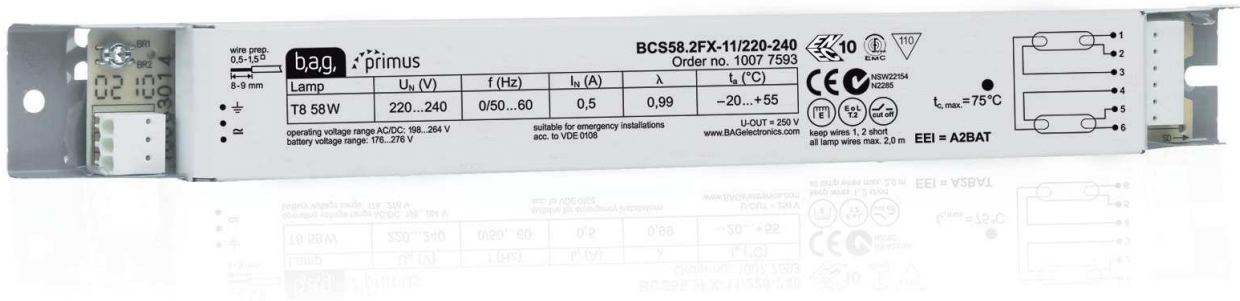


BCS
primus

Non dimmable electronic control gear units for T8 fluorescent lamps



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 bei $t_c = t_{c,max}$; failure rate $\leq 10\%$
100.000 h bei $t_c = t_{c,max} - 10\text{ K}$; 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 $< 2\text{ s}$
- Reliable lamp start even at low temperatures of -20°C
- 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 replacement
- 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

ECG model

Version	Order no.	Lamp
BCS18.3-4LR-01/220-240	10050999	3/4 x T8 18 W
BCS18.1FX-11/220-240	10077588	1 x T8 18 W
BCS18.2FX-11/220-240	10077589	2 x T8 18 W
BCS36.1FX-11/220-240	10077590	1 x T8 36 W
BCS36.2FX-11/220-240	10077591	2 x T8 36 W
BCS58.1FX-11/220-240	10077592	1 x T8 58 W
BCS58.2FX-11/220-240	10077593	2 x T8 58 W

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 - 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 / EVG
Ignition time of the lamp	< 2 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:	100.000 h at $t_c = t_{c, max} - 10 K$ 75.000 h ³⁾ at $t_c = t_{c, max}$
Lamp and mains terminals	
Type	90°-connector with release function ⁴⁾
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

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

³⁾ For BCS58.2FX lifetime at $t_c = t_{c, max}$ 50.000 h
75.000 h at $t_c = t_{c, max} - 5K$

⁴⁾ Order Number for release tool: 10075741

Admissible temperatures

Version	Ambient (t_a)	Case (t_c)
BCS18.1FX; BCS18.2FX; BCS36.1FX; BCS36.2FX; BCS58.1FX; BCS18.3-4LR	- 20 °C ... + 60 °C	max. + 75 °C
BCS58.2FX	- 20 °C ... + 55 °C	max. + 75 °C

Inrush current / Circuit breaker

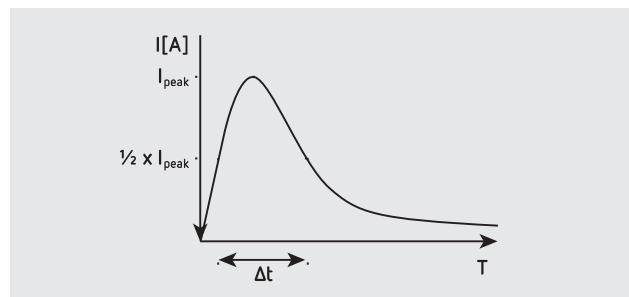
Version	typ $I_{peak} / \Delta t$	No. of ECG at single-pole circuit breakers			
		LS-Typ	10 A	16 A	20 A 25 A
BCS18.3-4LR	28 A / 115 μs	B	24	39	49 61
		C	32	51	64 80
BCS18.1FX BCS18.2FX	24 A / 145 μs	B	23	37	47 58
		C	39	62	78 98
BCS36.1FX BCS58.1FX	27 A / 152 μs	B	20	32	40 50
		C	33	53	67 84
BCS58.2FX	44 A / 122 μs	B	15	25	31 39
		C	17	27	34 42

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.





Non dimmable electronic control gear units for T8 fluorescent lamps

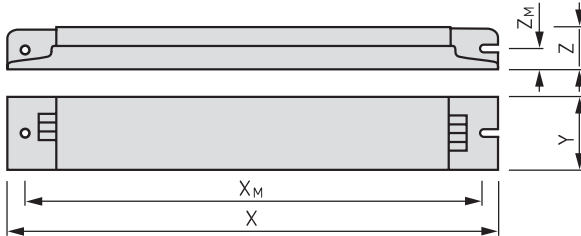
Operating data



Version	Lamp	System rating	Input current*	Operating frequency	Power factor	Lamp power	Lamp socket	EEI	Approvals
		W	A	kHz		W			
BCS18.3-4LR-01/220-240	3 × T8 18 W	58	0,26	47	0,98	46	G13	A2	a, b
	4 × T8 18 W	76	0,33	47	0,99	56	G13	A2	a, b
BCS18.1FX-11/220-240	1 × T8 18 W	19	0,08	49	0,97	16	G13	A2BAT	a, b
BCS18.2FX-11/220-240	2 × T8 18 W	36	0,16	45	0,97	32	G13	A2BAT	a, b
BCS36.1FX-11/220-240	1 × T8 36 W	35	0,16	44	0,97	32	G13	A2BAT	a, b
BCS36.2FX-11/220-240	2 × T8 36 W	71	0,32	45	0,99	64	G13	A2BAT	a, b
BCS58.1FX-11/220-240	1 × T8 58 W	55	0,25	45	0,99	50	G13	A2BAT	a, b
BCS58.2FX-11/220-240	2 × T8 58 W	108	0,50	45	0,99	100	G13	A2BAT	a, b

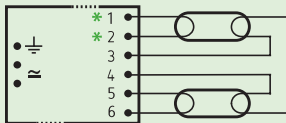
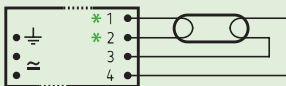
* at U_{Mains} = 230 VAC

Dimensions

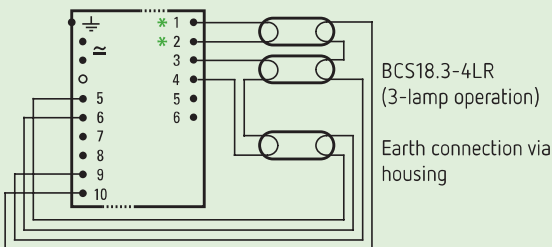


Version	X	X _M	Y	Z	Z _M	Weight
	mm	mm	mm	mm	mm	kg
BCS18.3-4LR	290	280	42	28	-	0,268
BCS18.1FX; BCS18.2FX	280	265	30	21	9	0,175
BCS36.1FX	280	265	30	21	9	0,185
BCS36.2FX	280	265	30	21	9	0,191
BCS58.1FX	280	265	30	21	9	0,190
BCS58.2FX	280	265	30	21	9	0,209

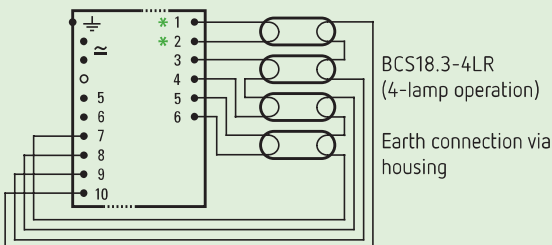
Wiring diagrams



* keep lamp wires as short as possible
Terminal 1,2: max. 1m
Terminal 3,4,5,6: max. 1m



BCS18.3-4LR
(3-lamp operation)
Earth connection via
housing



BCS18.3-4LR
(4-lamp operation)
Earth connection via
housing

* keep lamp wires as short as possible
Terminal 1, 2, 5, 6: max. 1m
Terminal 3, 4, 7, 8, 9, 10: 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