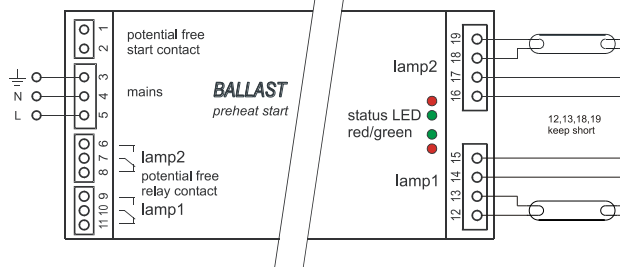


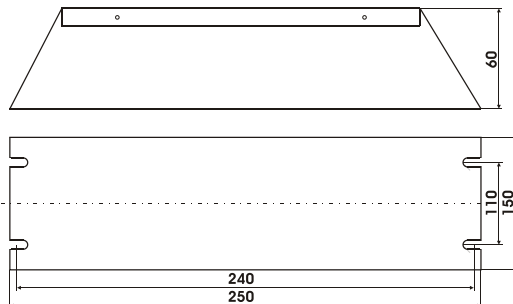
Electronic Ballast for UVC-Lamps with adjustable Lamp Current



Wiring



Dimensions



Features

- Controller based design (Cut-Off preheat start)
- Lamp current adjustable in steps
- 2 separate working lamp channels
- External/internal start alternatively
- Inrush current limiter
- 2 potential free relay contacts
- Opportunity of external potential free LED status indication

Technical Data

| | |
|---|--|
| Type | LT-UVC 2x (150..320)W 1,5 A ..2,1 A |
| Supply | 208/230 V AC ± 10 % 50/60 Hz |
| Input power min. / max. | 330 W .. 710 W |
| Output power two lamp application | 2x150 W .. 2x320 W |
| Adjustable range of lamp current | (1,5 A / 1,6 A / 1,8 A / 2,0 A / 2,1 A) ± 10 % |
| Powerfactor | > 0,95 |
| Efficiency | > 0,9 |
| Operating frequency | approx. 26..45 kHz |
| Inrush current | $\hat{I} < 40 \text{ A to } 30 \mu\text{s} / \hat{I} < 30 \text{ A to } 300 \mu\text{s}$ |
| Relay Contact | 1 changeover contact |
| Relay Contact – Maximum switching voltage | 5 A 250 V AC / 5 A 24 V DC (resistive load) |
| Relay Contact – Recommended range | ≥ 12 V / 10 mA |
| External start input | 10..230 V AC / DC (potential free) |
| Internal / external start | Adjustable by rotating switch. |
| Independent | 1 channel fails, other channel keeps in operation |
| Standby power dissipation | approx. 2 W |
| CE-conformity | yes |

Type coding

| | |
|---|---|
| C | Preheat start ballast (Cut-Off Technology) |
| M | Potential free relay contact |
| E | External start input |
| B | Additional module – selection lamp current |
| F | Additional module – selection lamp current – connection external status LED (potential free) |

Adjustment of lamp current

| | | |
|---|--|---|
| Adjustment by rotary switch on top of the ballast | | Pos. 0..4: internal start (local start) – ballast starts automatically after mains turn on Pos. 5..9: external start (remote start) – ballast starts by external start signal at the start input No warranty for damages caused by incompatible lamps or wrong adjustments! |
| Lamp typ | | On request |
| Adjustment of lamp current parameters | | Must be carried out before voltage application, switching during operation will not be detected |

Adjustment of lamp current

| Switch | Lamp current | preheat current maximal |
|--------|--------------|-------------------------|
| 0/5 | 1,5 A | 1,6 A |
| 1/6 | 1,8 A | 2,1 A |
| 2/7 | 1,8 A | 2,9 A |
| 3/8 | 2,0 A | 2,1 A |
| 4/9 | 2,1 A | 2,9 A |

Monitoring

| | |
|------------------------------------|---|
| Mains Control | Switch off at permanent under – or over voltage |
| Temperature | Switch off at permanent over temperature |
| Lamp presence | No start if no lamp is connected |
| Deactivated lamp, rectifier effect | Switch off |
| Shortage on the lamp line | Switch off |
| End of life lamp | Switch off |

General indications

| | |
|--|--|
| Operation | LED green – trouble free operation |
| Failure | LED red – failure, no operation |
| Over temperature indication (blink mode) | LED yellow – prewarning for switch off |
| Potential free contact PFK | Relay on – trouble free operation Relay off – failure or ballast does not start (Standby) |

State indications operation/failure

| Ballast status | PFK | LED green | LED red | Description | Cause |
|----------------------------------|-----|-----------------|-----------------|--|---|
| No start condition | Off | Permanent blink | Permanent blink | Ballast waits for start | - Under- or over voltage mains - Over temperature - no lamp connected - No HI level at the external start input |
| Ballast start/ procedure | Off | On | On | Lamp starts | |
| Ballast works trouble free | On | On | Off | Electronic ballast / lamp – normal mode | |
| Failure Temperature | Off | Off | 1x blinking | Cut off at over temperature Ambient temperature too high Temperature at tc to high | - Wrong installation - No heat dissipation , surface of housing too small |
| Under voltage mains | Off | Off | 2x blinking | Switch off at wrong mains | - Mains voltage under limit |
| Over voltage mains | Off | Off | 3x blinking | Switch off at wrong mains | - Mains voltage over limit |
| Failure lamp voltage | Off | Off | 4x blinking | Switch off Lamp voltage out of tolerance | - Wrong lamp type in use - End of lamp life - Deactivated lamp under operation - Rectifier effect of lamp - Start with deactivated lamp |
| Failure over current half bridge | Off | Off | 5x blinking | Switch off by over current half bridge (abnormal operation) | - Wrong lamp wiring - Shortage on lamp lines - Start without lamps |

Mounting instructions

| | |
|--------------------------|--|
| Designed for | Installations in switch cabinet |
| International protection | IP20 |
| Dimension of case | 250 x 150 x 60 mm |
| Installation position | Vertical, mains terminal below |
| Ambient temperature | ta = 0..40 °C |
| Temperature at tc-point | tc = 50 °C max. maximum case temperature |

Cabling

| | |
|---------------------------------|------------|
| Max. length of lamp cables | < 5 m |
| Max. capacitance of lamp cables | < 150 pF/m |
| Screened lamp cables permitted | yes |

Terminal blocks

| | |
|--|---|
| Mains Wago 231-303 3 pole Spacing 5,08 mm | Cross section: 0,75–2,5 mm ² (solid) Cross section: 0,75–1,5 mm ² (fine-stranded with ferrule) |
| Lamp Wago 231-304 4 pole Spacing 5,08 mm | Cross section: 0,75–2,5 mm ² (solid) Cross section: 0,75–1,5 mm ² (fine-stranded with ferrule) |
| potential free relay contacts Wago 734-203 3 pole Spacing 3,81 mm | Cross section: 0,2–1,5 mm ² (solid) Cross section: 0,25–1,0 mm ² (fine-stranded with ferrule) |
| external start input Wago 734-202 2 pole Spacing 3,81 mm | Cross section: 0,2–1,5 mm ² (solid) Cross section: 0,25–1,0 mm ² (fine-stranded with ferrule) |

Alternative - External LED state indication (additional module F necessary)

| | |
|-----------------------|---|
| LED state indication | for external installation in switch cabinet, potential free |
| Connection of 2 LED | LED green-operation / LED red-failure |
| Rated voltage for LED | 12 V DC max. 20 mA (operation with external resistor) |
| LED driver | Short circuit protection |

Alternative - Mounting external LED state indication (additional module F necessary)

| PIN | Allocation |
|-----|-------------------------|
| 1 | +12 V |
| 2 | +12 V |
| 3 | GND LED red channel 1 |
| 4 | GND LED red channel 2 |
| 5 | GND LED green channel 2 |
| 6 | GND LED green channel 1 |

