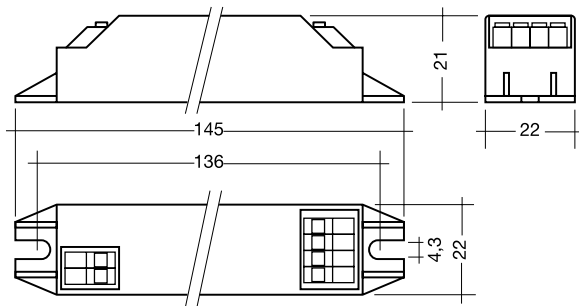


## Electronic ballasts

### Linear and compact lamps

#### PC Basic sl 4–28 W 220–240 V 50/60/0 Hz, non dimmable



- defined lamp warm start < 2 s
- switching cycles > 25.000
- average life = 50.000 h  
(at ta max. and a failure rate of ≤ 0,2 % per 1.000 h)
- AC voltage range 198–264 V
- DC voltage range 176–264 V  
(lamp start ≥ 198 V DC)
- overvoltage protection 270 V AC, 360 h
- operating frequency ≥ 40 kHz

- wide operating temperature range from -25 °C up to +60 °C (ta values see table)
- safe switch off of defective lamps
- safe shutdown of lamps at end of life
- automatic re-start after lamp change
- thermal protection according EN 61347-1 (PC 1x26W Basic sl , PC 1x18–24W Basic sl )

**Packaging:**  
25 pieces/carton  
36 carton/pallet  
900 pieces/pallet

**Certified:**  
EN 55015  
EN 61000-3-2  
EN 61347-2-3  
EN 61347-2-4  
EN 61547

#### PC Basic sl:

| Lamp              |        | Ballast                                   |                   |                 |                           |             |                    |                       |                       |                  |            |            |       |                   |                            |
|-------------------|--------|-------------------------------------------|-------------------|-----------------|---------------------------|-------------|--------------------|-----------------------|-----------------------|------------------|------------|------------|-------|-------------------|----------------------------|
| watt-<br>age<br>W | type   | type                                      | article<br>number | L x W x H<br>mm | fixing<br>centres<br>D mm | weight<br>g | lamp<br>power<br>W | circuit<br>power<br>W | Celma<br>class<br>EEI | current at 50 Hz |            | λ at 50 Hz |       | tc<br>point<br>°C | temperature<br>range<br>°C |
|                   |        |                                           |                   |                 |                           |             |                    |                       |                       | 220 V<br>A       | 240 V<br>A | 220 V      | 240 V |                   |                            |
| 4                 | T5     | PC 1x4–13W Basic sl 220–240 V 50/60/0 Hz  | 24138834          | 145x22x21       | 136                       | 44          | 3.5                | 5.0                   | A2                    | 0.045            | 0.043      | 0.51       | 0.48  | 85                | -25 → +60                  |
| 6                 | T5     | PC 1x4–13W Basic sl 220–240 V 50/60/0 Hz  | 24138834          | 145x22x21       | 136                       | 44          | 5.0                | 7.0                   | A2                    | 0.059            | 0.057      | 0.54       | 0.51  | 85                | -25 → +60                  |
| 8                 | T5     | PC 1x4–13W Basic sl 220–240 V 50/60/0 Hz  | 24138834          | 145x22x21       | 136                       | 44          | 6.5                | 8.5                   | A2                    | 0.067            | 0.063      | 0.58       | 0.56  | 85                | -25 → +60                  |
| 13                | T5     | PC 1x4–13W Basic sl 220–240 V 50/60/0 Hz  | 24138834          | 145x22x21       | 136                       | 44          | 11.0               | 15.5                  | A3                    | 0.114            | 0.106      | 0.62       | 0.61  | 85                | -25 → +60                  |
| 14                | T5     | PC 1x14–21W Basic sl 220–240 V 50/60/0 Hz | 22176001          | 145x22x21       | 136                       | 55          | 12.5               | 14.5                  | A2                    | 0.117            | 0.120      | 0.58       | 0.57  | 85                | -25 → +60                  |
| 21                | T5     | PC 1x14–21W Basic sl 220–240 V 50/60/0 Hz | 22176001          | 145x22x21       | 136                       | 55          | 17.5               | 20.0                  | A2                    | 0.147            | 0.151      | 0.60       | 0.60  | 85                | -25 → +60                  |
| 24                | T5     | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 21.5               | 25.0                  | A2                    | 0.18             | 0.17       | 0.62       | 0.61  | 85                | -25 → +60                  |
| 22                | T5C    | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 21.5               | 23.5                  | A2                    | 0.18             | 0.17       | 0.62       | 0.61  | 85                | -25 → +60                  |
| 18                | T8     | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 15.5               | 18.0                  | A2                    | 0.14             | 0.13       | 0.60       | 0.58  | 85                | -25 → +60                  |
| 5                 | TC-SEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 4.5                | 6.5                   | A2                    | 0.055            | 0.051      | 0.54       | 0.53  | 90                | -25 → +60                  |
| 7                 | TC-SEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 6.0                | 8.0                   | A2                    | 0.065            | 0.063      | 0.56       | 0.53  | 90                | -25 → +60                  |
| 9                 | TC-SEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 7.5                | 10.0                  | A2                    | 0.078            | 0.073      | 0.58       | 0.57  | 90                | -25 → +60                  |
| 11                | TC-SEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 11.0               | 15.0                  | A3                    | 0.110            | 0.104      | 0.62       | 0.60  | 90                | -25 → +60                  |
| 10                | TC-DEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 8.5                | 11.5                  | A3                    | 0.089            | 0.084      | 0.59       | 0.57  | 90                | -25 → +60                  |
| 13                | TC-DEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 11.8               | 15.5                  | A3                    | 0.112            | 0.106      | 0.63       | 0.61  | 90                | -25 → +60                  |
| 13                | TC-TEL | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 12.0               | 15.5                  | A3                    | 0.112            | 0.106      | 0.63       | 0.61  | 90                | -25 → +60                  |
| 10                | TC-DD  | PC 1x4–13W Basic sl 220–240 V 50/60/0 Hz  | 24138834          | 145x22x21       | 136                       | 44          | 9.0                | 11.5                  | A3                    | 0.087            | 0.081      | 0.60       | 0.59  | 85                | -25 → +60                  |
| 16                | TC-DD  | PC 1x5–16W Basic sl 220–240 V 50/60/0 Hz  | 24138833          | 145x22x21       | 136                       | 44          | 14.0               | 18.0                  | A3                    | 0.130            | 0.121      | 0.63       | 0.62  | 90                | -25 → +60                  |
| 18                | TC-TEL | PC 1x18W Basic sl 220–240 V 50/60/0 Hz    | 24138832          | 145x22x21       | 136                       | 44          | 15.0               | 19.0                  | A3                    | 0.135            | 0.128      | 0.64       | 0.62  | 90                | -25 → +60                  |
| 18                | TC-DEL | PC 1x18W Basic sl 220–240 V 50/60/0 Hz    | 24138832          | 145x22x21       | 136                       | 44          | 15.5               | 19.0                  | A3                    | 0.135            | 0.128      | 0.64       | 0.62  | 90                | -25 → +60                  |
| 18                | TCL    | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 14.0               | 16.5                  | A2                    | 0.13             | 0.12       | 0.59       | 0.58  | 85                | -25 → +60                  |
| 24                | TCL    | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 21.5               | 24.0                  | A3                    | 0.18             | 0.17       | 0.62       | 0.61  | 85                | -25 → +60                  |
| 18                | TCF    | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 13.0               | 16.0                  | A2                    | 0.12             | 0.12       | 0.68       | 0.57  | 85                | -25 → +60                  |
| 24                | TCF    | PC 1x18–24W Basic sl 220–240 V 50/60/0 Hz | 22176000          | 145x22x21       | 136                       | 55          | 19.0               | 22.5                  | A3                    | 0.17             | 0.15       | 0.61       | 0.60  | 85                | -25 → +60                  |
| 26                | TC-TEL | PC 1x26W Basic sl 220–240 V 50/60/0 Hz    | 22176002          | 145x22x21       | 136                       | 55          | 21.0               | 24.5                  | A2                    | 0.18             | 0.17       | 0.62       | 0.61  | 90                | -25 → +60                  |
| 26                | TC-DEL | PC 1x26W Basic sl 220–240 V 50/60/0 Hz    | 22176002          | 145x22x21       | 136                       | 55          | 20.5               | 24.0                  | A2                    | 0.18             | 0.17       | 0.62       | 0.61  | 90                | -25 → +60                  |
| ① 28              | TC-DD  | PC 1x26W Basic sl 220–240 V 50/60/0 Hz    | 22176002          | 145x22x21       | 136                       | 55          | 21.5               | 25.0                  | A2                    | 0.18             | 0.17       | 0.62       | 0.61  | 90                | -25 → +50                  |

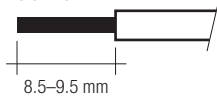
① For enclosed luminaires to fulfil the requirement of circuit power ≤ 25 W according to EN 61000-3-2. For AC operation only.

## Installation instructions

### Wiring type and cross section

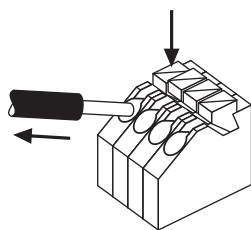
The wiring can be in flexible cable with ferules or solid with a cross section of 0.5–1.5 mm<sup>2</sup>. Strip 9.5 mm of insulation from the cables to ensure perfect operation of push-wire terminals.

wire preparation:  
0.5–1.5 □



### Release of the wiring

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



### RFI

TridonicAtco ballasts are RFI protected in accordance with EN 55015. To operate the luminaire correctly and to minimise RFI we recommend the following instructions:

- Connection to the lamps must be kept as short as possible
- Mains leads should be kept apart from lamp leads (ideally 5–10 cm distance)
- Do not lead mains leads too closely along the electronic ballast
- Keep the distance of lamp leads from the metal work as large as possible
- Mains wiring to be twisted when through wiring
- Keep the mains leads inside the luminaire as short as possible

### 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 %)

Min. lamp starting temperature -25 °C

### DC operation

220–240 V DC

198–264 V DC certain lamp start

176–264 V DC operating range

Min. lamp starting temperature -25 °C

### Wiring advice

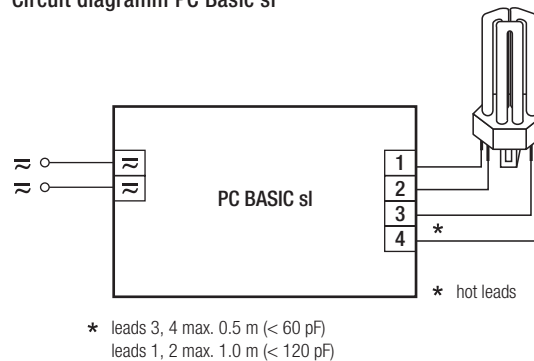
The lead length is dependent on the capacitance of the cable.

| Ballast Type          | Terminal |      | Maximum capacitance allowed |       |
|-----------------------|----------|------|-----------------------------|-------|
|                       | Cold     | Hot  | Cold                        | Hot   |
| PC 1x4–13 W Basic sl  | 1, 2     | 3, 4 | 120 pF                      | 60 pF |
| PC 1x5–16 W Basic sl  | 1, 2     | 3, 4 | 120 pF                      | 60 pF |
| PC 1x14–21 W Basic sl | 1, 2     | 3, 4 | 120 pF                      | 60 pF |
| PC 1x18 W Basic sl    | 1, 2     | 3, 4 | 120 pF                      | 60 pF |
| PC 1x18–24 W Basic sl | 1, 2     | 3, 4 | 120 pF                      | 60 pF |
| PC 1x26 W Basic sl    | 1, 2     | 3, 4 | 120 pF                      | 60 pF |

With standard solid wire 0.5/0.75 mm<sup>2</sup> the capacitance of the lead is 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. Lamp connection should be as short as possible and be made with symmetrical wiring.

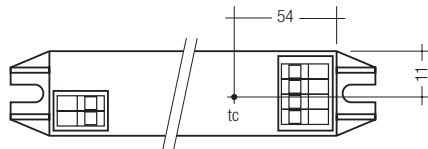
To avoid the damage of the control gear, the wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.)

### Circuit diagramm PC Basic sl



### Temperature range

from -25 °C to +60 °C



## Lamp matrix

| Lamp        | PC Basic sl<br>4–13 W | PC Basic sl<br>5–16 W | PC Basic sl<br>14–21 W | PC Basic sl<br>18 W | PC Basic sl<br>18–24 W | PC Basic sl<br>26 W |
|-------------|-----------------------|-----------------------|------------------------|---------------------|------------------------|---------------------|
| TC-SEL 5 W  |                       | •                     |                        |                     |                        |                     |
| 7 W         |                       | •                     |                        |                     |                        |                     |
| 9 W         |                       | •                     |                        |                     |                        |                     |
| 11 W        |                       | •                     |                        |                     |                        |                     |
| TC-DEL 10 W |                       | •                     |                        |                     |                        |                     |
| 13 W        |                       | •                     |                        |                     |                        |                     |
| 18 W        |                       |                       |                        | •                   |                        |                     |
| 26 W        |                       |                       |                        |                     |                        | •                   |
| TC-TEL 13 W |                       | •                     |                        |                     |                        |                     |
| 18 W        |                       |                       |                        | •                   |                        |                     |
| 26 W        |                       |                       |                        |                     |                        | •                   |
| T5 4 W      | •                     |                       |                        |                     |                        |                     |
| 6 W         | •                     |                       |                        |                     |                        |                     |
| 8 W         | •                     |                       |                        |                     |                        |                     |
| 13 W        | •                     |                       |                        |                     |                        |                     |
| 14 W        |                       |                       | •                      |                     |                        |                     |
| 21 W        |                       |                       | •                      |                     |                        |                     |
| 24 W        |                       |                       |                        |                     | •                      |                     |
| T5-C 22 W   |                       |                       |                        |                     | •                      |                     |
| T8 18 W     |                       |                       |                        |                     | •                      |                     |
| TC-DD 10 W  | •                     |                       |                        |                     |                        |                     |
| 16 W        |                       | •                     |                        |                     |                        |                     |
| 28 W        |                       |                       |                        |                     |                        | •                   |
| TC-L 18 W   |                       |                       |                        |                     | •                      |                     |
| 24 W        |                       |                       |                        |                     | •                      |                     |
| TC-F 18 W   |                       |                       |                        |                     | •                      |                     |
| 24 W        |                       |                       |                        |                     | •                      |                     |

## Abnormal operation protection

All ballasts are equipped with a protection circuit against abnormal operation. The circuit is used to shut down the ballast if the lamp fails to strike, or if the lamp is defect.

The ballast can be restarted after shut down by turning off the supply for 10 seconds or by replacing the lamp.

## Ingress protection

IP 20

## Protection class

The ballasts are suitable for use in class I or class II luminaires.

## Loading of automatic circuit breakers

| Automatic circuit breaker type | B10                 | B13                 | B16                 | B20                 | C10                 | C13                 | C16                 | C20                 |
|--------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Installation Ø                 | 1,5 mm <sup>2</sup> | 1,5 mm <sup>2</sup> | 1,5 mm <sup>2</sup> | 2,5 mm <sup>2</sup> | 1,5 mm <sup>2</sup> | 1,5 mm <sup>2</sup> | 1,5 mm <sup>2</sup> | 2,5 mm <sup>2</sup> |
| PC 1x4–13 W Basic sl           | 90                  | 117                 | 144                 | 181                 | 90                  | 117                 | 144                 | 181                 |
| PC 1x5–16 W Basic sl           | 80                  | 106                 | 130                 | 163                 | 80                  | 106                 | 130                 | 163                 |
| PC 1x14–21 W Basic sl          | 28                  | 54                  | 102                 | 127                 | 56                  | 83                  | 102                 | 127                 |
| PC 1x18 W Basic sl             | 76                  | 99                  | 122                 | 153                 | 76                  | 99                  | 122                 | 153                 |
| PC 1x18–24 W Basic sl          | 28                  | 54                  | 90                  | 112                 | 56                  | 73                  | 90                  | 112                 |
| PC 1x26 W Basic sl             | 28                  | 54                  | 88                  | 110                 | 56                  | 71                  | 88                  | 110                 |

Max. load per MCB at supply voltage  $U_n = 230$  V

## Harmonic distortion in the mains supply

EMC standard EN 61000-3-2 for lighting equipment with active input power  $\leq 25$  W.

All ballasts comply with the standard EN 61000-3-2 to operate lighting equipment with an active input power  $\leq 25$  W where distortion limits for current drawn from the supply are 86 % for 3<sup>rd</sup> harmonic and 61 % for 5<sup>th</sup> harmonic only.

## Remark

The EMC standard applies to the luminaire and reflects the specific properties of each fitting whether single or multi-lamp.

## Ballast lumen factor

at 230 V 50 Hz

| Lamp type | wattage | BLF  |
|-----------|---------|------|
| T5        | 4 W     | 1,00 |
|           | 6 W     | 1,03 |
|           | 8 W     | 1,01 |
|           | 13 W    | 0,98 |
|           | 14 W    | 0,99 |
|           | 21 W    | 0,86 |
| T5C       | 22 W    | 0,96 |
|           | 18 W    | 0,96 |
|           | 18 W    | 0,96 |
| TC-SEL    | 5 W     | 0,98 |
|           | 7 W     | 0,96 |
|           | 9 W     | 0,98 |
|           | 11 W    | 1,03 |
| TC-DEL    | 10 W    | 0,95 |
|           | 13 W    | 0,99 |
|           | 18 W    | 0,96 |
|           | 26 W    | 0,91 |
| TC-T      | 13 W    | 1,00 |
|           | 18 W    | 0,96 |
|           | 26 W    | 0,97 |
| TC-DD     | 10 W    | 0,98 |
|           | 16 W    | 0,99 |
|           | 28 W    | 0,85 |
| TCL       | 18 W    | 0,92 |
|           | 24 W    | 0,94 |
| TCF       | 18 W    | 0,88 |
|           | 24 W    | 0,88 |