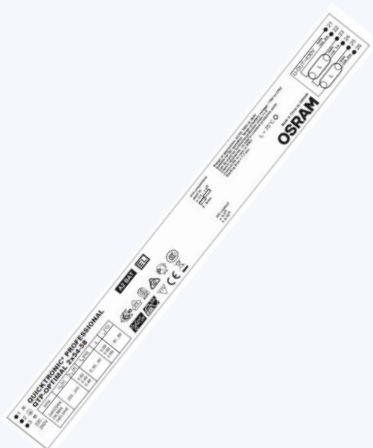


QUICKTRONIC® PROFESSIONAL QTP-OPTIMAL

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

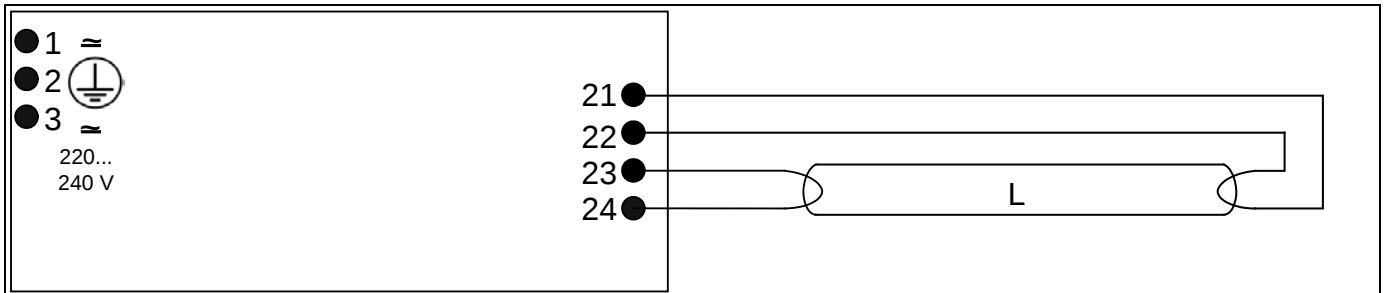
Safety:	acc. to EN 61347-2-3 + A1 + A2:2006-02 / IEC 61347-2-3 (ed.2):2011
Radio interference:	acc. EN 55015:2006 + A1:2007 + A2:2009 / CISPR 15: 2005 + A1:2006 + A2:2008
Harmonic content:	acc. to EN 61000-3-2:2006 + A1:2009 + A2:2009 / IEC 61000-3-2:2005 + A1:2008 + A2:2009
Immunity:	acc. to EN 61547:2009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

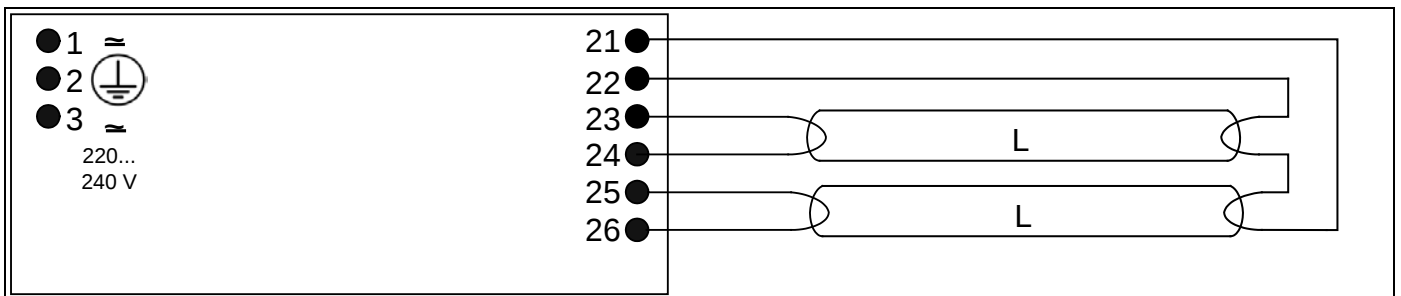
Lamp wiring

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 ambient temperature (ta)			
ECG	Lamp		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]	50.5	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

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	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>