89 - 88	1.00	X	X

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Primary Lamp			Also Operates	
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	F14T5	F21T5
1	F54T5HO	120 - 277	B254PUNV-D	Accustart T5	PRS	0.54 - 0.24	64	1.02	X	X
		347 - 480	B254PHRVHB-E	Accustart T5	PRS	0.19 - 0.15	66	1.02	X	X
2	F54T5HO	120 - 277	B254PUNV-D	Accustart T5	PRS	1.03 - 0.43	120 - 117	1.00	X	X
		347	B254PUNVHB-D	Accustart T5	PRS	0.96 - 0.41	116 - 113	1.00	X	X
3	F54T5HO	120 - 277	B254P347-D	Accustart T5	PRS	0.35	120	1.00	X	X
		347 - 480	B254PHRVHB-E	Accustart T5	PRS	0.35 - 0.26	120 - 119	1.00	X	X
4	F54T5HO	120 - 277	B454PUNV-E	Accustart T5	PRS	1.52 - 0.66	181 - 178	1.05	X	X
4	F54T5HO	120 - 277	B454PUNV-E	Accustart T5	PRS	2.01 - 0.86	240 - 234	1.00	X	X
		347 - 480	B454PUNVHB-E	Accustart T5	PRS	1.96 - 0.84	235 - 229	1.00	X	X



CIRCLINE

No. of Lamps	Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	Primary Lamp			Also Operates	
						Line Current (Amps)	Input Power (Watts)	Ballast Factor	CFS28W/GR10q	CFS38W/GR10q
1	FC9T5-22W	120 - 277	C2642UNVME	CF Electronic	PRS	0.21 - 0.10	25	1.00	X	X
		347	C2642/347ME	CF Electronic	PRS	0.08	26	0.98	X	
2	FC9T5-22W	120 - 277	C242UNVME	CF Electronic	PRS	0.42 - 0.19	50	1.05	X	
		347	C242/347ME	CF Electronic	PRS	0.14	47	1.05	X	
1	FC12T5-40W	120 - 277	C2642UNVME	CF Electronic	PRS	0.35 - 0.16	42	0.98	X	X
		347	C2642/347ME	CF Electronic	PRS	0.12	40	0.98	X	
2	FC12T5-40W	120 - 277	C242UNVME	CF Electronic	PRS	0.65 - 0.29	80 - 79	0.98	X	
		347	C242/347ME	CF Electronic	PRS	0.22	71	0.98	X	
1 & 1	FC9T5-22W & FC12T5-40W	120 - 277	C242UNVME	CF Electronic	PRS	0.54 - 0.24	66 - 64	0.98	X	
		347	C242/347ME	CF Electronic	PRS	0.18	59	0.98	X	
1	FC12T5-55W	120 - 277	B254PUNV-D	Accustart T5	PRS	0.45 - 0.20	55	1.00		
2	FC12T5-55W	120 - 277	B254PUNV-D	Accustart T5	PRS	0.88 - 0.38	107 - 104	1.00		



COMPACT

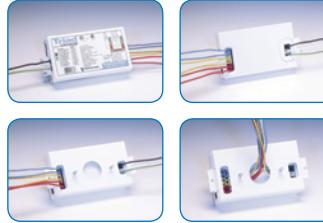
Lamp	Input Volts	Catalog Nbr	Ballast Family	Start Type	One Lamp			Two Lamp		
					Line Current (Amps)	Input Power (Watts)	Ballast Factor	Line Current (Amps)	Input Power (Watts)	Ballast Factor
13W/G24q or 13W/GX24q	120 - 277	C213UNVME	CF Electronic	PRS	0.15 - 0.07	18	1.00	0.26 - 0.11	30	1.00
	347	C213/347ME	CF Electronic	PRS	0.06	18	1.00	0.10	33	0.98
13W/2GX7	120 - 277	CT213UNVME	CF Electronic	PRS	0.12 - 0.06	15	0.98	0.22 - 0.10	26	0.98
18W/G24q or 18W/GX24q	120 - 277	C218UNVME	CF Electronic	PRS	0.16 - 0.07	19	1.00	0.30 - 0.13	35	0.95
	347	C218/347ME	CF Electronic	PRS	0.06	21	1.00	0.11	38	0.98
18W/2G11/RS	120 - 277	CT218UNVME	CF Electronic	PRS	0.19 - 0.07	23	1.00	0.37 - 0.16	43 - 42	0.98
26W/G24q or 26W/GX24q	120 - 277	C2642UNVME	CF Electronic	PRS	0.25 - 0.11	28	1.02	0.47 - 0.21	56	0.98
		C242UNVME	CF Electronic	PRS	-	-	-	0.46 - 0.20	56 - 55	1.02
	347	C2642/347ME	CF Electronic	PRS	0.09	31	1.02	0.17	57	0.98
		C242/347ME	CF Electronic	PRS	-	-	-	0.14	44	1.02
32W/GX24q	120 - 277	C2642UNVME	CF Electronic	PRS	0.30 - 0.13	36	1.00	-	-	-
		C242UNVME	CF Electronic	PRS	-	-	-	0.58 - 0.26	69 - 67	1.00
	347	C2642/347ME	CF Electronic	PRS	0.11	36	0.98	-	-	-
		C242/347ME	CF Electronic	PRS	-	-	-	0.19	62	1.00
42W/GX24q	120 - 277	C2642UNVME	CF Electronic	PRS	0.41 - 0.18	48	0.98	-	-	-
		C242UNVME	CF Electronic	PRS	0.40 - 0.18	45	1.00	0.76 - 0.32	91 - 90	0.98
	347	C2642/347ME	CF Electronic	PRS	0.15	50	1.00	-	-	-
		C242/347ME	CF Electronic	PRS	0.13	42	1.00	0.25	80	0.98
57W/GX24q	120 - 277	C242UNVME	CF Electronic	PRS	0.52 - 0.21	58 - 57	1.00	-	-	-
	347	C242/347ME	CF Electronic	PRS	0.18	61	1.00	-	-	-
70W/GX24q	120 - 277	C242UNVME	CF Electronic	PRS	0.61 - 0.27	73 - 72	1.00	-	-	-
	347	C242/347ME	CF Electronic	PRS	0.21	74	1.00	-	-	-

ME - Side and Bottom Exit Terminals

Fits Virtually Every J-box Cover & Fixture Application



The Multi-Exit ballast lead wire connectors accommodate side and bottom lead exit requirements, and the Snap mount adapter plate adds bottom-exit studs and additional flexibility for replacement of older magnetic ballasts.

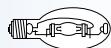


Multi-E Kits Contain

- Multi-Exit Ballast
- Snap-mount adapter plate
- Lead wire set
- Wire extraction tool
- Instructions

Multi-E Kit Products:

- C213UNVME000K
- C218UNVME000K
- C2642UNVME000K

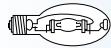


Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Nbr	Circuit Type	Input Power (Watts)	Max. Input Current
High Pressure Sodium	35 W	S76	120	S35120RCEM500K	Reactor	43	1.15/0.68
	50 W	S68	120	S50120RCEM500K	Reactor	60	1.50/0.90
			120/208/240/277	S50MLTLC3M500K	HX-HPF	64	1.24/0.60/0.52/0.45
	70 W	S62	120	S70120RCEM000K	Reactor	83	2.10/0.90
			480	S7048TLC3M500K	HX-HPF	94	0.34
			120/208/240/277	S70MLTLC3M500K	HX-HPF	94	1.40/0.83/0.72/0.62
	100 W	S54	120	S100120RCEM000K	Reactor	117	2.90/1.80
			480	S10048TLC3M500K	HX-HPF	135	0.57
			120/208/240/277	S100MLTLC3M500K	HX-HPF	122	2.20/1.30/1.10/0.95
	150 W	S55	120	S150120RCEM000K	Reactor	171	4.40/2.20
			480 (120V Aux)	S15048TLC3M500K	HX-HPF	189	0.72
			120/208/240/277	S150MLTLC30500K	HX-HPF	188	3.00/1.65/1.50/1.30
	200 W	S66	480 (120V Aux)	S20048TAC4M500K	CWA	245	0.56
			120/208/240/277	S200MLTAC4M500K	CWA	230	2.10/1.20/1.00/0.88
	250 W	S50	480	S25048TAC4M500K	CWA	285	0.62
			120/208/240/277/480	S250ML5AC40500K	CWA	300	2.50/1.55/1.25/1.05/0.65
			120/208/240/277	S250MLTAC4M500K	CWA	300	2.60/1.55/1.30/1.15
	400 W	S51	480	S40048TAC4M500K	CWA	465	1.10
			120/208/240/277/480	S40048TAC5M500K	CWA	467	1.05
			120/208/240/277	S400ML5AC4M500K	CWA	465	4.00/2.30/2.00/1.70/1.10
				S400ML5AC5M500K	CWA	468	4.40/2.62/2.21/1.90/1.05
				S400MLTAC4M500K	CWA	440	3.80/2.20/1.80/1.60
	1000 W	S52	480 (120V Aux)	S100048TAC5M500K	CWA	470	4.00/2.30/2.00/1.80
			120/208/240/277/480	S1000ML5AC5M500K	CWA	1100	2.45
			120/208/240/277	S1000ML5AW5M500K	CWA	1048	9.10/5.40/4.60/4.10/2.45
				S1000MLTAC5M500K	CWA	1048	9.10/5.40/4.60/4.10/2.40
				S1000MLTAC5M500K	CWA	1100	9.50/5.50/4.80/4.20



Universal HID Ballast Kits provide everything you need for an easy ballast replacement:

- Adjustable mounting brackets for various mounting configurations
- Pre-wired Capacitor and Ignitor to speed and simplify installation
- Color Coded Leads for easy identification
- Vacuum impregnated for cool and quiet operation



Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Nbr	Circuit Type	Input Power (Watts)	Max. Input Current
Metal Halide	175 W	M57	120/277	1110-245SC-TC	F-Can	205	1.75/0.75
		M57 or M107	480	M17548TAC3M500K	CWA	200	0.51
			120/208/240/277/480	M175ML5AC3M500K	CWA	208/210	1.90/1.10/0.95/0.85/0.50
			120/208/240/277	M175MLTAC3M500K	CWA	205	1.82/1.13/0.93/0.85
	250 W	M58	120/208/240/277	M250MLTAE3M	CWA	294	2.60/1.58/1.30/1.12
			120/277	1110-246SC-TC	F-Can	295	2.50/1.10
			480	M25048TAC4M500K	CWA	284	0.61
			120/208/277/480	M250ML5AC3M500K	CWA	280	2.50/1.50/1.25/1.10/0.65
			120/208/240/277/480	M250ML5AC4M500K	CWA	282	2.42/1.40/1.20/1.00/0.60
			120/208/240/277	M250MLTAC3M500K	CWA	297	2.65/1.58/1.30/1.13
	400 W	M59	120/277	M250MLTAC4M500K	CWA	290	3.05/1.65/1.55/1.25
			480	1110-247SC-TC	F-Can	455	3.90/1.70
			120/208/240/277/480	M400027TAC4M	CWA	458	3.94/1.69
			120/208/240/277	M400480AC4M	CWA	458	1.00
			480	M400ML5AC4M500K	CWA	458	4.00/2.30/2.00/1.70/1.00
			120/208/240/277	M400MLTAC4M500K	CWA	458	3.94/2.20/1.93/1.69
Pulse Start Metal Halide	1000 W	M47	480	M40048TAC4M500K	CWA	458	1.00
			120/480	M100048TAC5M500K	CWA	1060	8.80/2.30
			120/208/240/277/480	M1000ML5AC5M500K	CWA	1060	8.80/5.20/4.40/3.90/2.30
	1500 W	M48	120/208/240/277	M1000MLTAC5M500K	CWA	1080	8.50/5.00/4.50/3.80
			480 (120V Aux)	M150048TAC5M500K	CWA	1610	3.50
	35 W	M130	120/208/240/277	M1500MLTAC5M500K	CWA	1610	14.00/8.00/7.00/6.00
			120/277	M35MLTLC3M500K	HX-HPF	50	0.82/0.48/0.42/0.36
	50 W	M110	120/208/240/277	11210-236C-TC	F-Can	70	0.64/0.65
			120/277	M50MLTLC3M500K	HX-HPF	67	1.16/0.67/0.57/0.50
	70 W	M85 (Double Ended)	120/277	11210-277C-TC	F-Can	98	2.00/0.90
			120/208/240/277	M70MLTLC3D500K	HX-HPF	95	1.70/1.04/0.87/0.78
		M98	120/277	11210-506C-TC	F-Can	90	2.00/0.90
			480	M7048TLC3M500K	HX-HPF	95	0.50
			120/208/240/277	M70MLTLC3M500K	HX-HPF	95	1.70/1.04/0.87/0.78
	100 W	M90	120/277	11210-239C-TC	F-Can	125	2.20/1.00
		M90, M92, or M140	480	M10048TLC3M500K	HX-HPF	140	0.62
			120/208/240/277	M100MLTLC30500K	HX-HPF	127	2.60/1.55/1.30/1.15
		M91 (double ended)	120/208/240/277	M100MLTLC3D500K	HX-HPF	130	2.30/1.30/1.10/0.95
	150 W	M102	120/277	11210-539C-TC	F-Can	185	3.70/1.60
		M102 or M142	120/208/240/277	M150MLTLC3M500K	HX-HPF	185	3.32/1.93/1.66/1.48
			120/208/240/277	M150MLTAC3M500K	CWA	188	1.60/1.00/0.80/0.70
			480	M15048TLC3M500K	HX-HPF	180	1.00
		M81 (double ended)	120/277	11210-242C-TC	F-Can	185	3.70/1.60
			120/208/240/277	M150MLTLC3D500K	HX-HPF	185	3.32/1.93/1.66/1.48
	200 W	M136	277	P175277RCEM500K	Reactor	202	1.50/1.25
			480-120	P17548TAC3M500K	CWA	285	0.46
			480-120	P17548TAC4L500K	CWA	198	0.40
			120/208/240/277/480	P175ML5AC3M500K	CWA	285	1.80/1.10/0.90/0.78/0.45
			120/208/240/277	P175MLTAC3M500K	CWA	208	1.86/1.23/0.98/0.87
			120/208/240/277	P175MLTAC3L500K	CWA	198	1.95/1.10/1.00/0.80
			120/208/240/277	P175MLTAC4L500K	CWA	198	1.70/0.95/0.85/0.75
	250 W	M138 or M153	277	P200277RCEM500K	Reactor	218	1.80/1.35
			120/208/240/277/480	P200ML5AC3M500K	CWA	233	2.66/1.52/1.31/1.12/0.68
			277	P250277RCEM500K	Reactor	278	2.00/1.82
			480-120	P25048TAC4L500K	CWA	275	0.60
	320 W	M132 or M154	120/208/240/277/480	P250ML5AC4M500K	CWA	285	2.45/1.42/1.22/1.05/0.62
			120/208/240/277	P250MLTAC4L500K	CWA	283	2.60/1.50/1.30/1.10
			277	P320277RCEM500K	Reactor	358	3.70/1.65
			120/480	P32048TAC4L500K	CWA	364	0.80/1.06
			120/208/240/277/480	P320ML5AC4L500K	CWA	363	3.10/1.80/1.55/1.35/0.80
			120/208/240/277	P320MLTAC4O500K	CWA	365	4.10/2.50/2.00/1.85



Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Nbr	Circuit Type	Input Power (Watts)	Max. Input Current
Pulse Start Metal Halide	350 W	M131	277	P350277RCM500K	Reactor	377	3.80/2.34
			480-120	P35048TAC4O500K	CWA	398	0.85
			120/208/240/277/480	P350ML5AC4O500K	CWA	397	3.35/1.85/1.65/1.40/0.80
			120/208/240/277	P350MLTAC4O500K	CWA	397	3.25/1.80/1.60/1.40
	400 W	M155	480-120	P40048TAC4L500K	CWA	454	1.00
			120/208/240/277/480	P400ML5AC4L500K	CWA	454	3.90/2.25/1.90/1.65/0.95
			120/208/240/277	P400MLTAC4L500K	CWA	454	3.90/2.25/1.95/1.70
	450 W	M144	120/480	P45048TAC4L500K	CWA	511	1.05
			120/208/240/277/480	P450ML5AC4L500K	CWA	508	4.10/2.35/2.05/1.85/1.05
			120/208/240/277	P450MLTAC4L500K	CWA	508	4.35/2.55/2.15/1.90
	750 W	M149	480 (120V Aux)	P75048TAC5M500K	CWA	822	1.80
			120/208/240/277/480	P750ML5AC5M500K	CWA	820	6.95/4.00/3.50/3.00/1.75
			120/208/240/277	P750MLTAC5M500K	CWA	825	7.10/4.10/3.55/3.10
	875W	M166	120/208/240/277	P875MLTAC5M500K	CWA	945	7.90/4.55/3.95/3.45
	1000 W	M141	480 (120V Aux)	P100048TAC5M500K	CWA	1080	2.25
			120/208/240/277/480	P1000ML5AC5M500K	CWA	1080	8.95/5.15/4.45/3.85/2.25
			120/208/240/277	P1000MLTAC5M500K	CWA	1070	8.80/5.10/4.50/4.10

MULTI-5 UNI-PAK

Lamp Type	Lamp Watts	ANSI Code	Input Volts	Catalog Nbr	Circuit Type	Input Power (Watts)	Max. Input Current
High Pressure Sodium	250 W	S50	120/208/240/277/480	S250ML5AC4055K	CWA	300	2.50/1.55/1.25/1.05/0.65
	500 W	S51	120/208/240/277/480	S400ML5AC4M555K	CWA	465	4.00/2.30/2.00/1.70/1.10
	1000 W	S52	120/208/240/277/480	S1000ML5AC5M555K	CWA	1048	9.10/5.40/4.60/4.10/2.45
Metal Halide	175 W	M57	120/208/240/277/480	M175ML5AC3M555K	CWA	208/210	1.90/1.10/0.95/0.85/0.50
	250 W	M58	120/208/240/277/480	M250ML5AC3M555K	CWA	280	2.50/1.50/1.25/1.10/0.65
	400 W	M59	120/208/240/277/480	M400ML5AC4M555K	CWA	458	4.00/2.30/2.00/1.70/1.00
	1000 W	M47	120/208/240/277/480	M1000ML5AC5M555K	CWA	1060	8.80/5.20/4.40/3.90/2.30
Pulse Start Metal Halide	250 W	M153	120/208/240/277/480	P250ML5AC4L555K	CWA	233	2.45/1.42/1.22/1.05/0.62
	320 W	M154	120/208/240/277/480	P320ML5AC4L555K	CWA	363	3.10/1.80/1.55/1.35/0.80
	400 W	M155	120/208/240/277/480	P400ML5AC4L555K	CWA	454	3.90/2.25/1.90/1.65/0.95
	750 W	M149	120/208/240/277/480	P750ML5AC5M555K	CWA	820	6.95/4.00/3.50/3.00/1.75



Multi-5 Uni-Pak is the only HID replacement kit that offers these great benefits:

1. Gives you five taps in one: 120, 208, 240, 277 and 480 volt.
2. Packages the right ballast and lamp to ensure system compatibility — all in an easy-to-carry box.
3. Prewired capacitor (plus ignitor if needed) saves installation time and reduces wiring errors
4. Color-coded leads to reduce the risk of incorrect wiring.
5. Simple installation instruction and troubleshooting tips included.

Order Code	Part #	Lamp Wattage	Lamp Type	Input Voltage	Mounting	Lead Exit
Micro Series						
188514	M2012CK-7EUN	20	M/C156	120	No Feet	Side
188882	M2012CK-7EUN-F	20	M/C156	120	Feet	Side
188883	M2012CK-7EUN-J	20	M/C156	120	Studs	Top
188635	M3912CK-7EUN	39	M/C130	120	No Feet	Side
188776	M3912CK-7EUN-F	39	M/C130	120	Feet	Side
188756	M3912CK-7EUN-J	39	M/C130	120	Studs	Top
188777	MTm3912CK-7EUN-F	39Tm	M/C179	120	Feet	Side
Mini-Slim Series						
188246	M3912CK-6EUN-F	39	M/C130	120	Feet	Side
188164	M7012CK-6EUN-F	70	M/C98, M/C139, M/C143	120	Feet	Side
Mini-Square Series						
188901	M2012-27CK-6EU-F	20	M/C156	120-277	Feet	Side
1889031	M2012-27CK-6EU-JT3	20	M/C156	120-277	Studs	Top
188895	M3912-27CK-6EU-F	39	M/C130	120-277	Feet	Side
188293	M3912CK-6EU-F	39	M/C130	120	Feet	Side
188939	M7012-27CK-6EU-F	70	M/C98, M/C139, M/C143	120-277	Feet	Side
188940	M7012-27CK-6EU-J	70	M/C98, M/C139, M/C143	120-277	Studs	Top
Standard Series						
188611 ₁	M2012-27CK-5EU-JT3	20	M/C156	120-277	Studs	Top
188156	M3912-27CK-5EU	39	M/C130	120-277	No Feet	Side
188157	M3912-27CK-5EU-F	39	M/C130	120-277	Feet	Side
188301	M3912-27CK-5EU-J	39	M/C130	120-277	Studs	Top
188629 ₁	M3912-27CK-5EU-JT3	39	M/C130	120-277	Studs	Top
188630 ₂	M3912-27CK-5EU-JA3	39	M/C130	120-277	Studs	Top
188612	M5012-27CK-5EU-F	50	M148 or M110	120-277	Feet	Side
188613 ₁	M5012-27CK-5EU-JT3	50	M148 or M110	120-277	Studs	Top
188165	M7012-27CK-5EU	70	M/C98, M/C139, M/C143	120-277	No Feet	Side
188166	M7012-27CK-5EU-F	70	M/C98, M/C139, M/C143	120-277	Feet	Side
188167	M7012-27CK-5EU-J	70	M/C98, M/C139, M/C143	120-277	Studs	Top
188631 ₁	M7012-27CK-5EU-JT3	70	M/C98, M/C139, M/C143	120-277	Studs	Top
188632 ₂	M7012-27CK-5EU-JA3	70	M/C98, M/C139, M/C143	120-277	Studs	Top
188633 ₁	M10012-27CK-5EU-JT3	100	M/C90, M/C140, C191	120-277	Studs	Top
188168	M10012-27CK-5EU	100	M/C90, M/C140, C191	120-277	No Feet	Side
188169	M10012-27CK-5EU-F	100	M/C90, M/C140, C191	120-277	Feet	Side
188302	M10012-27CK-5EU-J	100	M/C90, M/C140, C191	120-277	Studs	Top
188634 ₂	M10012-27CK-5EU-JA3	100	M/C90, M/C140, C191	120-277	Studs	Top
188638.05 ₃	M15012-27CK-5EU-F	150	M/C102 and M/C142	120-277	Feet	Side
188639.05 ₃	M15012-27CK-5EU-J	150	M/C102 and M/C142	120-277	Studs	Top
188989.05 _{1,3}	M15012-27CK-5EU-JT3	150	M/C102 and M/C142	120-277	Studs	Top

Footnotes:

- 1 - "JT3" models have 120V power source for operating the heater on self-heating thermal protectors allowing dual-rated input voltage fixtures.
 2 - "JA3" models have same 120V power source as JT3 models, but also have an integrated auxiliary light control which drives a quartz restrike back-up lamp.
 3 - Exceeds EISA 2007 requirements with 90% efficiency.



- Optimum Lamp Performance
- Rugged, compact and lightweight design
- Enhanced color and CRI uniformity
- Reduced lamp dropouts caused by voltage dips
- Quiet Operation

ELECTRONIC SIGN

No. of Lamps	Total Lamp Footage (T12HO & T8HO Style Lamps)		Catalog Nbr
	Minimum	Maximum	
1 - 2	2'	16'	ESB216-12
1 - 4	4'	32'	ESB432-14
4 - 6	8'	48'	ESB848-46
1 - 4	10'	40'	ESB1040-14

LED CONSTANT VOLTAGE DRIVERS & CHAINS

Driver P/N	Voltage	Max Power (W)	Current (mA)	Input Voltage	Control/Notes
L12V20UNV-JL	12	20	1.7	120-277	Fixed Output
L12V60UNV-A	12	60	5	120-277	Fixed Output
L12V60UNV-Q	12	60	5	120-277	Fixed Output / IP67
L24V100UNV-A	24	96	4	120-277	Fixed Output
L24V100UNV-Q	24	96	4	120-277	Fixed Output / IP67

Chain P/N	Color	Color Temp	Input Voltage	Lumens/Foot
LSA-25WH	White	6500K	12V	100
LSA-25WW	White	3500K	12V	95



- Universal's constant voltage drivers are ideal for your general lighting and sign illumination applications.
- Universal's LED chains are ideal for sign illumination and accent lighting applications.

DIMMING

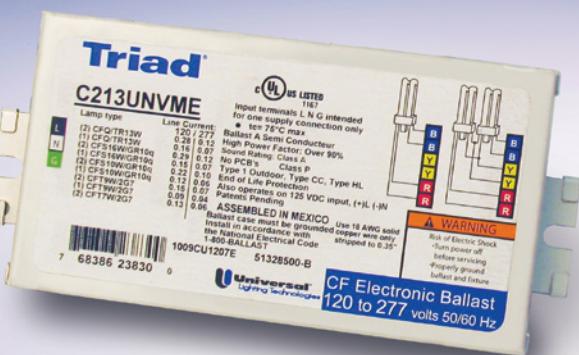


	LAMP TYPE	QTY	Analog Dimming	Light Level Switching	DALI Digital Dimming Ballasts	Analog Dimming w/ Parallel Lamp	Light Level Switching w/ Parallel Lamp
T8	F17T8	1	B132PUNVSV3-A	B232PUS50-A	B132PUNVDV3-A	B232PUSV3PLA (120-277V)	B232PUS50PLHA (120-277V)
		2	B232PUNVSV3-A		B232PUNVDV3-A		B232P3S50PLHA
	F25T8	1	B132PUNVSV3-A	B232PUS50-A	B132PUNVDV3-A		B232PUS50PLA (120-277V)
		2	B232PUNVSV3-A		B232PUNVDV3-A		
	F32T8	1	B132PUNVSV3-A	B232PUS50-A	B132PUNVDV3-A		B232P3S50PLA (347V)
		2	B232PUNVSV3-A	B232PUS50-A B232SR120S30 B232SR277S30	B232PUNVDV3-A		
		3	B332SR120V5 B332SR277V5	B332SR120S30 B332SR277S30			
		4	B432SR277V5				
T5 & T5HO	F14T5	1	B114PUNVSV3-D	B214PU115S50A	B114PUNVDV3-D	B228PUSV3PLA (120-277V)	B232PUS50PLA (120-277V)
		2	B214PUNVSV3-D	B228PU95S50D & B214PU115S50A	B214PUNVDV3-D		
	F21T5	1	B128PUNVSV3-D	B214PU115S50A	B128PUNVDV3-D		B232P3S50PLA (347V)
		2	B228PUNVSV3-D	B228PU95S50D & B228PU115S50D	B228PUNVDV3-D		
	F28T5	1	B128PUNVSV3-D	B214PU115S50A	B128PUNVDV3-D		B232P3S50PLA (347V)
		2	B228PUNVSV3-D	B228PU95S50D & B228PU115S50D	B228PUNVDV3-D		
	F35T5	1	B135PUNVSV3-D		B135PUNVDV3-D		
		2		B228PU115S50D			
	F54T5HO	1			B254PUDV3PLD B254P3DV3PLD (347V)	B254PUSV3PLD	
		2					
CFL	CFQ/TR13W	1	C213UNVSV3ME		C226UNVDV3ME		
		2	C213UNVSV3ME		C226UNVDV3ME		
	CFQ/TR18W	1	C218UNVSV3ME		C226UNVDV3ME		
		2	C218UNVSV3ME		C226UNVDV3ME		
	CFQ/TR26W	1	C226UNVSV3ME		C226UNVDV3ME		
		2	C226UNVSV3ME		C226UNVDV3ME		
	CFTR32W	1	C226UNVSV3ME		C226UNVDV3ME		
		2			C232PUNVDV3		
	CFM42W	1	C226UNVSV3ME		C226UNVDV3ME		
		2			C242PUNVDV3		
T5	FT40W/2G11	1			C140PUNVDV3		
		2			C240PUNVDV3		
	FT55W/2G11	1			B254PUDV3PLD B254P3DV3PLD (347V)	B254PUSV3PLD	
		2					

- SuperDim Analog dimming ballasts operate with numerous industry standard compatible 0 to 10-volt controls. Most SuperDim ballasts feature universal input voltage and a dimming range down to 1% for T5 lamps and 3%.
- Ballastar light level switching ballasts operate with standard wall switches or relays to provide switching between 100% and 50% light levels or 100%/ 60%/ 30% light levels while keeping all lamps operating for full fixture illumination.
- DALI-Pro digital dimming ballasts are designed for use with industry standard DALI controls.
- VariPro ballasts combine fast starting and parallel lamp operation on a 0-10V Analog dimming ballast platform. Universal voltage (120-277V) and 347V models are available.
- LevelPro step-dimming ballasts provide fast starting & parallel lamp operation. Several models are available, providing various choices for input voltage and ballast factor, and all support a large selection of lamp applications.

- For more information on all of the dimming ballasts and controls, visit www.unvlt.com

- For warranty information visit www.unvlt.com/support



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