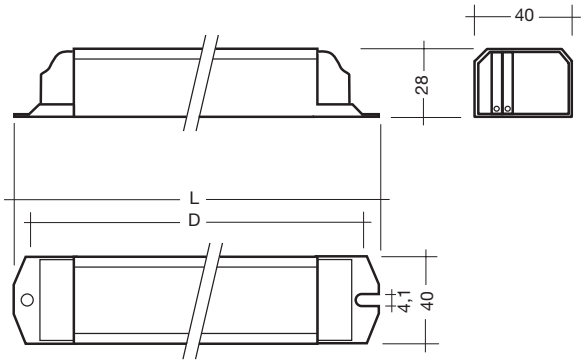
PC T8 PRO 4/18 W 220–240 V 50/60/0 Hz



- defined warm start within 2.0 s
- constant light output independent of fluctuations in mains voltage
- Average service life = 50,000 h (at ta max. with a failure rate ≤ 0.2 % per 1000 operating hours)
- AC voltage range 198–264 V
- DC voltage range 176–280 V, for ignition input voltage ≥ 198 V
- power factor > 0.96
- overvoltage protection 320 V AC, 1 h
- overvoltage indication starting at input voltage 267–306 V AC
- undervoltage protection (shut down) below 150 V AC / 176 V DC
- operating frequency ≥ 40 kHz
- suitable for automatic and manual wiring with insulation displacement connector (IDC)
- wide operating temperature range from -25 °C to +55 °C (ta values see table)
- Energy Efficiency Index CELMA EEI = A2
- suitable for use in emergency lighting installations in accordance with EN 50172
- safe switch off of defective lamps
- automatic re-start after lamp change
- for luminaires with F or M and MM in acc. with EN 60598/VDE 0710 and VDE 0711
- suitable for luminaires with protection class SK I and SK II
- Ingress protection IP 20
- thermal protection according to EN 61347-2-3 C5e

Packaging L=234:
box of 10
63 carton/pallet
630 pieces/pallet

Certified:
EN 55015
EN 55022
EN 61347-2-4
EN 60925
EN 61347-2-3
EN 60929
EN 61000-3-2
EN 61547
in accordance with EN 50172
IEC 68-2-64 Fh
IEC 68-2-29 Eb
IEC 68-2-30

Lamp		Ballast														
watt-age	length	type	article number	length	fixing centres	weight	lamp power	circuit power	Celma class	current at 50 Hz		λ at 50 Hz		tc point	temperature range
W	mm			mm	D mm	kg	W	W ①	EEI	220 V A	240 V A	220 V	240 V	°C	ta °C
4x18	590	**PC 4/18 T8 PRO** 220–240 V 50/60/0 Hz	22176144	234	220	0.28	64	70.2	A2	0.32	0.30	0.97	0.96	70	-25 → +55

① measured according to EN 50294

Lamp starting characteristics
Warm start
Starting time 2 secs 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
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 VDE 0108 or for emergency luminaires according to EN 61347-2-3 appendix J.

Instant start after mains interruption < 0.5 s

Mains currents in DC operation

Type	lamp type	wattage W	Mains current at U_n = 220 VDC	Mains current at U_n = 240 VDC
PC 4/18 T8 PRO 220-240V 50/60/0Hz	T8	4x18	0.32 A	0.30 A

Harmonic distortion in the mains supply

Type	lamp type	wattage W	THD at 230 V / 50 Hz
PC 4/18 T8 PRO 220-240V 50/60/0Hz	T8	4x18	< 10 %

Working voltage

Type	lamp type	wattage W	U_{out}
PC 4/18 T8 PRO 220-240V 50/60/0Hz	T8	4x18	270 V

Ballast lumen factor EN 60929 8.1

Type	lamp type	wattage W	AC/DC-BLF at U = 198–254 V, 25 °C
PC 4/18 T8 PRO 220-240V 50/60/0Hz	T8	4x18	1.00

All data are typical values

Intelligent Voltage Guard
Intelligent Voltage Guard is the name of the new electronic monitor from TridonicAtco. This innovative feature of the PC PRO family of control gear from TridonicAtco 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 approx. 305 V (voltage depends on the ballast type), the lamp starts flashing on and off.
- 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 to protect the control gear from being irreparably damaged.

Smart Heating
Innovative heating circuit. Reduced filament heating after lamp ignition.

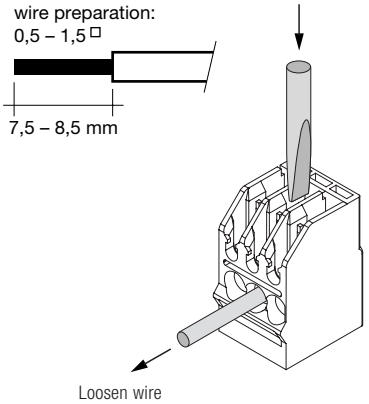
ASIC light management
ASIC (Application specific integrated circuit) is the very latest in lighting management design technology. The lamp friendly warm start is delivering maximum T8 lamp life and enables high switching frequency applications.

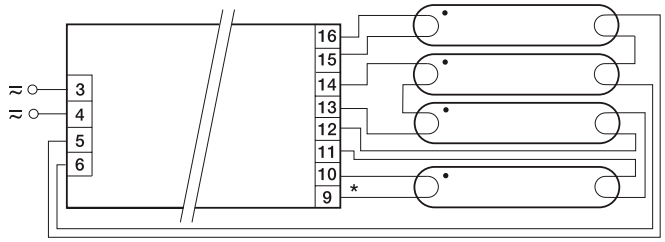
Defective lamp
If a lamp is defective, the ballast switches off and goes into standby. There is an automatic restart once the lamp has been changed.

Energy class CELMA
PC T8 PRO ignition technology (smart heating) 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.

IDC interface
- solid wire with a cross section of 0.5 mm²
  according to the specification from WAGO

Horizontal interface
- solid wire with a cross section of 0.5–1.5 mm²
  according to the specification from WAGO
- strip 7.5–8.5 mm of insulation from the
  cables to ensure perfect operation of the
  screw terminals





*** leads 9, 10 max. 1.0 m (< 100 pF)**
leads 5, 6, 11, 12, 13, 14, 15, 16 max. 2.0 m (< 200 pF)
SK I - luminaires: earth via fixing of ballast housing with separated edge washer required (according to IEC 60598)

PC 4x18 W T8 PRO

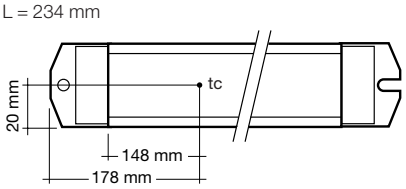
RFI
TridonicAtco ballasts are RFI protected in accordance with EN 55015 and EN 55022. To operate the luminaire correctly and and to minimise RFI we recommend the following instructions:
- Connection to the lamps of the “hot leads” must be kept as short as possible (marked with *)
- Mains leads should be kept apart from lamp leads (ideally 5–10 cm distance)
- 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

T8 lamp information

wattage	length
18 W	590 mm

- Ballast must be earthed, either over the terminal or over the mounting screw of the ballast
- Mains wiring to be twisted when through wiring
- Keep the mains leads inside the luminaire as short as possible

Ambient Temperature
-25 °C to +55 °C



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

PC T8 PRO is designed for an average service life of 50,000 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.

Installation instructions

Maximum loading of automatic circuit breakers

Automatic circuit	C10	C13	C16	C20	B10	B13	B16	B20
Installation ∅	1.5 mm²	1.5 mm²	1.5 mm²	4.0 mm²	1.5 mm²	1.5 mm²	2.5 mm²	4.0 mm²
PC 4/18 T8 PRO	18	26	36	36	9	13	18	18

Wiring advice
The lead length is dependant on the capacitance of the cable.
Connection to earth reduces radio interference.

Ballast type	Terminal		Maximum capacitance allowed	
	Cold	Hot	Cold	Hot
PC 4/18 T8 PRO	5, 6, 11, 12, 13, 14, 15, 16	9, 10	200 pF	100 pF

With standard solid wire 0.5/0.75 mm² the capacitance of the lead is approx. 80 pF/m. This value is influenced by the way the wiring is made. In borderline cases the capacitance must be measured inside the luminaire.
Keep lamp wires short. Lamp connection with twin ballast should be made with symmetrical wiring. Hot leads and cold leads should be separated as much as possible.

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