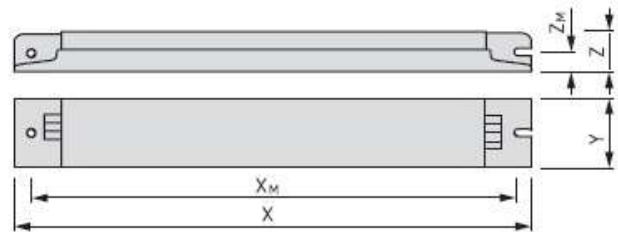


ECG model

Version	Order no	Lamp
BCS39.1FX-11/220-240	10077581	1 x T5 FQ 24/39 W
		1 x TC-L/-F 18/24/36 W
		1 x TC-L 40 W
		1 x T8 18/36 W
BCS54.1FX-11/220-240	10077585	1 x T5 FQ 54 W
		1 x TC-L 55 W
		1 x T8 58 W

Dimensions



Performance characteristics

- Compact housing with a flat design for space-saving installation in luminaires
- Best possible Energy Efficiency Class EEI = A2BAT
- Suitable for operation of T5 High Efficiency Lamps for optimal energy saving
- Extended lifetime*:
75,000 h at $t_c = t_{c,max}$; failure rate $\leq 10\%$
100,000 h at $t_c = t_{c,max} - 10\text{ K}$; failure rate $\leq 10\%$
- Over Voltage Protected: 320 VAC 48 h / 350 VAC 2 h
- Flicker free light due to high frequency operation of the lamp; no stroboscopic effect
- Constant lamp output independent of mains voltage fluctuations
- Energy controlled, electrode preserving lamp warm start for maximum lamp life independent of the switching frequency; starting time: 1,5 s
- Reliable lamp start even at low temperatures of -20°C
- Electrode preserving warm start for maximum lamp life, even at increased switching frequency; starting time $< 1,5\text{ s}$
- Multipower- Technology: Suitable for operation of different lamps and wattages with same ECG
- Automatic safety switch-off in case of abnormal lamp operation, e.g. defective electrodes and end of lamp life; tested acc. to EN 61347-2-3/A1 + Test 2
- Suitable for luminaires with protection class 2
- Automatic restart after lamp replacements
- Certified as thermally protected ballasts, e.g. for application in ∇ -luminaires
- Suitable for direct current operation and application in emergency lighting installations : Conforms to requirements for emergency lighting acc. to EN 61347-2-3/J
- Fast restart of the lamps after short mains interruptions
- Conformance with international regulations regarding safety and operation, electromagnetic compatibility and immunity to interference

*For more details please see technical data on page 2

Version	X	X _M	Y	Z	Z _M	Weight
	mm	mm	mm	mm	mm	kg
BCS39.1FX	280	270	30	21	9	0,175
BCS54.1FX	280	270	30	21	9	0,190

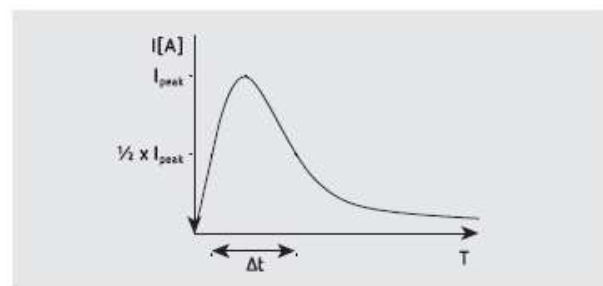
Admissible temperatures

Version	Ambient (t _a)	Case (t _c)
BCS54.1FX, BCS39.1FX	$-20^\circ\text{C} \dots +60^\circ\text{C}$	max. $+75^\circ\text{C}$

Inrush current / Circuit breaker

Version	typ I _{peak} / Δt	No. of ECG at single-pole circuit breakers			
		LS-Typ	10 A	16 A	20 A 25 A
BCS39.1FX	24 A / 120 μs	B	29	47	59 74
		C	47	75	94 117
BCS54.1FX	25 A / 147 μs	B	23	37	46 58
		C	30	49	61 76

All data for U_{supply} = 230 VAC, mains impedance = 1 Ω
 In case of multipolar CB the max. no. is reduced by 20 %
 The max. number may differ depending on CB manufacturer. Please consider the specifications of the manufacturer.
 Basically, CB with C-characteristics are recommended to be used in lighting groups.



Markings



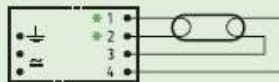
Technical data

Mains voltage supply	
Rated voltage range	220 V – 240 V
Max. admissible voltage range (continuous)	198 V – 264 V
Frequency	0/ 50 Hz ... 60 Hz
Battery operation	
Voltage range for continuous operation	198 VDC – 278 VDC
Lowest limiting value for temporary operation	176 VDC - 198 VDC ¹⁾
Behaviour at mains overvoltage	
Switch-off of the lamp(s) at	approx. 320 VAC ²⁾
Overvoltage protection	350 VAC / 2 h
Leakage current	< 0.5 mA / ECG
Ignition time of the lamp	< 1.5 s
Behaviour in case of defective lamp	Switch-off of the lamp(s)
Automatic restart after lamp replacement	yes
Max. temperature at housing surface	+ 110 °C (acc. EN 61 347-2-3/C)
Nominal service life: (failure rate ≤ 10%)	100.000 h at $t_c = t_{c, max} - 10K$ 75.000 h at $t_c = t_{c, max}$
Lamp and mains terminals	
Type	90°-connector with release function
Wire cross section	0.5 mm ² – 1.5 mm ²
Wire stripping length	8.0 mm – 9.0 mm
Lamp wire lengths	see "wiring diagrams"

¹⁾ Reliable lamp ignition only for ≥ 198 VDC, for max. 0,5 h

²⁾ Automatic lamp restart after reaching the nominal input voltage range

Wiring diagrams



* keep lamp wires as short as possible
Terminal 1,2: max. 1m
Terminal 3,4: max. 2m

Conformance with regulations

EN 61 347-1	General and safety requirements
EN 61 347-2-3	
EN 61 347-2-3/C	Requirements for thermally protected ballasts
EN 61347	Particular additional safety requirements for a.c./d.c. supplied electronic ballasts for emergency lighting
EN 60 929	Performance requirements
EN 50 294	Measurement method of total input power of ballast-lamp circuits
EN 61 000-3-2	Limits for harmonic current emissions
EN 61 000-3-3	Limitation of voltage fluctuations and flicker
General EMC immunity:	
EN 61 000-4-2	Electrostatic discharge
EN 61 000-4-3	Radiated, radio-frequency, electromagnetic field
EN 61 000-4-4	Electrical fast transient/burst
EN 61 000-4-5	Surge
EN 61 000-4-6	Conducted disturbances, induced by radio-frequency fields
EN 61 000-4-8	Power frequency magnetic field
EN 61 000-4-11	Voltage dips, short interruptions and voltage variations
EN 61 547	EMC immunity: equipment for general lighting purposes
EN 55 015	Radio disturbances, frequencies < 300MHz (CDN method)
Environmental tests for mechanical capacity:	
IEC 60 068-2-6	Test Fc: vibrations (sinusoidal)
IEC 60 068-2-27	Test Ea: shock and bump
IEC 60 068-2-29	Test Eb: shock and bump
Quality management certified according to ISO 9001	



Non dimmable electronic control gear units for T5, T8 and TC-L/F- fluorescent lamps

Operating data



Version	Lamp	System rating	Input current*	Operating frequency	Power factor	Lamp power	Lamp socket	EEI	Approvals
		W	A	kHz		W			
BCS39.1FX-11/220-240	1 × T5 FQ 24 W	27	0,12	44	0,98	23	G5	A2	a, b
	1 × T5 FQ 39 W	41	0,18	44	0,97	38	G5	A2BAT	a, b
	1 × TC-L/F 18 W	19	0,08	44	0,96	16	2G11/2G10	A2	a, b
	1 × TC-L/F 24 W	26	0,12	44	0,98	22	2G11/2G10	A2	a, b
	1 × TC-L/F 36 W	37	0,16	44	0,99	32	2G11/2G10	A2BAT	a, b
	1 × TC-L 40 W	41	0,18	44	0,99	40	2G11	A2BAT	a, b
	1 × T8 18 W	20	0,09	44	0,98	18	G13	A2	-
	1 × T8 36 W	36	0,16	44	0,99	33	G13	A2BAT	-
BCS54.1FX-11/220-240	1 × T5 FQ 54 W	59	0,26	45	0,99	54	G5	A2BAT	a, b
	1 × TC-L 55 W	60	0,26	45	0,99	55	2G11	A2BAT	a, b
	1 × T8 58 W	55	0,25	45	0,99	50	G13	A2BAT	a, b

* at $U_{Mains} = 230 \text{ VAC}$