



ZITARES QCS

SELV constant current control gear, 1-channel



ECG versions

Model	Order number	Output current	Total power output
QCS170-20LS-11/220-240	10124490	1 x 700 mA	11 ... 21 W
QCS150-25LS-11/220-240	10124492	1 x 500 mA	14 ... 25 W
QCS170-35LS-11/220-240	10124539	1 x 700 mA	22 ... 35 W
QCS135-18LS-11/220-240	10124540	1 x 350 mA	11 ... 18 W

Performance features

- Non-dimmable 1-channel ECG for constant current operation of LED modules
- SELV output voltage ≤ 60 VDC
- High efficiency of up to 88 % (100 % load)
- Input voltage range 220 – 240 VAC
- For use in luminaires of protection class I and II
- ECG extensively protected against abnormal operating conditions at the output e.g. short-circuit, open circuit or overload
- Certified as thermally protected device
- Conformance with international regulations, regarding safety and operation, electromagnetic compatibility and immunity to interference
- Nominal service life: 30,000 h with failure rate ≤ 10 % and operation at $t_c = t_{c,max}$

Applications



Industry



Office & Commercial



Shop

Markings





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General technical data

Mains voltage supply	
Rated voltage range	220 ... 240 [V]
Voltage range continuous AC	198 ... 264 [V]
Rated frequency	50 ... 60 [Hz]
Protection against voltage peaks	
Voltage peaks L - N	1 kV
Total harmonic distortion	
Total harmonic distortion (max.)	20 %, at 100 % load
Output data	
Output current tolerance	+/- 10 %
Max. ripple output current (high frequency)	+/- 1 %
Max. ripple output current (low frequency)	+/- 25 %
Max. wire length to LED-module	2 m
Galvanic separation to mains input	yes, test voltage 3.75 kV
Protection functions output side	
Overload operation	yes, limitation of the output voltage
Open-circuit operation	yes; output voltage max. 60 VDC (SELV)
Terminals	
Type	90° push-in terminal with key
Wire cross section	0,5 ... 1,5 mm ²
Wire stripping length	7,5 ... 8,5 mm
Thermally protected device	
Max. case temperature (acc to EN 61347-2-13/C5e)	110 ° C
Degree of protection	
Protection rating	IP 20



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Operation temperature

Model	Ambient (t_a)	Case ($t_{c,max}$)
QCS170-20LS...	-20 ... 50 °C	75 °C
QCS150-25LS...	-20 ... 50 °C	75 °C
QCS170-35LS...	-20 ... 50 °C	75 °C
QCS135-18LS...	-20 ... 50 °C	75 °C

Lifetime

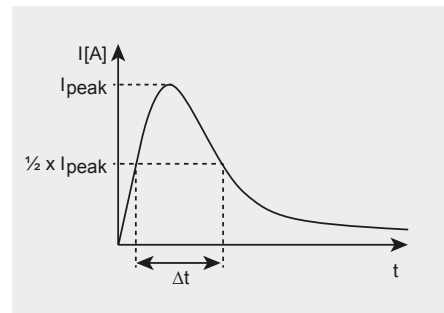
Lifetime	
Operation at $t_c = t_c \text{ max}$	30,000 h, failure rate $\leq 10 \%$
Operation at $t_c = t_c \text{ max} - 10 \text{ K}$	50,000 h, failure rate $\leq 10 \%$

Circuit breaker/starting current

Model	typ. $I_{peak}/\Delta t$	Number of ECGs on single-pole power circuit breakers (CB)				
		CB-Typ	10 A	16 A	20 A	25 A
QCS170-20LS...	16 A / 170 μ s	B	22	35	43	54
		C	37	58	72	90
QCS150-25LS...	16 A / 178 μ s	B	21	34	42	53
		C	36	58	71	89
QCS170-35LS...	17 A / 184 μ s	B	17	27	34	43
		C	28	45	57	71
QCS135-18LS...	16 A / 168 μ s	B	22	35	43	54
		C	37	58	72	90

- All specifications with $U_{mains} = 230 \text{ VAC}$, mains impedance = 1Ω
- With multi-pole power circuit breakers the max. number is reduced by 20 %.
- With power circuit breakers from different manufacturers the max. number may deviate; observe manufacturer specifications.
- For lighting groups the use of C circuit-breakers is generally recommended.

Typical sequence of current-time curves with switch-on

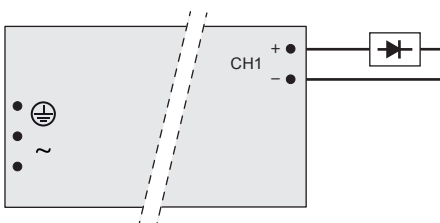


Operating data

Model	Input current A	Input power W	Power factor	ECG efficiency %	Output current (default) mA	Output voltage VDC	Total power output W
QCS170-20LS...	0,11	25	0,95	85 %	1 x 700	16 ... 30	11 ... 21
QCS150-25LS...	0,13	29	0,95	88 %	1 x 500	28 ... 50	14 ... 25
QCS170-35LS...	0,18	41	0,95	88 %	1 x 700	32 ... 50	22 ... 35
QCS135-18LS...	0,09	21	0,95	88 %	1 x 350	32 ... 52	11 ... 18

- All specifications with 230 VAC nominal operation and 100 % load

ECG connection diagrams input



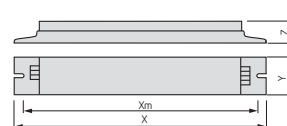


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ECG dimensions

Model	X	X _M	Y	Z
	mm	mm	mm	mm
QCS170-20LS...	280	270	30	21
QCS150-25LS...	280	270	30	21
QCS170-35LS...	280	270	30	21
QCS135-18LS...	280	270	30	21



Logistical data

Model	Order number	EAN (one piece)	Weight	ECG PU	Dimensions PU	Weight PU
			kg	St.	mm	kg
QCS170-20LS-11/220-240	10124490	4046189034036	0,165	40	320 x 312 x 110	7,50
QCS150-25LS-11/220-240	10124492	4046189034043	0,165	40	320 x 312 x 110	7,50
QCS170-35LS-11/220-240	10124539	4046189034012	0,165	40	320 x 312 x 110	8,50
QCS135-18LS-11/220-240	10124540	4046189034029	0,165	40	320 x 312 x 110	7,50

Conformity to standards

EN 61347-1	Lamp controlgear - Part 1: General and safety requirements
EN 61347-2-13	Lamp controlgear - Part 2-13: Particular requirements for d.c. or a.c. supplied electronic control gear for LED modules
EN 62384	D.C. or A.C. supplied electronic control gear for LED modules - Performance requirements
EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61547	Equipment for general lighting purposes - EMC immunity requirements
IEC 60068-2-6	Environmental testing: Tests – Test Fc: Vibration (sinusoidal)
IEC 60068-2-27	Environmental testing: Tests – Test Ea and guidance: Shock
IEC 60068-2-29	Basic environmental testing procedures - Part 2: Tests; test Eb and guidance: Bump