

**Technical Data and Lamp Matrix**

Lamp Wattage	Lamp Type	Product description	12NC	Input power (W)	Lamp power (W)	Ploss (W)	THD (%)	Power Factor	EEl	Tc Point Max.	Ambient Temperature Ta	BLF
2x14W	TL5	HF-E 214 TL5 II	913713041566	32,3	13,4	5,5	8.3	0.98	A2	75°C	0 °C to +50 °C	1.03



# Electrical Data and Ballast/Lamp Combinations

Lamp Wattage	Lamp Type	Product description	12NC	Power Factor	Input power (W)	Input current (mA)	THD (%)	Ploss (W)	Lamp power (W)	EEL		
1x49W	TL5	HF-E 1/2 49 TL5 II	913713040766	0.97	55.4	246,0	8.11	4.66	50.74	A2		
2x49W	TL5			0.98	109,0	478,0	7.21	9.8	99.95	A2		
1x54W	TL5	HF-E 1/2 54 TL5 II	913713040866	0.97	57.9	257,0	8.19	4.6	53.3	A2		
2x54W	TL5			0.98	103.9	455,0	7.03	8.24	47.75	A2		
1x58W	T8			0.97	56.2	250,0	8.52	5.4	50.8	A2		
2x58W	T8			0.98	101.2	445,0	7.1	7.94	46.24	A2		
1x55W	PL-L			0.97	57.1	254,0	8.36	4.54	52.56	A2		
2x55W	PL-L			0.99	104.4	458,0	6.82	5.38	49.43	A2		
3x14W	TL5			HF-E 3/414 TL5 II	913713041366	0.98	45.0	200,0	6.94	3.50	41.5	A2 BAT
4x14W	TL5					0.98	61.0	267,0	6.54	5.00	56.0	A2 BAT
1x14W	TL5	HF-E 114 TL5 II	913713041466	0.972	17.4	77,0	6.53	2.91	14.39	A2		
2x14W	TL5	HF-E 214 TL5 II	913713041566	0.98	32.3	143,0	8.3	5.23	13.38	A2		
1x21W	TL5	HF-E 121 TL5 II	913713041666	0.98	24.1	110,0	9.2	3.69	20.48	A2		
1x28W	TL5	HF-E 128 TL5 II	913713041766	0.98	32.3	143,0	9.26	4.79	27.51	A2		
2x28W	TL5	HF-E 228 TL5 II	913713041866	0.975	64,0	285,0	10.81	7.67	27.93	A2		

## Technical data for installation

### Mains operation

- Rated mains voltage: 220-240 V
- With tolerances for safety:  $\pm 10\%$  198-264 V
- Mains frequency: 50/60 Hz
- Operation frequency: > 42 kHz
- Power factor: 0.97
- Earth leakage current: < 0.5 mA per ballast
- Ignition time: <1.6 sec
- Overvoltage protection: 2 hrs at 276 V AC, 48 hrs at 184 V AC
- Under voltage protection:
- Max cable length hot side: 0.75 m
- Total wire capacitance between hot and cold lamp wires: Max. 200 pF
- Total wire capacitance between lamp wires to ground: Max. 200 pF
- Automatic restart after lamp replacement: Yes
- Tested with a dip down to: 30%

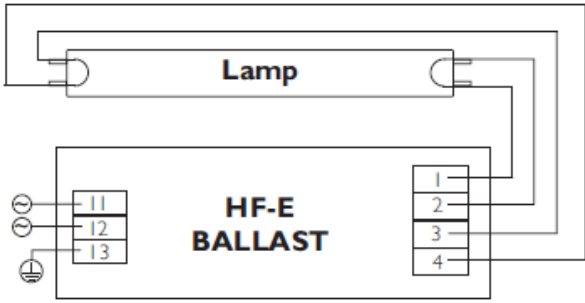
### DC/Emergency operation

- Nominal light output is obtained at DC voltage: 220 - 240 V
- Required battery voltage for guaranteed ignition: 186 - 276 V
- Required battery voltage for burning lamps: 176 - 276 V
- DC switchover time: 180-200 ms

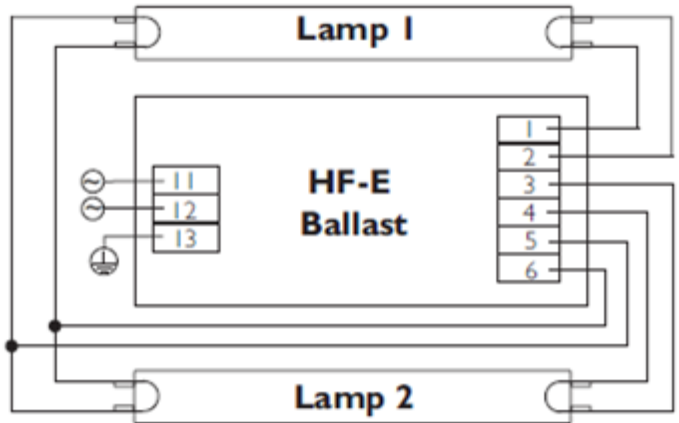


# Wiring Diagram

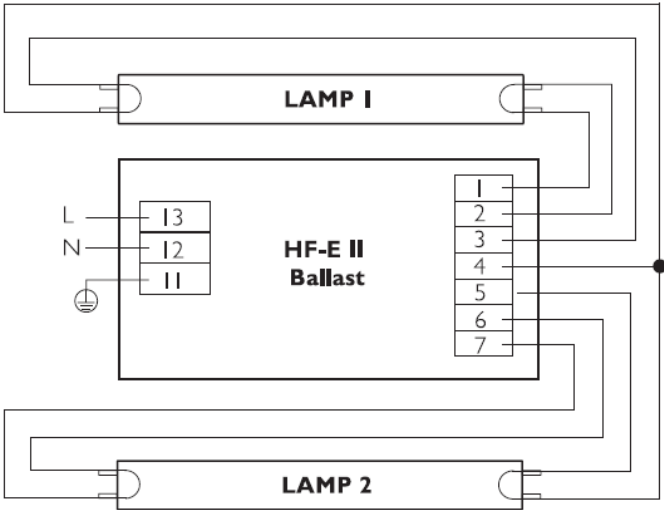
**HF-E 114/21/28 TL5 II**



**HF-E 221 TL5 II**

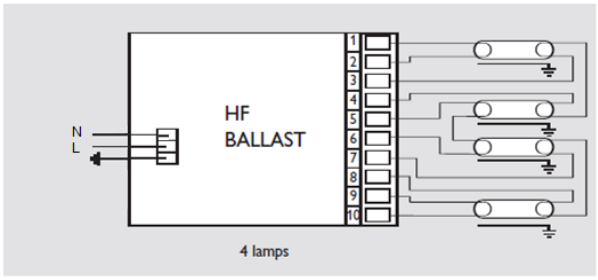
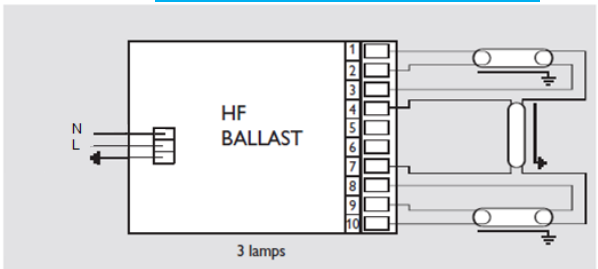


**HF-E 228 TL5 II**



Keep wires 1;2 short

**HF-E 3/414 TL5 II**



**Wiring**

