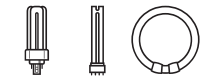
EL RoHS



TC-DEL
TC-SEL
TC-TEL
TC-TEL HE

TC-F
TC-L

T5c

PC TC PRO 1/2x9–70 W

PC PRO compact

Product description

- CELMA Energy Efficiency Index A2 BAT / A2
- Nominal life-time up to 100,000 h (at ta 50 °C with a failure rate max. 0.2 % per 1,000 h)
- Large temperature range (for values see table)
- Devices can operate either 1 or 2 lamps
- Intelligent Voltage Guard (overvoltage indication and undervoltage shutdown)
- Constant luminous flux irrespective of fluctuations in mains voltage
- For luminaires of protection class I and protection class II
- Automatic start after replacement of defective lamps
- Safety shutdown of defective lamps and at end of lamp life (EOL 2)
- For emergency lighting systems as per EN 50172
- For luminaires with M and MM as per EN 60598, VDE 0710 and VDE 0711
- Temperature protection as per EN 61347-2-3 C5e

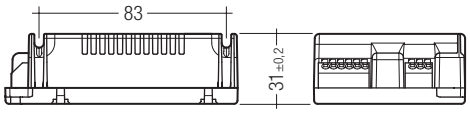
Technical data

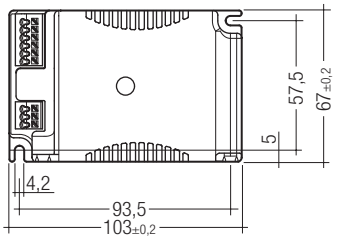
Mains voltage range	220 – 240 V
AC voltage range	198 – 264 V
DC voltage range	176 – 280 V (Lamp start ≥ 198 V DC)
Mains frequency	0 / 50 / 60 Hz
Overvoltage protection	320 V AC, 1 h
Defined warm start	≤ 1.6 s
Operating frequency	≥ 40 kHz
Type of protection	IP20

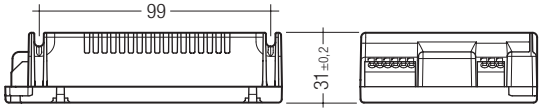
→

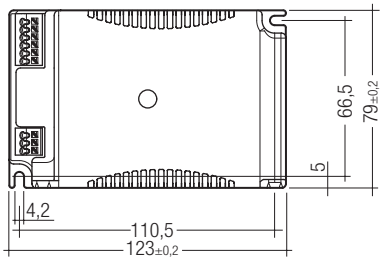
Standards, page 3

Wiring diagrams and installation examples, page 8









Ordering data

Type	Article number	Packaging carton	Packaging pallet	Weight per pc.
For luminaires with 1 lamp				
PC 1x57/70 TC PRO	**22176409**	10 pc(s).	500 pc(s).	0.170 kg
For luminaires with 1 or 2 lamps				
PC 1/2x9–13 TC PRO	**22176405**	15 pc(s).	750 pc(s).	0.130 kg
PC 1/2x11–17 TC PRO	**22176406**	15 pc(s).	750 pc(s).	0.129 kg
PC 1/2x18 TC PRO	**22176407**	15 pc(s).	750 pc(s).	0.130 kg
PC 1/2x26–42 TC PRO	**22176408**	15 pc(s).	750 pc(s).	0.130 kg
For luminaires with 2 lamps				
PC 2x26–42 TC PRO	**22176410**	10 pc(s).	500 pc(s).	0.168 kg

Specific technical data

Lamp wattage	Lamp type	Type	Aricle number	Dimensions L x W x H	Lamp power	Circuit power	EEI	Current at 50 Hz		λ at 50 Hz		tc point max.	Ambient temperature ta	tc / ta for ≥ 50,000 h
								220 V	240 V	220 V	240 V			
For luminaires with 1 lamp														
1 x 57 W	TC-TEL	**PC 1x57/70 TC PRO**	22176409	123 x 79 x 31 mm	56.0 W	58.6 W	A2 BAT	0.272 A	0.250 A	0.98	0.97	75 °C	-25 ... 65 °C	70/60 °C
1 x 70 W	TC-TEL	**PC 1x57/70 TC PRO**	22176409	123 x 79 x 31 mm	70.0 W	73.2 W	A2 BAT	0.334 A	0.306 A	0.98	0.98	75 °C	-25 ... 65 °C	65/55 °C
For luminaires with 1 or 2 lamps														
1 x 10 W	TC-DEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	9.5 W	11.0 W	A2 BAT	0.055 A	0.051 A	0.91	0.89	75 °C	-25 ... 70 °C	70/65 °C
2 x 10 W	TC-DEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	19.0 W	21.0 W	A2 BAT	0.099 A	0.091 A	0.97	0.95	75 °C	-25 ... 70 °C	70/65 °C
1 x 13 W	TC-DEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	12.5 W	15.1 W	A2 BAT	0.073 A	0.067 A	0.94	0.92	75 °C	-25 ... 70 °C	70/65 °C
2 x 13 W	TC-DEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	25.0 W	29.9 W	A2 BAT	0.139 A	0.127 A	0.98	0.97	75 °C	-25 ... 65 °C	70/60 °C
1 x 9 W	TC-SEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	8.0 W	9.8 W	A2	0.050 A	0.046 A	0.90	0.87	75 °C	-25 ... 70 °C	70/65 °C
2 x 9 W	TC-SEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	16.0 W	18.9 W	A2 BAT	0.090 A	0.082 A	0.96	0.94	75 °C	-25 ... 70 °C	70/65 °C
1 x 11 W	TC-SEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	11.0 W	13.9 W	A2 BAT	0.068 A	0.062 A	0.94	0.92	75 °C	-25 ... 70 °C	70/65 °C
2 x 11 W	TC-SEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	22.0 W	27.6 W	A2 BAT	0.129 A	0.118 A	0.98	0.97	75 °C	-25 ... 65 °C	70/60 °C
1 x 13 W	TC-TEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	12.5 W	14.4 W	A2 BAT	0.070 A	0.064 A	0.95	0.93	75 °C	-25 ... 70 °C	70/65 °C
2 x 13 W	TC-TEL	**PC 1/2x9–13 TC PRO**	22176405	103 x 67 x 31 mm	25.0 W	27.9 W	A2 BAT	0.130 A	0.119 A	0.98	0.98	75 °C	-25 ... 65 °C	70/60 °C
1 x 11 W	TC-TEL HE	**PC 1/2x11-17 TC PRO**	22176406	103 x 67 x 31 mm	12.0 W	13.5 W	A2 BAT	0.066 A	0.061 A	0.93	0.91	80 °C	-25 ... 70 °C	75/65 °C
2 x 11 W	TC-TEL HE	**PC 1/2x11-17 TC PRO**	22176406	103 x 67 x 31 mm	24.5 W	27.3 W	A2 BAT	0.127 A	0.116 A	0.98	0.97	75 °C	-25 ... 60 °C	75/60 °C
1 x 14 W	TC-TEL HE	**PC 1/2x11-17 TC PRO**	22176406	103 x 67 x 31 mm	15.5 W	16.7 W	A2	0.080 A	0.074 A	0.95	0.93	80 °C	-25 ... 70 °C	75/65 °C
2 x 14 W	TC-TEL HE	**PC 1/2x11-17 TC PRO**	22176406	103 x 67 x 31 mm	32.0 W	33.9 W	A2 BAT	0.157 A	0.144 A	0.98	0.98	75 °C	-25 ... 60 °C	75/60 °C
1 x 17 W	TC-TEL HE	**PC 1/2x11-17 TC PRO**	22176406	103 x 67 x 31 mm	18.6 W	19.5 W	A2 BAT	0.094 A	0.086 A	0.96	0.95	80 °C	-25 ... 70 °C	75/65 °C
2 x 17 W	TC-TEL HE	**PC 1/2x11-17 TC PRO**	22176406	103 x 67 x 31 mm	37.8 W	40.0 W	A2 BAT	0.186 A	0.171 A	0.99	0.98	75 °C	-25 ... 60 °C	75/60 °C
1 x 18 W	TC-DEL	**PC 1/2x18 TC PRO**	22176407	103 x 67 x 31 mm	16.7 W	18.7 W	A2 BAT	0.090 A	0.082 A	0.95	0.94	75 °C	-25 ... 70 °C	75/70 °C
2 x 18 W	TC-DEL	**PC 1/2x18 TC PRO**	22176407	103 x 67 x 31 mm	33.6 W	36.5 W	A2 BAT	0.170 A	0.156 A	0.98	0.98	75 °C	-25 ... 65 °C	70/60 °C
1 x 18 W	TC-TEL	**PC 1/2x18 TC PRO**	22176407	103 x 67 x 31 mm	16.6 W	18.8 W	A2 BAT	0.090 A	0.083 A	0.95	0.94	75 °C	-25 ... 70 °C	75/70 °C
2 x 18 W	TC-TEL	**PC 1/2x18 TC PRO**	22176407	103 x 67 x 31 mm	34.8 W	37.3 W	A2 BAT	0.174 A	0.159 A	0.98	0.98	75 °C	-25 ... 65 °C	70/60 °C
1 x 22 W	T5c	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	21.7 W	24.6 W	A2	0.117 A	0.107 A	0.96	0.95	75 °C	-25 ... 65 °C	70/60 °C
2 x 22 W	T5c	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	44.8 W	48.7 W	A2 BAT	0.225 A	0.206 A	0.99	0.98	75 °C	-25 ... 60 °C	70/55 °C
1 x 40 W	T5c	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	38.2 W	40.7 W	A2 BAT	0.189 A	0.173 A	0.99	0.98	75 °C	-25 ... 65 °C	70/60 °C
1 x 26 W	TC-DEL	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	23.0 W	25.6 W	A2 BAT	0.125 A	0.114 A	0.97	0.96	75 °C	-25 ... 65 °C	70/60 °C
2 x 26 W	TC-DEL	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	49.9 W	52.4 W	A2 BAT	0.242 A	0.222 A	0.99	0.99	75 °C	-25 ... 60 °C	70/55 °C
1 x 18 W	TC-F	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	13.7 W	15.4 W	A2	0.077 A	0.071 A	0.92	0.91	75 °C	-25 ... 65 °C	70/60 °C
2 x 18 W	TC-F	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	26.4 W	30.4 W	A2 BAT	0.142 A	0.130 A	0.98	0.97	75 °C	-25 ... 65 °C	70/60 °C
1 x 24 W	TC-F	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	20.0 W	22.2 W	A2 BAT	0.106 A	0.097 A	0.96	0.95	75 °C	-25 ... 65 °C	70/60 °C
2 x 24 W	TC-F	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	42.9 W	45.7 W	A2 BAT	0.211 A	0.193 A	0.99	0.98	75 °C	-25 ... 60 °C	70/55 °C
1 x 18 W	TC-L	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	14.5 W	16.7 W	A2	0.083 A	0.076 A	0.93	0.92	75 °C	-25 ... 65 °C	70/60 °C
2 x 18 W	TC-L	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	29.5 W	33.3 W	A2 BAT	0.155 A	0.142 A	0.98	0.97	75 °C	-25 ... 65 °C	70/60 °C
1 x 24 W	TC-L	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	21.6 W	24.1 W	A2 BAT	0.114 A	0.104 A	0.96	0.95	75 °C	-25 ... 65 °C	70/60 °C
2 x 24 W	TC-L	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	44.5 W	48.4 W	A2 BAT	0.223 A	0.204 A	0.99	0.97	75 °C	-25 ... 60 °C	70/55 °C
1 x 26 W	TC-TEL	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	24.4 W	26.7 W	A2 BAT	0.125 A	0.115 A	0.97	0.96	75 °C	-25 ... 65 °C	70/60 °C
2 x 26 W	TC-TEL	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	50.2 W	53.3 W	A2 BAT	0.243 A	0.223 A	0.99	0.99	75 °C	-25 ... 60 °C	70/55 °C
1 x 32 W	TC-TEL	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	31.3 W	33.7 W	A2 BAT	0.157 A	0.144 A	0.98	0.97	75 °C	-25 ... 65 °C	70/60 °C
1 x 42 W	TC-TEL	**PC 1/2x26–42 TC PRO**	22176408	103 x 67 x 31 mm	40.9 W	42.7 W	A2 BAT	0.198 A	0.181 A	0.99	0.98	75 °C	-25 ... 65 °C	70/60 °C
For luminaires with 2 lamps														
2 x 22 W	T5c	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	48.0 W	50.9 W	A2 BAT	0.237 A	0.218 A	0.97	0.96	75 °C	-25 ... 65 °C	75/65 °C
1 x 22 + 40 W	T5c	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	62.5 W	66.6 W	A2 BAT	0.309 A	0.283 A	0.97	0.97	70 °C	-25 ... 55 °C	70/55 °C
2 x 40 W	T5c	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	74.5 W	80.2 W	A2 BAT	0.370 A	0.339 A	0.98	0.97	70 °C	-25 ... 55 °C	70/55 °C
2 x 26 W	TC-DEL	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	52.5 W	56.4 W	A2 BAT	0.263 A	0.241 A	0.98	0.97	75 °C	-25 ... 65 °C	75/65 °C
2 x 18 W	TC-F	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	28.3 W	31.0 W	A2 BAT	0.151 A	0.138 A	0.94	0.93	80 °C	-25 ... 75 °C	75/70 °C
2 x 24 W	TC-F	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	42.4 W	45.7 W	A2 BAT	0.216 A	0.198 A	0.96	0.95	75 °C	-25 ... 65 °C	75/65 °C
2 x 18 W	TC-L	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	30.5 W	33.3 W	A2 BAT	0.161 A	0.148 A	0.95	0.93	80 °C	-25 ... 75 °C	75/70 °C
2 x 24 W	TC-L	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	47.7 W	51.1 W	A2 BAT	0.239 A	0.219 A	0.97	0.96	75 °C	-25 ... 65 °C	75/65 °C
2 x 26 W	TC-TEL	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	51.6 W	55.5 W	A2 BAT	0.259 A	0.237 A	0.98	0.97	75 °C	-25 ... 65 °C	75/65 °C
2 x 32 W	TC-TEL	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	66.1 W	71.2 W	A2 BAT	0.329 A	0.302 A	0.98	0.98	70 °C	-25 ... 55 °C	70/55 °C
2 x 42 W	TC-TEL	**PC 2x26-42 TC PRO**	22176410	123 x 79 x 31 mm	83.0 W	90.4 W	A2 BAT	0.417 A	0.382 A	0.99	0.98	70 °C	-25 ... 55 °C	70/55 °C

Standards
EN 55015
EN 60929
EN 61000-3-2
EN 61347-2-3
EN 61347-2-4
EN 61547
according to EN 50172

Lamp starting characteristics
Warm start
Starting time ≤ 1.6 s with AC and DC operation
Cathode heating will be reduced after preheat time

AC operation
Mains voltage:
220–240 V 50/60 Hz
198–264 V 50/60 Hz including safety tolerance (±10 %)
202–254 V 50/60 Hz including performance tolerance (+6 % / -8 %)

DC operation
Mains voltage:
220–240 V 0 Hz
198–280 V 0 Hz certain lamp start
176–280 V 0 Hz operating range
Light output level in DC operation: 100 %

Emergency lighting
Use in emergency lighting installations according to EN 50172 or for emergency luminaires according to EN 61347-2-3 appendix J.

Instant start after mains interruption < 0.5 s
EBLF = 1.00

Mains current for defective or missing lamps at DC operation < 10 mA.

Intelligent Voltage Guard
Intelligent Voltage Guard is the name of an electronic monitor from Tridonic. This innovative feature of the PC PRO family of control gear from Tridonic immediately shows if the mains voltage rises above or falls below certain thresholds. Measures can then be taken quickly to prevent damage to the control gear.
- If the mains voltage rises above ≥ 306 V the lamps flash.
- This signal “demands” disconnection of the power supply to the lighting system.
- If the mains voltage falls below 150 V the control gear automatically disconnects the lamp circuit (light off) to protect the control gear from being irreparably damaged.

Smart Heating
PC PRO with smart heating ignition technology optimises lamp start and ensures no energy is wasted. After the lamp has struck the filament heating is reduced automatically to a defined minimum value. This reduction in filament heating, saves energy, yet maintains the proper operating conditions for the lamp. The lamp is always operated within specification.

Mains current in DC operation

Type	Lamp type	Wattage	Mains current at $U_n = 220\,V_{DC}$	Mains current at $U_n = 240\,V_{DC}$
PC 1x57/70 TC PRO	TC-TEL	1x57 W	272 mA	250 mA
	TC-TEL	1x70 W	334 mA	306 mA
PC 1/2x9–13 TC PRO	TC-DEL	1x10 W	55 mA	51 mA
	TC-DEL	2x10 W	99 mA	91 mA
	TC-DEL	1x13 W	73 mA	67 mA
	TC-DEL	2x13 W	139 mA	127 mA
	TC-SEL	1x9 W	50 mA	46 mA
	TC-SEL	2x9 W	90 mA	82 mA
	TC-SEL	1x11 W	68 mA	62 mA
	TC-SEL	2x11 W	129 mA	118 mA
	TC-TEL	1x13 W	70 mA	64 mA
	TC-TEL	2x13 W	130 mA	119 mA
PC 1/2x11–17 TC PRO	TC-TEL HE	1x11 W	66 mA	61 mA
	TC-TEL HE	2x11 W	127 mA	116 mA
	TC-TEL HE	1x14 W	80 mA	74 mA
	TC-TEL HE	2x14 W	157 mA	144 mA
	TC-TEL HE	1x17 W	94 mA	86 mA
	TC-TEL HE	2x17 W	186 mA	171 mA
PC 1/2x18 TC PRO	TC-DEL	1x18 W	90 mA	82 mA
	TC-DEL	2x18 W	170 mA	156 mA
	TC-TEL	1x18 W	90 mA	83 mA
	TC-TEL	2x18 W	174 mA	159 mA
PC 1/2x26–42 TC PRO	T5c	1x22 W	117 mA	107 mA
	T5c	2x22 W	225 mA	206 mA
	T5c	1x40 W	189 mA	173 mA
	TC-DEL	1x26 W	125 mA	114 mA
	TC-DEL	2x26 W	242 mA	222 mA
	TC-F	1x18 W	77 mA	71 mA
	TC-F	2x18 W	142 mA	130 mA
	TC-F	1x24 W	106 mA	97 mA
	TC-F	2x24 W	211 mA	193 mA
	TC-L	1x18 W	83 mA	76 mA
	TC-L	2x18 W	155 mA	142 mA
	TC-L	1x24 W	114 mA	104 mA
	TC-L	2x24 W	223 mA	204 mA
	TC-TEL	1x26 W	125 mA	115 mA
	TC-TEL	2x26 W	243 mA	223 mA
	TC-TEL	1x32 W	157 mA	144 mA
	TC-TEL	1x42 W	198 mA	181 mA
PC 2x26–42 TC PRO	T5c	2x22 W	237 mA	218 mA
	T5c	22+40 W	309 mA	283 mA
	T5c	2x40 W	370 mA	339 mA
	TC-DEL	2x26 W	263 mA	241 mA
	TC-F	2x18 W	151 mA	138 mA
	TC-F	2x24 W	216 mA	198 mA
	TC-L	2x18 W	161 mA	148 mA
	TC-L	2x24 W	239 mA	219 mA
	TC-TEL	2x26 W	259 mA	237 mA
	TC-TEL	2x32 W	329 mA	302 mA
	TC-TEL	2x42 W	417 mA	382 mA

Harmonic distortion in the mains supply

Type	Lamp type	Wattage	THD at 230 V / 50 Hz
PC 1x57/70 TC PRO	TC-TEL	1x57 W	< 10 %
	TC-TEL	1x70 W	< 10 %
PC 1/2x9–13 TC PRO	TC-DEL	1x10 W	< 17 %
	TC-DEL	2x10 W	< 12 %
	TC-DEL	1x13 W	< 15 %
	TC-DEL	2x13 W	< 10 %
	TC-SEL	1x9 W	< 17 %
	TC-SEL	2x9 W	< 12 %
	TC-SEL	1x11 W	< 12 %
	TC-SEL	2x11 W	< 10 %
	TC-TEL	1x13 W	< 15 %
	TC-TEL	2x13 W	< 10 %
PC 1/2x11–17 TC PRO	TC-TEL HE	1x11 W	< 15 %
	TC-TEL HE	2x11 W	< 10 %
	TC-TEL HE	1x14 W	< 12 %
	TC-TEL HE	2x14 W	< 10 %
	TC-TEL HE	1x17 W	< 12 %
	TC-TEL HE	2x17 W	< 10 %
PC 1/2x18 TC PRO	TC-DEL	1x18 W	< 15 %
	TC-DEL	2x18 W	< 10 %
	TC-TEL	1x18 W	< 15 %
	TC-TEL	2x18 W	< 10 %
PC 1/2x26–42 TC PRO	T5c	1x22 W	< 12 %
	T5c	2x22 W	< 10 %
	T5c	1x40 W	< 10 %
	TC-DEL	1x26 W	< 12 %
	TC-DEL	2x26 W	< 10 %
	TC-F	1x18 W	< 17 %
	TC-F	2x18 W	< 10 %
	TC-F	1x24 W	< 12 %
	TC-F	2x24 W	< 10 %
	TC-L	1x18 W	< 17 %
	TC-L	2x18 W	< 10 %
	TC-L	1x24 W	< 12 %
	TC-L	2x24 W	< 10 %
	TC-TEL	1x26 W	< 12 %
	TC-TEL	2x26 W	< 10 %
	TC-TEL	1x32 W	< 10 %
	TC-TEL	1x42 W	< 10 %
PC 2x26–42 TC PRO	T5c	2x22 W	< 12 %
	T5c	22+40 W	< 10 %
	T5c	2x40 W	< 10 %
	TC-DEL	2x26 W	< 12 %
	TC-F	2x18 W	< 15 %
	TC-F	2x24 W	< 12 %
	TC-L	2x18 W	< 15 %
	TC-L	2x24 W	< 12 %
	TC-TEL	2x26 W	< 12 %
	TC-TEL	2x32 W	< 10 %
	TC-TEL	2x42 W	< 10 %

Output voltage

Type	Lamp type	Wattage	U_{out}
PC 1x57/70 TC PRO	TC-TEL	1x57 W	400 V
	TC-TEL	1x70 W	400 V
PC 1/2x9–13 TC PRO	TC-DEL	1x10 W	300 V
	TC-DEL	2x10 W	300 V
	TC-DEL	1x13 W	300 V
	TC-DEL	2x13 W	300 V
	TC-SEL	1x9 W	300 V
	TC-SEL	2x9 W	300 V
	TC-SEL	1x11 W	300 V
	TC-SEL	2x11 W	300 V
	TC-TEL	1x13 W	300 V
	TC-TEL	2x13 W	300 V
PC 1/2x11–17 TC PRO	TC-TEL HE	1x11 W	400 V
	TC-TEL HE	2x11 W	400 V
	TC-TEL HE	1x14 W	400 V
	TC-TEL HE	2x14 W	400 V
	TC-TEL HE	1x17 W	400 V
	TC-TEL HE	2x17 W	400 V
PC 1/2x18 TC PRO	TC-DEL	1x18 W	250 V
	TC-DEL	2x18 W	250 V
	TC-TEL	1x18 W	250 V
	TC-TEL	2x18 W	250 V
PC 1/2x26–42 TC PRO	T5c	1x22 W	300 V
	T5c	2x22 W	300 V
	T5c	1x40 W	300 V
	TC-DEL	1x26 W	300 V
	TC-DEL	2x26 W	300 V
	TC-F	1x18 W	300 V
	TC-F	2x18 W	300 V
	TC-F	1x24 W	300 V
	TC-F	2x24 W	300 V
	TC-L	1x18 W	300 V
	TC-L	2x18 W	300 V
	TC-L	1x24 W	300 V
	TC-L	2x24 W	300 V
	TC-TEL	1x26 W	300 V
	TC-TEL	2x26 W	300 V
	TC-TEL	1x32 W	300 V
	TC-TEL	1x42 W	300 V
PC 2x26–42 TC PRO	T5c	2x22 W	300 V
	T5c	22+40 W	300 V
	T5c	2x40 W	300 V
	TC-DEL	2x26 W	300 V
	TC-F	2x18 W	300 V
	TC-F	2x24 W	300 V
	TC-L	2x18 W	300 V
	TC-L	2x24 W	300 V
	TC-TEL	2x26 W	300 V
	TC-TEL	2x32 W	300 V
	TC-TEL	2x42 W	300 V

Ballast lumen factor (EN 60929 8.1)

Type	Lamp type	Wattage	AC/DC-BLF at U = 198–254 V, 25 °C
PC 1x57/70 TC PRO	TC-TEL	1x57 W	1.00
	TC-TEL	1x70 W	0.98
PC 1/2x9–13 TC PRO	TC-DEL	1x10 W	0.98
	TC-DEL	2x10 W	1.02
	TC-DEL	1x13 W	1.05
	TC-DEL	2x13 W	1.09
	TC-SEL	1x9 W	1.02
	TC-SEL	2x9 W	1.05
	TC-SEL	1x11 W	1.10
	TC-SEL	2x11 W	1.10
	TC-TEL	1x13 W	1.05
	TC-TEL	2x13 W	1.08
PC 1/2x11–17 TC PRO	TC-TEL HE	1x11 W	1.01
	TC-TEL HE	2x11 W	1.03
	TC-TEL HE	1x14 W	1.01
	TC-TEL HE	2x14 W	1.04
	TC-TEL HE	1x17 W	1.01
	TC-TEL HE	2x17 W	1.03
PC 1/2x18 TC PRO	TC-DEL	1x18 W	1.03
	TC-DEL	2x18 W	1.06
	TC-TEL	1x18 W	1.02
	TC-TEL	2x18 W	1.04
PC 1/2x26–42 TC PRO	T5c	1x22 W	1.00
	T5c	2x22 W	1.03
	T5c	1x40 W	1.01
	TC-DEL	1x26 W	1.02
	TC-DEL	2x26 W	1.08
	TC-F	1x18 W	0.94
	TC-F	2x18 W	0.98
	TC-F	1x24 W	1.01
	TC-F	2x24 W	1.05
	TC-L	1x18 W	0.94
	TC-L	2x18 W	1.01
	TC-L	1x24 W	1.01
	TC-L	2x24 W	1.06
	TC-TEL	1x26 W	1.00
	TC-TEL	2x26 W	1.04
	TC-TEL	1x32 W	0.98
	TC-TEL	1x42 W	0.99
PC 2x26–42 TC PRO	T5c	2x22 W	1.04
	T5c	22+40 W	1.07
	T5c	2x40 W	1.00
	TC-DEL	2x26 W	1.08
	TC-F	2x18 W	0.99
	TC-F	2x24 W	1.06
	TC-L	2x18 W	0.98
	TC-L	2x24 W	1.08
	TC-TEL	2x26 W	1.08
	TC-TEL	2x32 W	1.01
	TC-TEL	2x42 W	1.01

PC PRO with xitec processor

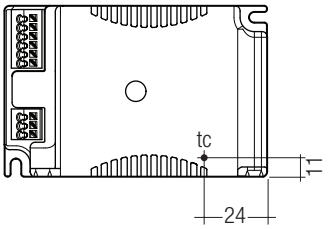
The very latest in lighting management design technology. The lamp friendly warm start is delivering maximum lamp life and enables many frequency applications. Smallest power loss and new freedom in the lamp design thanks to convincing thermal management.

Energy class: CELMA EEI = A2 BAT / A2[1)]

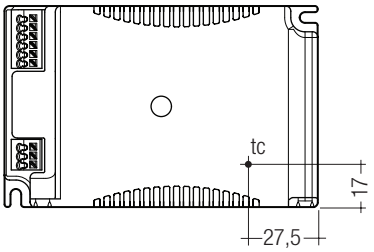
Maximum energy efficiency:
Right from the early stages in the development of xitec technology the focus has always been on achieving maximum energy efficiency. In conjunction with Smart Heating Technology, PC TC PRO is rated in the best possible efficiency class of A2 BAT that CELMA provides for ballasts with a constant luminous flux.

[1)] according to the EU directives on ecodesign requirements (EC) No. 245/2009 and (EC) No. 347/2010

Temperature range



PC TC PRO, L = 103 mm



PC TC PRO, L = 123 mm

The ballast life duration is related to the ambient temperature ta.
The relation of tc to ta temperature depends also on the luminaire design. If the measured tc temperature is approx. 5 K below tc max. or higher, ta temperature should be checked and eventually critical components (e.g. ELCAP) measured. Detailed information on request.

PC TC PRO is designed for an average life-time of 100,000 (at ta for ≥ 50.000 h) hours under reference conditions and with a failure probability of less than 10 %. This corresponds to an average failure rate of 0.2 % for every 1,000 hours of operation.

Humidity: 5 % up to max. 85 %, not condensed (max. 56 days/year at 85 %)

Storage temperature: -40 °C up to max. +80 °C

The devices have to be within the specified temperature range (ta) before they can be operated.

Expected life-time

Type	Lamp type	Lamp power		ta = 40 °C	ta = 50 °C	ta = 55 °C	ta = 60 °C	ta = 65 °C	ta = 70 °C	ta = 75 °C
PC 1x57/70 TC PRO	TC-TEL	1x57 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	90,000 h	70,000 h	50,000 h	35,000 h	x	x
	TC-TEL	1x70 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	65,000 h	50,000 h	35,000 h	25,000 h	x	x
PC 1/2x9–13 TC PRO	TC-SEL TC-DEL TC-SEL	1x9 W 1x10 W 1x11 W	tc	45 °C	55 °C	60 °C	65 °C	70 °C	75 °C	x
			Life-time	> 100,000 h	> 100,000 h	> 100,000 h	95,000 h	65,000 h	45,000 h	x
	TC-SEL TC-DEL TC-DEL TC-TEL	2x9 W 2x10 W 1x13 W 1x13 W	tc	45 °C	55 °C	60 °C	65 °C	70 °C	75 °C	x
			Life-time	> 100,000 h	> 100,000 h	> 100,000 h	85,000 h	50,000 h	35,000 h	x
	TC-SEL TC-DEL TC-TEL	2x11 W 2x13 W 2x13 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	> 100,000 h	100,000 h	70,000 h	45,000 h	x	x
PC 1/2x11–17 TC PRO	TC-TEL HE TC-TEL HE TC-TEL HE	1x11 W 1x14 W 1x17 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	80 °C	x
			Life-time	> 100,000 h	> 100,000 h	> 100,000 h	75,000 h	50,000 h	35,000 h	x
	TC-TEL HE TC-TEL HE TC-TEL HE	2x11 W 2x14 W 2x17 W	tc	55 °C	65 °C	60 °C	75 °C	x	x	x
			Life-time	> 100,000 h	> 100,000 h	95,000 h	50,000 h	x	x	x
PC 1/2x18 TC PRO	TC-DEL TC-TEL	1x18 W 1x18 W	tc	45 °C	55 °C	60 °C	65 °C	70 °C	75 °C	x
			Life-time	> 100,000 h	> 100,000 h	> 100,000 h	90,000 h	70,000 h	50,000 h	x
	TC-DEL TC-TEL	2x18 W 2x18 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	> 100,000 h	75,000 h	60,000 h	45,000 h	x	x
PC 1/2x26–42 TC PRO	T5c TC-DEL TC-F TC-F TC-L TC-L TC-TEL	1x22 W 1x26 W 1x18 W 1x24 W 1x18 W 1x24 W 1x26 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	> 100,000 h	90,000 h	65,000 h	45,000 h	x	x
	T5c TC-F TC-L TC-TEL TC-TEL	1x40 W 2x18 W 2x18 W 1x32 W 1x42 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	> 100,000 h	75,000 h	55,000 h	40,000 h	x	x
	T5c TC-DEL TC-F TC-L TC-TEL	2x22 W 2x26 W 2x24 W 2x24 W 2x26 W	tc	60 °C	65 °C	70 °C	75 °C	x	x	x
			Life-time	> 100,000 h	85,000 h	60,000 h	45,000 h	x	x	x
PC 2x26–42 TC PRO	TC-F TC-L	2x18 W 2x18 W	tc	45 °C	55 °C	60 °C	65 °C	70 °C	75 °C	80 °C
			Life-time	> 100,000 h	> 100,000 h	> 100,000 h	95,000 h	70,000 h	50,000 h	35,000 h
	T5c TC-DEL TC-F TC-L TC-TEL	2x22 W 2x26 W 2x24 W 2x24 W 2x26 W	tc	50 °C	60 °C	65 °C	70 °C	75 °C	x	x
			Life-time	> 100,000 h	> 100,000 h	> 100,000 h	75,000 h	50,000 h	x	x
	T5c T5c TC-TEL TC-TEL	22+40 W 2x40 W 2x32 W 2x42 W	tc	55 °C	65 °C	70 °C	x	x	x	x
			Life-time	> 100,000 h	90,000 h	60,000 h	x	x	x	x

x = not permitted

Maximum loading of automatic circuit breakers

Automatic circuit	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current	
Installation cross section	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²	I_{max}	time
PC 1x57–70 TC PRO	24	31	39	49	12	17	24	27	23.4 A	238 µs
PC 1/2x9–13 TC PRO	40	68	105	132	20	34	68	70	15.7 A	236 µs
PC 1/2x11–17 TC PRO	22	32	44	50	11	16	22	25	22.3 A	255 µs
PC 1/2x18 TC PRO	46	60	74	93	24	36	74	80	13.0 A	200 µs
PC 1/2x26–42 TC PRO	24	38	52	66	12	19	31	33	23.5 A	245 µs
PC 2x26–42 TC PRO	14	20	24	30	7	10	12	15	37.1 A	205 µs

Wiring advice

The lead length is dependant on the capacitance of the cable.

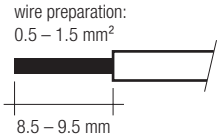
Ballast	Terminal		Maximum capacitance allowed	
Type	Cold	Hot	Cold	Hot
PC 1xx TC PRO	4, 5	8, 9	200 pF	100 pF
PC 2xx TC PRO	4, 5, 6, 7	8, 9	200 pF	100 pF

With standard solid wire 0.5/0.75 mm² the capacitance of the lead is 30–80 pF/m. This value is influenced by the way the wiring is made. Lamp connection should be made with symmetrical wiring.

To avoid the damage of the control gear, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.)

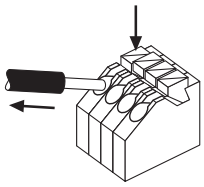
Installation instructions

Wiring type and cross section
The wiring can be in stranded wires with ferrules or solid with a cross section of 0.5–1.5 mm².
Strip 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals.



Release of the wiring

Press down the “push button” and remove the cable from front.



Mounting of device

Max. torque for fixing: 0.5 Nm/M4

RFI

- Connection to the lamps of the “hot leads” must be kept as short as possible
- Mains leads should be kept apart from lamp leads
- Do not run mains leads adjacent to the electronic ballast
- Twist the lamp leads
- Keep the distance of lamp leads from the metal work as large as possible
- Ballast must be earthed
- Keep the mains leads inside the luminaire as short as possible

Defective lamp

If a lamp is defective, the ballast switches off and goes into standby. Switch off tested according to EN 61347-2-3 17.3 (EoL-Test 2). There is an automatic restart once the lamp has been changed.

Isolation and electric strength testing of luminaires

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V DC for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal.
The isolation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V AC (or 1.414 x 1500 V DC). To avoid damage to the electronic devices this test must not be conducted.

Glow-wire test

according to EN 61347-1 with increased temperature of 850 °C passed.

Additional information

Additional technical information at
www.tridonic.com → Technical Data

Guarantee conditions at
www.tridonic.com → Services

No warranty if device was opened.

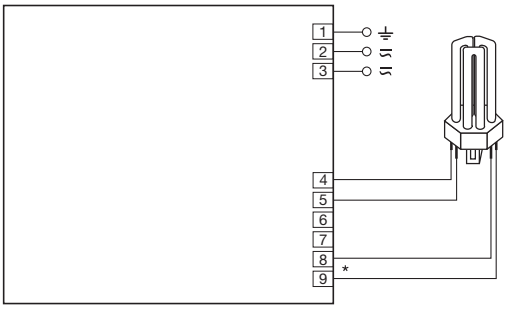
Accessories

PC compact gear box for independant solutions

Ordering data

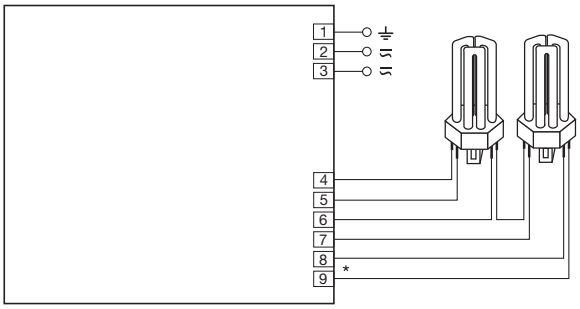
Dimensions LxWxH	Type	Article number
278 x 114 x 55 mm	**PC** Ballast box, upper section	**24138824**
278 x 114 x 55 mm	**PC** Ballast box, lower section	**24138825**

Wiring diagrams



* leads 8, 9 max. 1.0 m (< 100 pF)
leads 4, 5 max. 2.0 m (< 200 pF)
For luminaires of protection class I: Earthing via earth terminal (according to IEC 60598)
For luminaires of protection class II: No earthing required

PC 1x57/70 TC PRO with 1 lamp
PC 1/2x9-13 TC PRO with 1 lamp
PC 1/2x11–17 TC PRO with 1 lamp
PC 1/2x18 TC PRO with 1 lamp
PC 1/2x26-42 TC PRO with 1 lamp



* leads 8, 9 max. 1.0 m (< 100 pF)
leads 4, 5, 6, 7 max. 2.0 m (< 200 pF)
For luminaires of protection class I: Earthing via earth terminal (according to IEC 60598)
For luminaires of protection class II: No earthing required

PC 1/2x9-13 TC PRO with 2 lamps
PC 1/2x11–17 TC PRO with 2 lamps
PC 1/2x18 TC PRO with 2 lamps
PC 1/2x26-42 TC PRO with 2 lamps
PC 2x26–42 TC PRO with 2 lamps