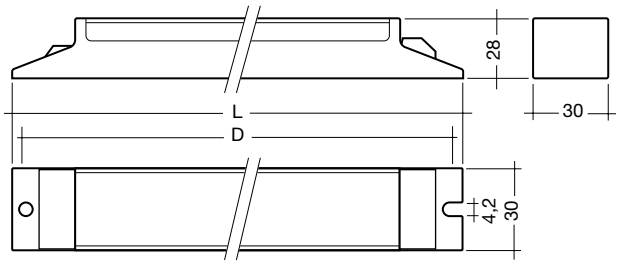
PC INDUSTRY T5 49–80 W 220–240 V 50/60/0 Hz
PC INDUSTRY T8 36–58 W 220–240 V 50/60/0 Hz



- defined lamp warm start in 1.5 s
- constant light output independent of fluctuations in mains voltage
- AC voltage range 198–264 V
- DC voltage range 176–280 V, for ignition input voltage ≥ 198 V
- power factor > 0.94
- overvoltage protection 320 V AC, permanent
- suitable for high mains voltage peaks (Burst, Surge) up to 4 kV
- overvoltage indication starting at input voltage ≥ 306 V AC
- undervoltage protection (shut down) < 150 V AC / 176 V DC
- operating frequency ≥ 40 kHz
- wide operating temperature range from -30 °C to +70 °C
- average service life of 100,000 hours at ta max. –10 °C with a failure probability of ≤ 0.1 % per 1,000 hours resp. 50,000 hours at ta max. with a failure probability of ≤ 0.2 % per 1,000 hours (ta values see table)
- economical operation thanks to smart heating
- energy efficiency index 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
- suitable for luminaires with protection class SK I and SK II
- Ingress protection IP 20
- thermal protection according to EN 61347-2-3 C5e
- suitable for automatic and manual wiring with insulation displacement connector (IDC)

Packaging:
box of 25
20 cartons/pallet
500 pieces/pallet

Approvals:
EN 55015: 2006 + A1: 2007
EN 55022
EN 60925
EN 60929
EN 60598
EN 50082-2
EN 61000-3-2
EN 61347-2-3
EN 61347-2-4
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 W	type	type	article number	length L mm	fixing centres D mm	weight kg	circuit power W	lamp power W	current (50 Hz) 220 V A	current (50 Hz) 240 V A	λ 220 V 50 Hz	λ 240 V 50 Hz	tc point °C	temperature range °C
1x49	T5	**PC 1/49 T5 INDUSTRY** 220–240 V 50/60/0 Hz	86458039	456	445	0.42	56.0	49.0	0.27	0.25	0.96	0.95	77	-30 → +70
2x49	T5	**PC 2/49 T5 INDUSTRY** 220–240 V 50/60/0 Hz	86458040	456	445	0.42	107.0	98.0	0.50	0.46	0.98	0.97	77	-30 → +70
1x54	T5	**PC 1/54 T5 INDUSTRY** 220–240 V 50/60/0 Hz	86458041	456	445	0.42	60.0	54.0	0.28	0.26	0.97	0.96	79	-30 → +70
2x54	T5	**PC 2/54 T5 INDUSTRY** 220–240 V 50/60/0 Hz	86458042	456	445	0.42	115.0	106.5	0.51	0.48	0.99	0.97	79	-30 → +70
1x80	T5	**PC 1/80 T5 INDUSTRY** 220–240 V 50/60/0 Hz	86458043	456	445	0.42	88.0	80.0	0.41	0.38	0.98	0.97	80	-30 → +70
2x80	T5	**PC 2/80 T5 INDUSTRY** 220–240 V 50/60/0 Hz	86458044	456	445	0.42	172.0	160.0	0.79	0.73	0.99	0.98	84	-30 → +60
1x36	T8	**PC 1/36 T8 INDUSTRY** 220–240 V 50/60/0 Hz	86458035	456	445	0.42	36.5	32	0.17	0.16	0.96	0.94	76	-30 → +70
2x36	T8	**PC 2/36 T8 INDUSTRY** 220–240 V 50/60/0 Hz	86458036	456	445	0.42	74.5	64	0.35	0.32	0.97	0.97	82	-30 → +70
1x58	T8	**PC 1/58 T8 INDUSTRY** 220–240 V 50/60/0 Hz	86458037	456	445	0.42	55.5	50	0.26	0.24	0.97	0.96	80	-30 → +70
2x58	T8	**PC 2/58 T8 INDUSTRY** 220–240 V 50/60/0 Hz	86458038	456	445	0.42	108.0	100	0.50	0.46	0.98	0.98	83	-30 → +70

Lamp starting characteristics
Warm start
Starting time 1.5 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 EN 50172 or for emergency luminaires according to EN 61347-2-3 appendix J.

Instant start after mains interruption < 0.5 s

Intelligent Voltage Guard
Intelligent Voltage Guard is the name of the new electronic monitor from TridonicAtco. This innovative feature of the PC INDUSTRY 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 306 V the lamps start 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 has struck.

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 1/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x49	0.26 A	0.24 A
PC 2/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x49	0.49 A	0.45 A
PC 1/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x54	0.28 A	0.25 A
PC 2/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x54	0.51 A	0.48 A
PC 1/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x80	0.40 A	0.37 A
PC 2/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x80	0.80 A	0.74 A
PC 1/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x36	0.16 A	0.15 A
PC 2/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x36	0.33 A	0.31 A
PC 1/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x58	0.26 A	0.24 A
PC 2/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x58	0.49 A	0.45 A

Harmonic distortion in the mains supply

Type	lamp type	wattage W	THD at 230 V / 50 Hz
PC 1/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x49	< 10 %
PC 2/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x49	< 10 %
PC 1/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x54	< 10 %
PC 2/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x54	< 10 %
PC 1/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x80	< 10 %
PC 2/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x80	< 10 %
PC 1/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x36	< 10 %
PC 2/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x36	< 10 %
PC 1/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x58	< 10 %
PC 2/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x58	< 10 %

Working voltage

Type	lamp type	wattage W	U_{out}
PC 1/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x49	250 V
PC 2/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x49	300 V
PC 1/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x54	250 V
PC 2/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x54	350 V
PC 1/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x80	250 V
PC 2/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x80	400 V
PC 1/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x36	250 V
PC 2/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x36	250 V
PC 1/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x58	250 V
PC 2/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x58	250 V

Ballast lumen factor EN 60929 8.1

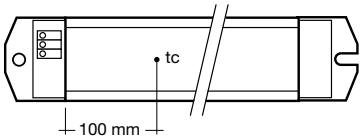
Type	lamp type	wattage W	AC/DC-BLF at U = 198–254 V, 25 °C and 35 °C
PC 1/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x49	1.00
PC 2/49 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x49	1.00
PC 1/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x54	1.00
PC 2/54 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x54	1.00
PC 1/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	1x80	1.00
PC 2/80 T5 INDUSTRY 220-240V 50/60/0Hz	T5	2x80	1.00
PC 1/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x36	1.00
PC 2/36 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x36	1.00
PC 1/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	1x58	1.00
PC 2/58 T8 INDUSTRY 220-240V 50/60/0Hz	T8	2x58	1.00

TRIDONIC.ATCO

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 lamp life and enables high switching frequency applications.

Energy class CELMA EEI = A2
PC INDUSTRY 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.

Ambient Temperature
-30 °C to +70 °C



tc point is related to the ballast life duration.
PC INDUSTRY is designed for an average service life of 100,000 hours at tc = tc_{max} -10 °C under reference conditions and with a failure probability of less than 10 %. This corresponds to an average failure rate of 0.1 % for every 1,000 hours of operation.

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	2.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²	2.5 mm²
PC 1/49 T5 INDUSTRY	28	40	44	58	14	20	22	29
PC 2/49 T5 INDUSTRY	18	28	30	36	9	14	15	18
PC 1/54 T5 INDUSTRY	28	40	44	58	14	20	22	29
PC 2/54 T5 INDUSTRY	14	20	24	30	7	10	12	15
PC 1/80 T5 INDUSTRY	18	28	30	44	9	14	15	22
PC 2/80 T5 INDUSTRY	8	14	16	20	4	7	8	10
PC 1/36 T8 INDUSTRY	38	52	60	72	19	26	30	36
PC 2/36 T8 INDUSTRY	24	32	38	44	12	16	19	22
PC 1/58 T8 INDUSTRY	36	50	60	70	18	25	30	35
PC 2/58 T8 INDUSTRY	16	22	26	30	8	11	13	15

Wiring advice
The lead length is dependant on the capacitance of the cable.
For safety reasons, the PC INDUSTRY must only be earthed in the case of a safety class 1 luminaire. Earthing is not required for the device to operate. Connection to earth reduces radio interference.

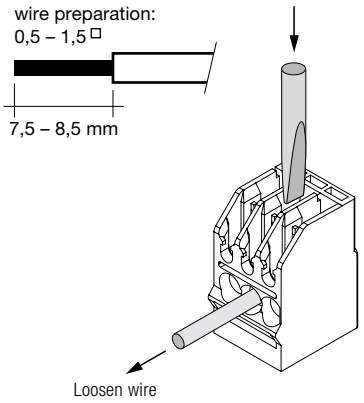
Ballast type	Terminal		Maximum capacitance allowed	
	Cold	Hot	Cold	Hot
PC 1/xx T5 INDUSTRY	11, 12	9, 10	200 pF	100 pF
PC 2/xx T5 INDUSTRY	11, 12, 13, 14, 15	9, 10	200 pF	100 pF
PC 1/xx T8 INDUSTRY	11, 12	9, 10	200 pF	100 pF
PC 2/xx T8 INDUSTRY	11, 12, 13, 14	9, 10	200 pF	100 pF

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 (9, 10) and cold leads (11, 12, 13, 14, 15) should be separated as much as possible.
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

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

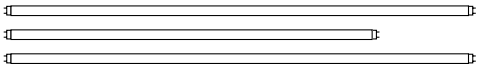
Horizontal interface
- solid wire with a cross section of 0.5–1.5 mm² according to the specification from WAGO
- strip 7.5–8.5 mm of insulation from the cables to ensure perfect operation of the push terminals



RFI
TridonicAtco ballasts are RFI protected in accordance with EN 55015:2006+A1:2007. 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
- 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

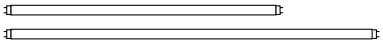
Defective lamp
If a lamp is defective, the ballast switches off and goes into standby. There is an automatic restart once the lamp has been changed.

T5 lamp information

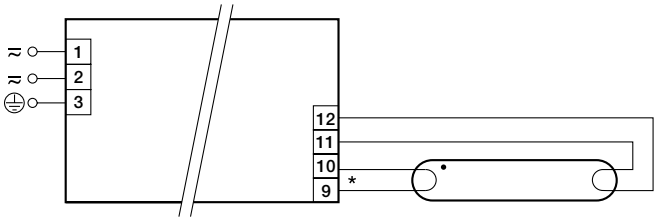


wattage	length
49 W	1449 mm
54 W	1149 mm
80 W	1449 mm

T8 lamp information

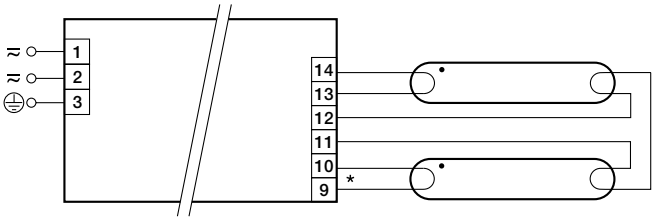


wattage	length
36 W	1200 mm
58 W	1500 mm



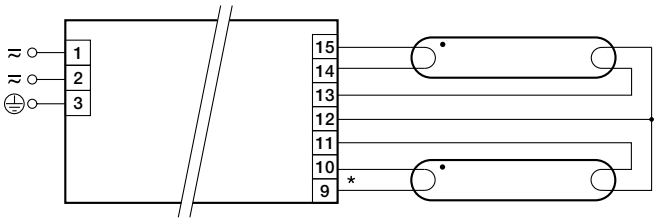
* leads 9, 10 max. 1.0 m (< 100 pF)
leads 11, 12 max. 2.0 m (< 200 pF)
SK I - luminaires: earth of ballast housing required (according to IEC 60598)
SK II - luminaires: no earth required

PC 1x49–80 W T5 INDUSTRY, PC 1x36–58 W T8 INDUSTRY



* leads 9, 10 max. 1.0 m (< 100 pF)
leads 11, 12, 13, 14 max. 2.0 m (< 200 pF)
SK I - luminaires: earth of ballast housing required (according to IEC 60598)
SK II - luminaires: no earth required

PC 2x36–58 W T8 INDUSTRY



* leads 9, 10 max. 1.0 m (< 100 pF)
leads 11, 12, 13, 14, 15 max. 2.0 m (< 200 pF)
SK I - luminaires: earth of ballast housing required (according to IEC 60598)
SK II - luminaires: no earth required

PC 2x49–80 W T5 INDUSTRY