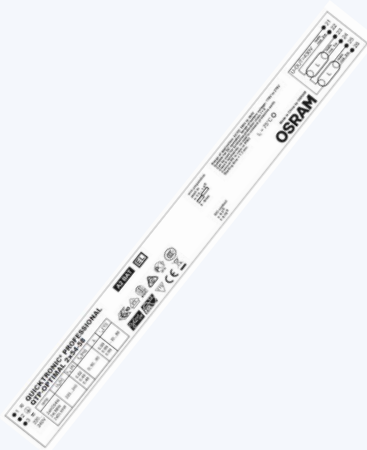


QUICKTRONIC® PROFESSIONAL QTP-OPTIMAL

ECG for T5/Ø16mm, T8/Ø26mm, DULUX L / F
fluorescent lamps



QTP-OPTIMAL



i.e. LUMILUX® T5 HO ES



Product Features:

- One ECG for three lamp technologies; T5, T8, Dulux L / F
- Up to 100.000 hours lifetime¹
- Lamp start with optimized filament preheating within 1.5 sec.
- Suitable for lighting with very high switching cycles
- Reliable lamp ignition between -20°C...+50°C
- Cut-off Technology
- Suitable for luminaires of protection classes I and II²
- CELMA Energy Efficiency Index **A2 BAT** (Best Available Technology)³
- Automatic safety shut-down in case of a defect or at the end of the lamp's life (EoL T.2)
- Automatic restart after lamp replacement
- Suitable for emergency installations (DC operation)



Technical Data

| | | |
|--|--|---------------------|
| Max. cross section for IDC-kontakt [mm ²]: | „S“ ⁴ : 0.5; „f“ ⁵ : 0.75 | |
| Max. cross section for push-in contact [mm ²]: | „S“ ⁴ : 0.5...1.0 | |
| Starting time: | t: < 1,5 sec. (<0.3 sec. in case of line interruptions/switchover of <0.5 sec.) | |
| Line voltage: | 220 - 240 V | |
| Voltage range (AC): | 198 - 264 V | |
| Voltage range (DC): | 176 - 276 V | |
| Line frequency: | 0, 50 - 60 Hz | |
| Operating frequency: | 40 - 50 kHz | |
| Electrical strength: | 300 V → permanent, 320 V → 48 hours, 350 V → 2 hours | |
| Ambient temperature ta: | -20 °C to +50 °C | |
| Measuring point temperature tc: | max. +75 °C | |
| | 330 V | 430 V |
| U-OUT: | QTP-OPTIMAL 1x18-40 | QTP-OPTIMAL 2x18-40 |
| | QTP-OPTIMAL 1x54-58 | QTP-OPTIMAL 2x54-58 |

¹ at T = 65°C @ Tc. 50.000 h with max. 10% failure rate at tc = 75°C max

² No need to connect earth in suitable luminaires of protection class II

³ EEI: A2 for QTP-OPTIMAL 1x18-40





⁴ „s“ = solid wire

⁵ „f“ = flexible wire

Inrush current and max. number of ECG per circuit breaker

| ECG | Inrush Current | | Max. number of ECG per circuit breaker | | |
|---------------------|--------------------|---------|--|--------|---------|
| | I _p [A] | TH [μs] | B: 10A | B: 16A | C: 16 A |
| QTP-OPTIMAL 1x18-40 | 24 | 230 | 17 | 28 | 47 |
| QTP-OPTIMAL 2x18-40 | 37 | 200 | 12 | 19 | 32 |
| QTP-OPTIMAL 1x54-58 | 37 | 200 | 12 | 19 | 32 |
| QTP-OPTIMAL 2x54-58 | 57 | 150 | 8 | 13 | 22 |

Standards and approval marks

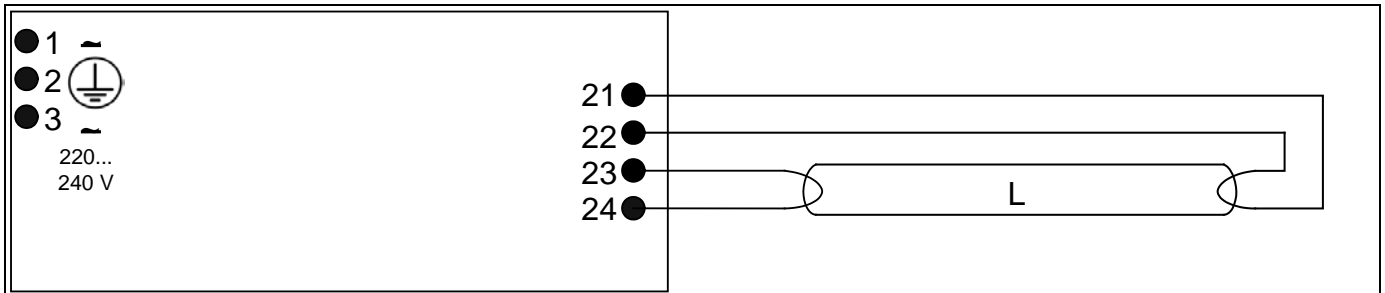
| | |
|---------------------|--|
| Safety: | acc. to EN 61347-2-3 + A1 + A2:2006-02 / IEC 61347-2-3 (ed.2):2011 |
| Radio interference: | acc. EN 55015:2006 + A1:2007 + A2:2009 / CISPR 15: 2005 + A1:2006 + A2:2008 |
| Harmonic content: | acc. to EN 61000-3-2:2006 + A1:2009 + A2:2009 / IEC 61000-3-2:2005 + A1:2008 + A2:2009 |
| Immunity: | acc. to EN 61547:2009 / IEC 61547:2009 |
| Approval marks: |     |

Dimensions & weight

| Description | Length [mm] | width [mm] | height [mm] | distance mounting holes [mm] | Weight [g] |
|---------------------|-------------|------------|-------------|------------------------------|------------|
| QTP-OPTIMAL 1x18-40 | 280 | 30 | 21 | 270 | 170 |
| QTP-OPTIMAL 2x18-40 | 360 | 30 | 21 | 350 | 230 |
| QTP-OPTIMAL 1x54-58 | 280 | 30 | 21 | 270 | 160 |
| QTP-OPTIMAL 2x54-58 | 360 | 30 | 21 | 350 | 240 |

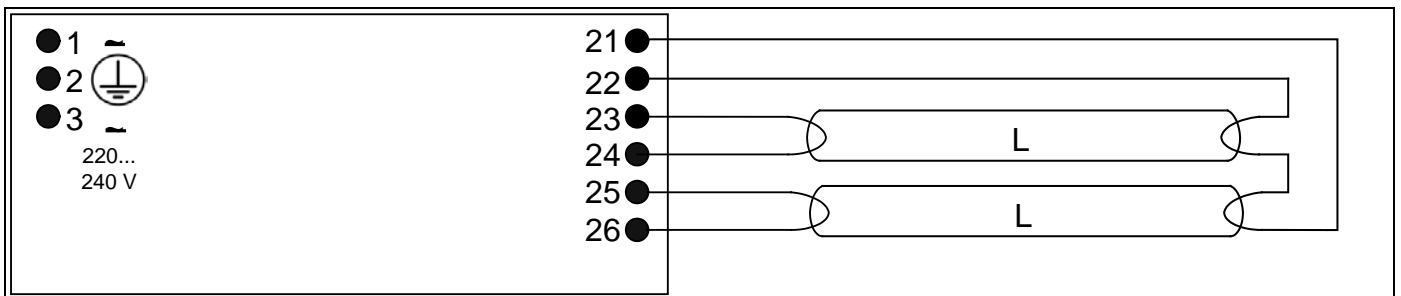
Lamp wiring

QTP-OPTIMAL 1x...



Max. permitted cable length between ECG and lamp: 2.0 m (PIN 21, 22); 1.0 m (PIN 23, 24)

QTP-OPTIMAL 2x...



Max. permitted cable length between ECG and lamp: 2.0 m (PIN 21, 22, 25, 26); 1.0 m (PIN 23, 24)

Logistic Data

| Description | EAN 10 | EAN 40 | Packaging Unit |
|---------------------|---------------|---------------|----------------|
| QTP-OPTIMAL 1x18-40 | 4008321873743 | 4008321873750 | 20 |
| QTP-OPTIMAL 2x18-40 | 4008321873767 | 4008321873774 | 20 |
| QTP-OPTIMAL 1x54-58 | 4008321873729 | 4008321873736 | 20 |
| QTP-OPTIMAL 2x54-58 | 4008321880253 | 4008321880260 | 20 |

Lifetime

| Measuring point temperature tc: | Lifetime with max. 10% failure rate |
|---------------------------------|-------------------------------------|
| 75 °C | 50,000 h |
| 65 °C | 100,000 h |

Expected lifetime

| ECG | Lamp | ECG ambient temperature (ta) | | | |
|---------------------|-------|------------------------------|---------|---------|--------|
| | | 40°C | 50°C | 60°C | |
| QTP-OPTIMAL 1x18-40 | HO 24 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 50 | 60 | 70 |
| | HO 39 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 55 | 60 | 70 |
| | L18 | lifetime [h] | 100,000 | 100,000 | 90,000 |
| | | temperature at tc-point [°C] | 50 | 60 | 70 |
| | L30 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 50 | 60 | 70 |
| | L36 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 55 | 60 | 70 |
| QTP-OPTIMAL 2x18-40 | HO 24 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 50 | 60 | 70 |
| | HO 39 | lifetime [h] | 100,000 | 100,000 | 50,000 |
| | | temperature at tc-point [°C] | 60 | 65 | 75 |
| | L18 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 50 | 60 | 65 |
| | L30 | lifetime [h] | 100,000 | 100,000 | 70,000 |
| | | temperature at tc-point [°C] | 55 | 60 | 70 |
| | DL 18 | lifetime [h] | 100,000 | 100,000 | 90,000 |
| | | temperature at tc-point [°C] | 50 | 60 | 65 |
| QTP-OPTIMAL 1x54-58 | HO54 | lifetime [h] | 100,000 | 100,000 | 70,000 |
| | | temperature at tc-point [°C] | 55 | 60 | 70 |
| | L58 | lifetime [h] | 100,000 | 100,000 | 80,000 |
| | | temperature at tc-point [°C] | 55 | 60 | 70 |
| | DL 55 | lifetime [h] | 100,000 | 100,000 | 70,000 |
| | | temperature at tc-point [°C] | 55 | 60 | 70 |

| ECG | Lamp | ECG ambient temperature (ta) | | | |
|------------------------|-------|------------------------------|---------|---------|--------|
| | | 40°C | 50°C | 60°C | |
| QTP-OPTIMAL 2x54-58 | HO54 | lifetime [h] | 100,000 | 90,000 | 50,000 |
| | | temperature at tc-point [°C] | 60 | 65 | 75 |
| | L58 | lifetime [h] | 100,000 | 100,000 | 60,000 |
| | | temperature at tc-point [°C] | 55 | 65 | 75 |
| | DL 55 | lifetime [h] | 100,000 | 100,000 | 60,000 |
| | | temperature at tc-point [°C] | 60 | 65 | 75 |

Expected lifetime is the calculation of the ECG lifetime according to IEC_60929_Edition_4_2011. As background for this estimation, are the MTTF values according to SN 29500 and the component- parameters used

Lamp/ECG System Combination

| ECG | Lamp | HF lamp wattage [W] | System wattage [W] | Line current [A] | Luminous flux at 25°C [lm] | Luminous flux at 35°C [lm] | Power factor [λ] |
|----------------------------|-------------|---------------------|--------------------|------------------|----------------------------|----------------------------|------------------|
| QTP-OPTIMAL 1x18-40 | L 15 | 13,5 | in preparation | in preparation | 950 | - | in preparation |
| | L 16 ES | 14:2 | in preparation | in preparation | 1100 | - | in preparation |
| | L 18 | 16 | 20.0 | 0.10 | 1350 | - | 0.95 |
| | L 18 U | 16 | 20.0 | 0.10 | 1350 | - | 0.95 |
| | DL 18 | 16 | 19.0 | 0.09 | 1200 | - | 0.9c |
| | DF 18 | 16 | 18.0 | 0.08 | 1100 | - | 0.9c |
| | HO 20 ES | 20 | 24.5 | 0.11 | 1650 | 2000 | 0,98 |
| | HO 24 | 23 | 28.2 | 0.13 | 1750 | 2000 | 0,98 |
| | DL 24 | 22 | 27.3 | 0.12 | 1800 | - | 0.95 |
| | DF 24 | 22 | 25.3 | 0.12 | 1700 | - | 0.95 |
| | L 30 | 30 | 33.1 | 0.15 | 3000 | - | 0.95 |
| | L 32 ES | 29 | in preparation | in preparation | 2500 | - | in preparation |
| | HO 34 ES | 34 | 36.7 | 0.16 | 3250 | 3500 | 0.98 |
| | L 36 | 32 | 35.8 | 0.16 | 3200 | - | 0.98 |
| | L 36-1 | 32 | 35.8 | 0.16 | 3200 | - | 0.98 |
| | DL 36 | 32 | 35.6 | 0.16 | 2850 | - | 0.98 |
| | DF 36 | 32 | 33.8 | 0.15 | 2750 | - | 0.98 |
| | HO 39 | 38 | 41.3 | 0.18 | 3100 | 3500 | 0.98 |
| DL 40 | 40 | 44.4 | 0.20 | 3675 | - | 0.98 | |
| QTP-OPTIMAL 2x18-40 | 2x L 15 | 13,5 | in preparation | in preparation | 950 | - | in preparation |
| | 2x L 16 ES | 14:2 | in preparation | in preparation | 1100 | - | in preparation |
| | 2x L 18 | 16 | 39.0 | 0.17 | 1350 | - | 0.95 |
| | 2x L 18 U | 16 | 39.0 | 0.17 | 1350 | - | 0.95 |
| | 2x DL 18 | 16 | 36.2 | 0.16 | 1200 | - | 0.95 |
| | 2x DF 18 | 16 | 33.6 | 0.16 | 1100 | - | 0.95 |
| | 2x HO 20 ES | 20 | 47.6 | 0.22 | 1650 | 2000 | 0.98 |
| | 2x HO 24 | 23 | 52.9 | 0.24 | 1750 | 2000 | 0.98 |
| | 2x DL 24 | 22 | 53.8 | 0.23 | 1800 | - | 0.98 |
| | 2x DF 24 | 22 | 49.7 | 0.23 | 1700 | - | 0.98 |
| | 2x L 30 | 30 | 63.0 | 0.28 | 3000 | - | 0.98 |
| | 2x L 32 ES | 29 | in preparation | in preparation | 2500 | - | in preparation |
| | 2x HO 34 ES | 34 | 75.9 | 0.34 | 3250 | 3500 | 0.99 |
| | 2x L 36 | 32 | 69.5 | 0.31 | 3200 | - | 0.98 |

LE MK-EM TEGG, Edition: 13.05.2013. Subject to change without notice. Despite careful review, the possibility of mistakes cannot be excluded – no guaranty will be provided.

| | | | | | | | |
|----------------------------|-------------|------|------|------|------|------|----------------|
| | 2x L 36-1 | 32 | 69.5 | 0.31 | 3200 | - | in preparation |
| | 2x DL 36 | 32 | 70.4 | 0.30 | 2850 | - | 0.98 |
| | 2x DF 36 | 32 | 67.1 | 0.30 | 2750 | - | 0.98 |
| | 2x HO 39 | 38 | 80.0 | 0.36 | 3100 | 3500 | 0.99 |
| | DL 40 | 40 | 88.3 | 0.37 | 3675 | - | 0.99 |
| QTP-OPTIMAL 1x54-58 | HO 50 ES | 50 | 54 | 0.24 | 4450 | 5000 | 0.98 |
| | HO 54 | 54 | 55 | 0.26 | 4450 | 5000 | 0.98 |
| | DL 55 | 50 | 54 | 0.24 | 4450 | - | 0.98 |
| | L 51 ES | 44.5 | 50 | 0.23 | 4200 | - | 0.96 |
| | L 58 | 50 | 55 | 0.25 | 5000 | - | 0.98 |
| QTP-OPTIMAL 2x54-58 | 2x HO 50 ES | 50 | 108 | 0.24 | 4450 | 5000 | 0.98 |
| | 2x HO 54 | 54 | 110 | 0.26 | 4450 | 5000 | 0.98 |
| | 2x DL 55 | 50 | 108 | 0.24 | 4450 | - | 0.98 |
| | 2x L 51 ES | 44.5 | 100 | 0.23 | 4200 | - | 0.96 |
| | 2x L 58 | 50 | 110 | 0.25 | 5000 | - | 0.99 |

For more information on ECG refer to <http://www.osram.com/ecg>

For more information on System Guarantee refer to <http://www.osram.com/guarantee>