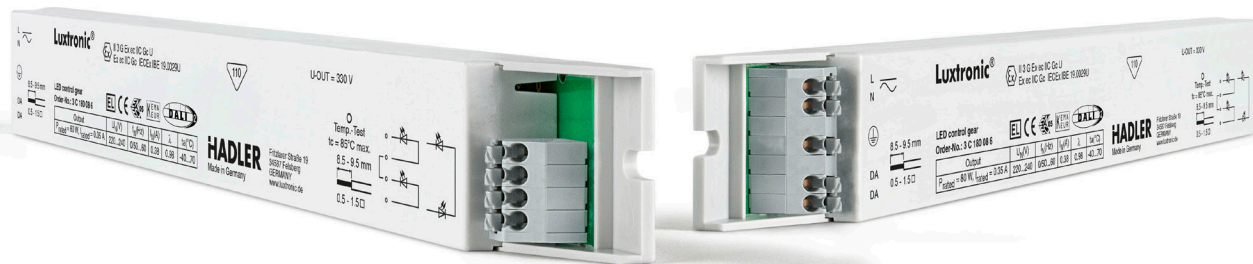


HADLER



Data sheet

Constant current LED control gear
80 W Output power
50 – 700 mA Output current
Intelligent temperature protection

Linear VI LED

Luxtronic[®]

Linear VI LED control gear

More than 25 years of experience in the design and development of electronic lighting products, the close cooperation with test authorities and the joint research in the sector of explosion protection enable the company Hadler to develop products in accordance with market trends which will exactly meet the requirements. Function and, above all, safety will take priority over other requirements.

Furthermore, in accordance with the company philosophy, Luxtronic ballasts also reflect the "second idea": Features offering an additional benefit and using the full competence of the company Hadler to allow for a unique position in the market. Both large-scale and small-scale series of the Luxtronic ballasts can be produced in a cost-effective way. The proximity to the market allows for short delivery times.

Michael Lamkowski
Head of Research & Development

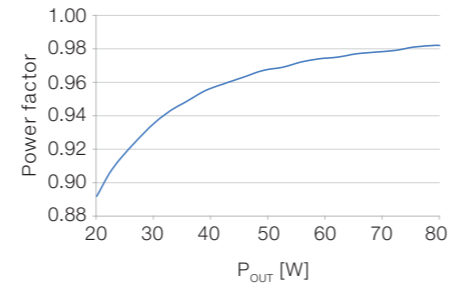


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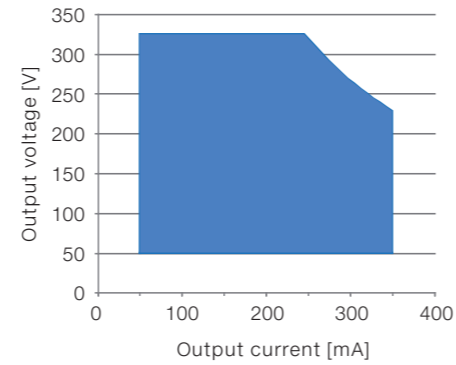
Input

Rated supply voltage	220 – 240 V
Mains frequency	0 / 50 – 60 Hz
Input voltage range a.c.	198 – 264 V
Input voltage range d.c.	176 – 275 V
Power factor	0.98 at full load (see graph)
Total Harmonic Distortion	< 8 % at full load



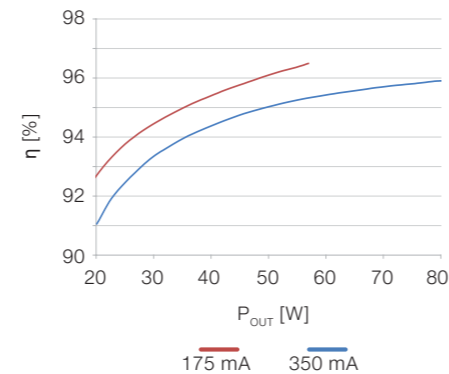
Output

Output characteristic	Constant current, non-SELV
Output voltage	50 – 325 V (see graph)
Output current	350 mA max.
Output power	80 W max.
No. of output channels	1
Output current accuracy	+/- 5 %
Output current ripple	< 10 % at 100 Hz
Output dimming	n.a.
Dimming range	n.a.



Efficiency

Stand-By Power consumption	n.a.
No-load Power consumption	0.5 W
Electrical efficiency	> 0.95 at full load (see graph)



Interface

Dimming Interface	n.a.
Interface control current	n.a.
Dimming curve	n.a.

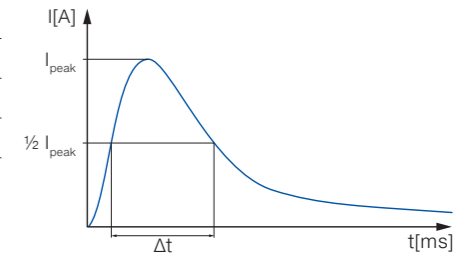
Temperature, Lifetime

Ambient temperature range	-40 – 70 °C		
Max. case temperature	85 °C		
T _a	50 °C	60 °C	70 °C
T _c	65 °C	75 °C	85 °C
lifetime	> 200,000 h	140,000 h	70,000 h

Inrush current

Input voltage	230 V
I _{peak}	54 A
Δt	≈ 125 μs

(measured with network impedance = 850 mΩ)



Max. No. of ECG per circuit breaker

Type	B10	8 pcs.
	C10	13 pcs.
	B16	12 pcs.
	C16	21 pcs.

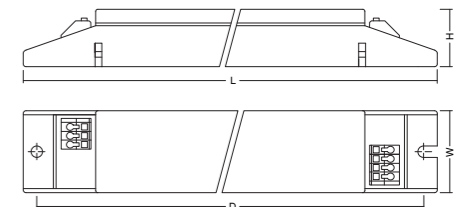
Dimensions

Length x Width x Height	360 x 30 x 21 mm
Mounting hole distance D	350 mm
Mounting screws	M4 max.

(see schematic view on the right)

Ordering data

Weight	0.18 kg
Packaging unit	72 pcs.
Order No.	3 C 180 08 0



Emergency lighting, performance during DC power supply

The electronic ballast is equipped with an integrated supply voltage detection which allows a certain DC-supply mode.

The following values are factory-adjusted:

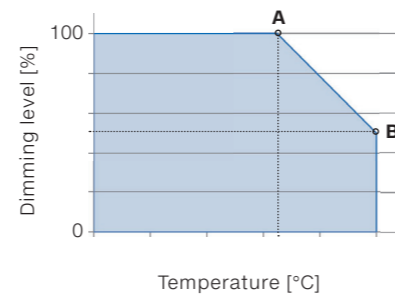
DC supply level	229	≅ 50% EOF (Emergency Output Factor)
“Time to light”	0.3 s	suitable for high-risk task area lighting

Temperature protection

The unit operates an integrated temperature overload protection which reduces the output power by linear decrease if a certain operating point “A” is reached and reduces the output power to zero if the temperature at operating point “B” is exceeded. The control gear restarts automatically if the temperature decreases by 5 K.

The following values are factory-adjusted:

Temperature “A”	$T_{\text{board}} = 90 \text{ °C} \cong T_c = 75 - 80 \text{ °C}$
Temperature “B”	$T_{\text{board}} = 95 \text{ °C} \cong T_c = 80 - 85 \text{ °C}$
Temperature limit level “B”	229 ≅ 50%



Standards

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 60079-0
- EN 60079-7

Markings



Thermally protected according to IEC 61347-1 C.5 e)

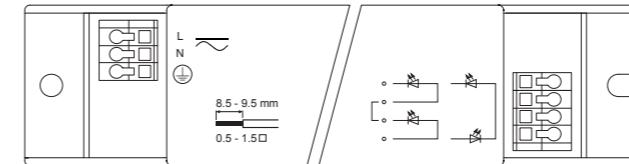


Wiring

Max. output cable length	200 cm
Input wire cross-section	0.5 – 1.5 mm ²
Output wire cross-section	0.5 – 1.5 mm ²

The wiring should be short and without crossings for best EMC results.

Wiring diagram



ECG 50 – 350 mA, 80 W, 220 – 240 V

Safety instructions

Please carefully read these instructions prior to installation and keep them for later reference.

This control gear is intended for operation of LED modules in explosion protected luminaires. Please ensure that ratings of the LED module match with the output range of the ECG. Do not use this product for other than intended use.



Hadler GmbH declares that this control gear is in conformity with the EU explosion protection directive.

An attestation of conformity according to directive 2014/35/EU (ATEX), covering types of protection "ec" and "nA", is available at www.hadler-gmbh.de.

The sign „U“ placed after certificate number and ATEX marking indicates, that the corresponding certificate is not equivalent to a Statement of Conformity for an equipment or protective system. It is intended to be used as a basis for certifying an equipment or protective system.

Certificates and detailed product datasheets are available at www.hadler-gmbh.de.

For operation conditions see pages 4 – 6.

Installation precautions

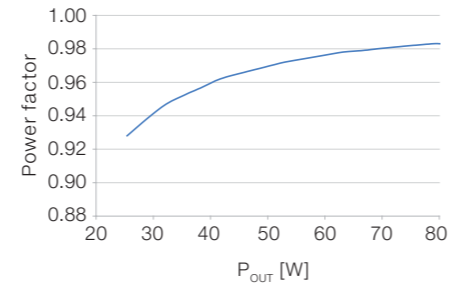
The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfills degree of protection of at least IP54.

The maximum permitted service temperature of the terminals is 85 °C.

Creepages and clearances have to be considered depending on the rated voltage when assembled in an enclosure.

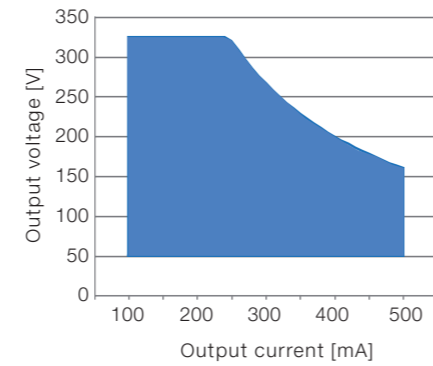
Input

Rated supply voltage	220 – 240 V
Mains frequency	0 / 50 – 60 Hz
Input voltage range a.c.	198 – 264 V
Input voltage range d.c.	176 – 275 V
Power factor	0.98 at full load (see graph)
Total Harmonic Distortion	< 8 % at full load



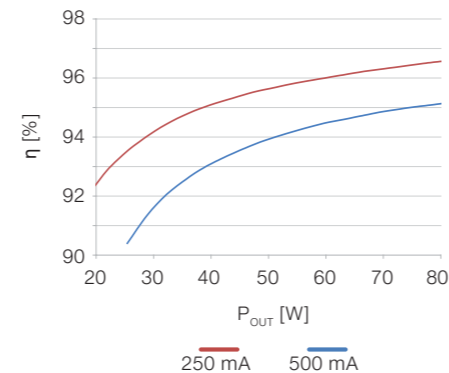
Output

Output characteristic	Constant current, non-SELV
Output voltage	50 – 325 V (see graph)
Output current	500 mA max.
Output power	80 W max.
No. of output channels	1
Output current accuracy	+/- 5 %
Output current ripple	< 10 % at 100 Hz
Output dimming	n.a.
Dimming range	n.a.



Efficiency

Stand-By Power consumption	n.a.
No-load Power consumption	0.5 W
Electrical efficiency	> 0.95 at full load (see graph)



Interface

Dimming Interface	n.a.
Interface control current	n.a.
Dimming curve	n.a.

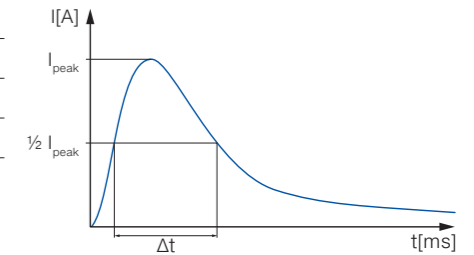
Temperature, Lifetime

Ambient temperature range	-40 – 60 °C		
Max. case temperature	80 °C		
T _a	40 °C	50 °C	60 °C
T _c	60 °C	70 °C	80 °C
lifetime	> 200,000 h	> 200,000 h	120,000 h

Inrush current

Input voltage	230 V
I _{peak}	54 A
Δt	≈ 125 μs

(measured with network impedance = 850 mΩ)



Max. No. of ECG per circuit breaker

Type	B10	8 pcs.
	C10	13 pcs.
	B16	12 pcs.
	C16	21 pcs.

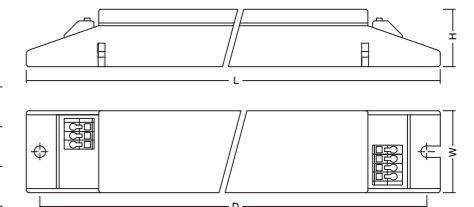
Dimensions

Length x Width x Height	360 x 30 x 21 mm
Mounting hole distance D	350 mm
Mounting screws	M4 max.

(see schematic view on the right)

Ordering data

Weight	0.18 kg
Packaging unit	72 pcs.
Order No.	3 C 180 18 0



Emergency lighting, performance during DC power supply

The electronic ballast is equipped with an integrated supply voltage detection which allows a certain DC-supply mode.

The following values are factory-adjusted:

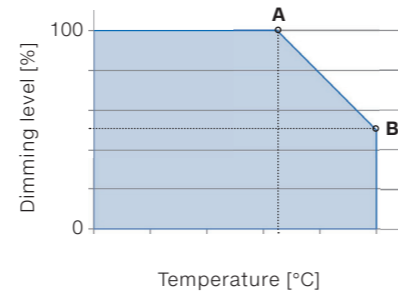
DC supply level	229	≈ 50% EOF (Emergency Output Factor)
“Time to light”	0.3 s	suitable for high-risk task area lighting

Temperature protection

The unit operates an integrated temperature overload protection which reduces the output power by linear decrease if a certain operating point “A” is reached and reduces the output power to zero if the temperature at operating point “B” is exceeded. The control gear restarts automatically if the temperature decreases by 5 K.

The following values are factory-adjusted:

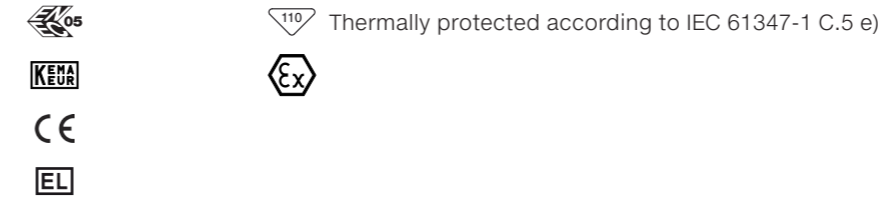
Temperature “A”	$T_{\text{board}} = 90 \text{ °C} \approx T_c = 75 - 80 \text{ °C}$
Temperature “B”	$T_{\text{board}} = 95 \text{ °C} \approx T_c = 80 - 85 \text{ °C}$
Temperature limit level “B”	229 ≈ 50%



Standards

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 60079-0
- EN 60079-7

Markings

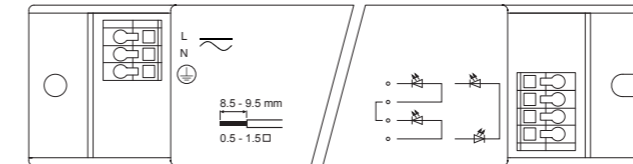


Wiring

Max. output cable length	200 cm
Input wire cross-section	0.5 – 1.5 mm ²
Output wire cross-section	0.5 – 1.5 mm ²

The wiring should be short and without crossings for best EMC results.

Wiring diagram



ECG 100 – 500 mA, 80 W, 220 – 240 V

Safety instructions

Please carefully read these instructions prior to installation and keep them for later reference.

This control gear is intended for operation of LED modules in explosion protected luminaires. Please ensure that ratings of the LED module match with the output range of the ECG. Do not use this product for other than intended use.



Hadler GmbH declares that this control gear is in conformity with the EU explosion protection directive.

An attestation of conformity according to directive 2014/35/EU (ATEX), covering types of protection "ec" and "nA", is available at www.hadler-gmbh.de.

The sign „U“ placed after certificate number and ATEX marking indicates, that the corresponding certificate is not equivalent to a Statement of Conformity for an equipment or protective system. It is intended to be used as a basis for certifying an equipment or protective system.

Certificates and detailed product datasheets are available at www.hadler-gmbh.de.

For operation conditions see pages 10 – 12.

Installation precautions

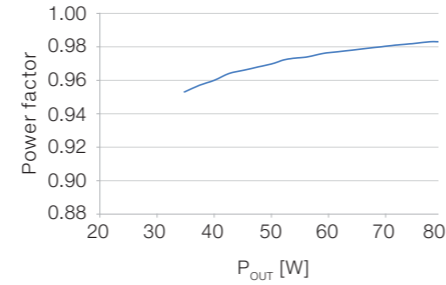
The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfills degree of protection of at least IP54.

The maximum permitted service temperature of the terminals is 85 °C.

Creepages and clearances have to be considered depending on the rated voltage when assembled in an enclosure.

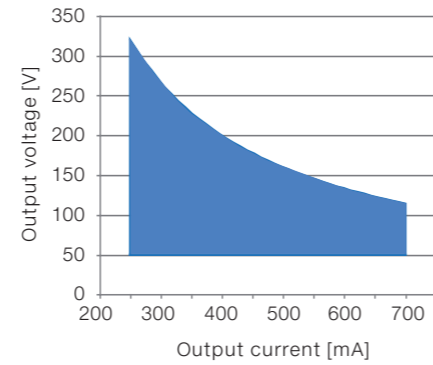
Input

Rated supply voltage	220 – 240 V
Mains frequency	0 / 50 – 60 Hz
Input voltage range a.c.	198 – 264 V
Input voltage range d.c.	176 – 275 V
Power factor	0.98 at full load (see graph)
Total Harmonic Distortion	< 8 % at full load



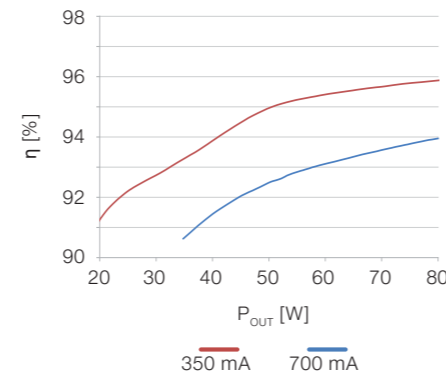
Output

Output characteristic	Constant current, non-SELV
Output voltage	50 – 325 V (see graph)
Output current	700 mA max.
Output power	80 W max.
No. of output channels	1
Output current accuracy	+/- 5 %
Output current ripple	< 10 % at 100 Hz
Output dimming	n.a.
Dimming range	n.a.



Efficiency

Stand-By Power consumption	n.a.
No-load Power consumption	0.5 W
Electrical efficiency	> 0.94 at full load (see graph)



Interface

Dimming Interface	n.a.
Interface control current	n.a.
Dimming curve	n.a.

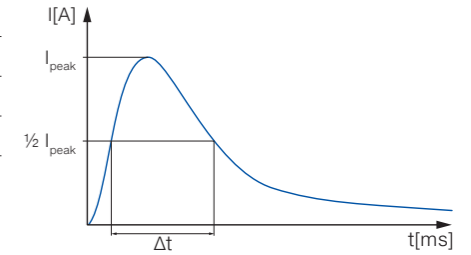
Temperature, Lifetime

Ambient temperature range	-40 – 60 °C		
Max. case temperature	80 °C		
T _a	40 °C	50 °C	60 °C
T _c	60 °C	70 °C	80 °C
lifetime	> 200,000 h	> 200,000 h	120,000 h

Inrush current

Input voltage	230 V
I _{peak}	54 A
Δt	≈ 125 μs

(measured with network impedance = 850 mΩ)



Max. No. of ECG per circuit breaker

Type	B10	8 pcs.
	C10	13 pcs.
	B16	12 pcs.
	C16	21 pcs.

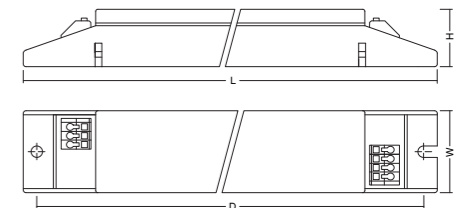
Dimensions

Length x Width x Height	360 x 30 x 21 mm
Mounting hole distance D	350 mm
Mounting screws	M4 max.

(see schematic view on the right)

Ordering data

Weight	0.19 kg
Packaging unit	72 pcs.
Order No.	3 C 180 28 0



Emergency lighting, performance during DC power supply

The electronic ballast is equipped with an integrated supply voltage detection which allows a certain DC-supply mode.

The following values are factory-adjusted:

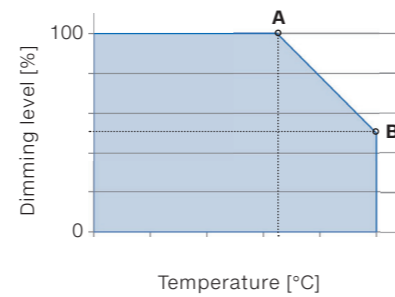
DC supply level	229	≈ 50% EOF (Emergency Output Factor)
“Time to light”	0.3 s	suitable for high-risk task area lighting

Temperature protection

The unit operates an integrated temperature overload protection which reduces the output power by linear decrease if a certain operating point “A” is reached and reduces the output power to zero if the temperature at operating point “B” is exceeded. The control gear restarts automatically if the temperature decreases by 5 K.

The following values are factory-adjusted:

Temperature “A”	$T_{\text{board}} = 90 \text{ °C} \approx T_c = 75 - 80 \text{ °C}$
Temperature “B”	$T_{\text{board}} = 95 \text{ °C} \approx T_c = 80 - 85 \text{ °C}$
Temperature limit level “B”	229 ≈ 50%



Standards

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 60079-0
- EN 60079-7

Markings



Thermally protected according to IEC 61347-1 C.5 e)

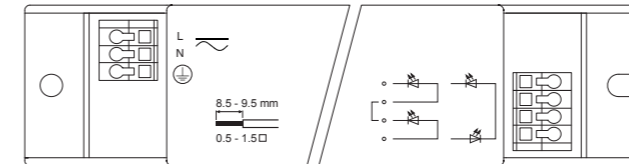


Wiring

Max. output cable length	200 cm
Input wire cross-section	0.5 – 1.5 mm ²
Output wire cross-section	0.5 – 1.5 mm ²

The wiring should be short and without crossings for best EMC results.

Wiring diagram



ECG 250 – 700 mA, 80 W, 220 – 240 V

Safety instructions

Please carefully read these instructions prior to installation and keep them for later reference.

This control gear is intended for operation of LED modules in explosion protected luminaires. Please ensure that ratings of the LED module match with the output range of the ECG. Do not use this product for other than intended use.



Hadler GmbH declares that this control gear is in conformity with the EU explosion protection directive.

An attestation of conformity according to directive 2014/35/EU (ATEX), covering types of protection "ec" and "nA", is available at www.hadler-gmbh.de.

The sign „U“ placed after certificate number and ATEX marking indicates, that the corresponding certificate is not equivalent to a Statement of Conformity for an equipment or protective system. It is intended to be used as a basis for certifying an equipment or protective system.

Certificates and detailed product datasheets are available at www.hadler-gmbh.de.

For operation conditions see pages 16 – 18.

Installation precautions

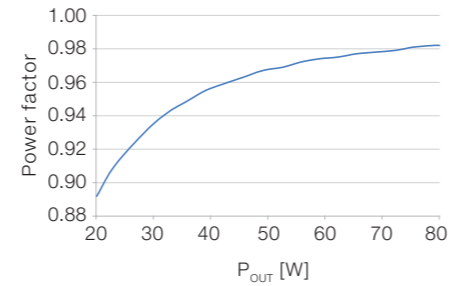
The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfills degree of protection of at least IP54.

The maximum permitted service temperature of the terminals is 85 °C.

Creepages and clearances have to be considered depending on the rated voltage when assembled in an enclosure.

Input

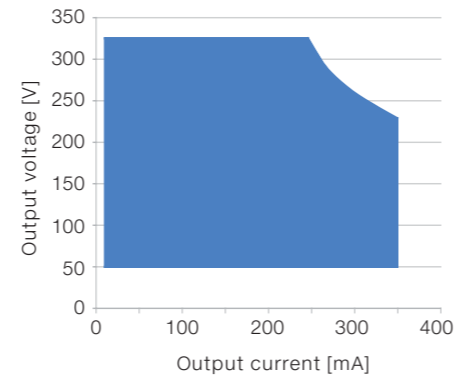
Rated supply voltage	220 – 240 V
Mains frequency	0 / 50 – 60 Hz
Input voltage range a.c.	198 – 264 V
Input voltage range d.c.	176 – 275 V
Power factor	0.98 at full load (see graph)
Total Harmonic Distortion	< 8 % at full load



Output

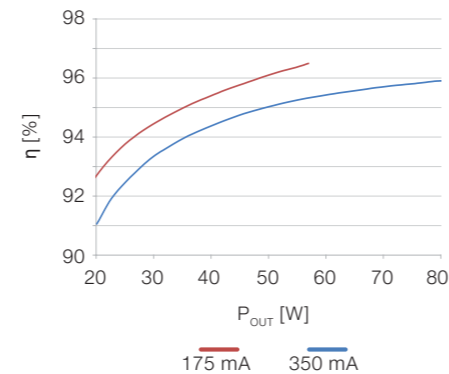
Output characteristic	Constant current, non-SELV
Output voltage	50 – 325 V (see graph)
Output current	350 mA max.
Output power	80 W max.
No. of output channels	1
Output current accuracy	+/- 5 %
Output current ripple	< 10 % at 100 Hz
Output dimming	AM, PWM (500 Hz) @ I _{out} < 128 mA*
Dimming range	3 – 100 %, 10 mA min.

* smaller AM output currents available in accordance with customer's working point



Efficiency

Stand-By Power consumption	< 0.5 W
No-load Power consumption	0.5 W
Electrical efficiency	> 0.95 at full load (see graph)



Interface

Dimming Interface	DALI, non SELV
Interface control current	≤ 2 mA
Dimming curve	log. / linear

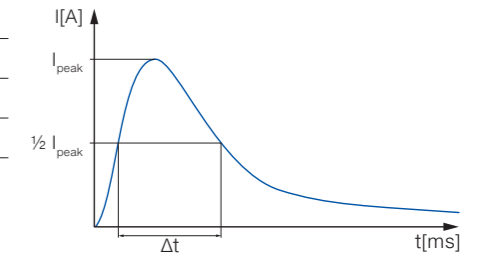
Temperature, Lifetime

Ambient temperature range	-40 – 70 °C		
Max. case temperature	85 °C		
T _a	50 °C	60 °C	70 °C
T _c	65 °C	75 °C	85 °C
lifetime	> 200,000 h	140,000 h	70,000 h

Inrush current

Input voltage	230 V
I _{peak}	54 A
Δt	≈ 125 μs

(measured with network impedance = 850 mΩ)



Max. No. of ECG per circuit breaker

Type	B10	8 pcs.
	C10	13 pcs.
	B16	12 pcs.
	C16	21 pcs.

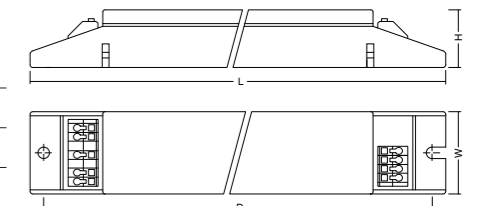
Dimensions

Length x Width x Height	360 x 30 x 21 mm
Mounting hole distance D	350 mm
Mounting screws	M4 max.

(see schematic view on the right)

Ordering data

Weight	0.18 kg
Packaging unit	72 pcs.
Order No.	3 C 180 08 6



Emergency lighting, performance during DC power supply

The electronic ballast is equipped with an integrated supply voltage detection which allows a certain DC-supply mode.

The following values are factory-adjusted:

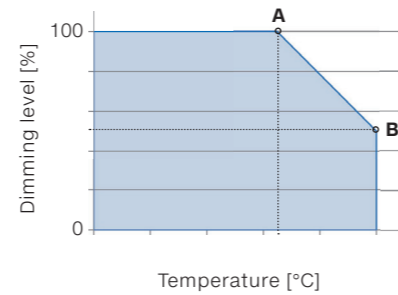
DC supply level	229	≈ 50% EOF (Emergency Output Factor)
“Time to light”	0.3 s	suitable for high-risk task area lighting

Temperature protection

The unit operates an integrated temperature overload protection which reduces the output power by linear decrease if a certain operating point “A” is reached and reduces the output power to zero if the temperature at operating point “B” is exceeded. The control gear restarts automatically if the temperature decreases by 5 K.

The following values are factory-adjusted:

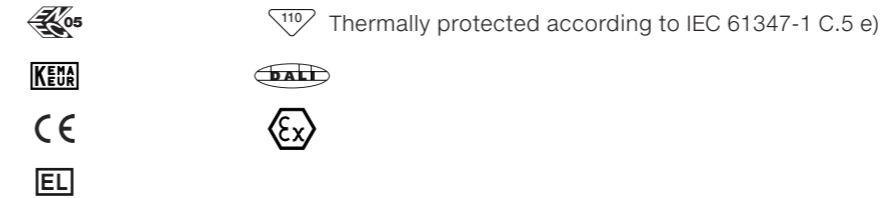
Temperature “A”	$T_{board} = 90\text{ °C} \approx T_c = 75 - 80\text{ °C}$
Temperature “B”	$T_{board} = 95\text{ °C} \approx T_c = 80 - 85\text{ °C}$
Temperature limit level “B”	229 ≈ 50%



Standards

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 62386
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 60079-0
- EN 60079-7

Markings

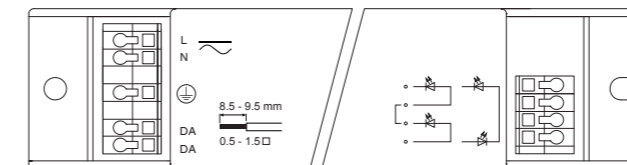


Wiring

Max. output cable length	200 cm
Input wire cross-section	0.5 – 1.5 mm ²
Output wire cross-section	0.5 – 1.5 mm ²

The wiring should be short and without crossings for best EMC results.

Wiring diagram



ECG 50 – 350 mA, 80 W, 220 – 240 V, DALI

Safety instructions

Please carefully read these instructions prior to installation and keep them for later reference.

This control gear is intended for operation of LED modules in explosion protected luminaires. Please ensure that ratings of the LED module match with the output range of the ECG. Do not use this product for other than intended use.



Hadler GmbH declares that this control gear is in conformity with the EU explosion protection directive.

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Certificates and detailed product datasheets are available at www.hadler-gmbh.de.

For operation conditions see pages 22 – 24.

Installation precautions

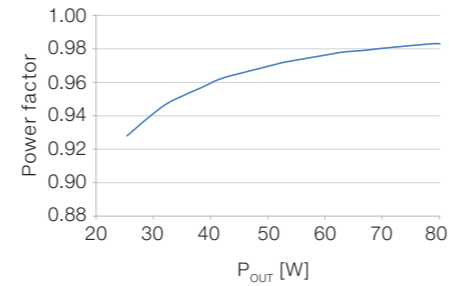
The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfills degree of protection of at least IP54.

The maximum permitted service temperature of the terminals is 85 °C.

Creepages and clearances have to be considered depending on the rated voltage when assembled in an enclosure.

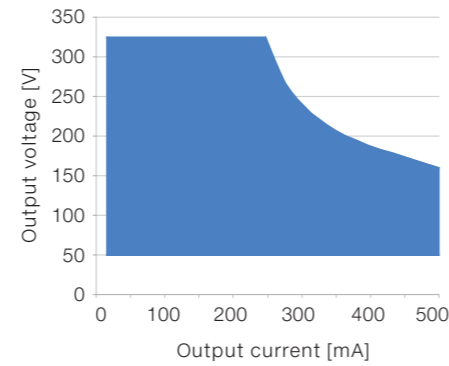
Input

Rated supply voltage	220 – 240 V
Mains frequency	0 / 50 – 60 Hz
Input voltage range a.c.	198 – 264 V
Input voltage range d.c.	176 – 275 V
Power factor	0.98 at full load (see graph)
Total Harmonic Distortion	< 8 % at full load



Output

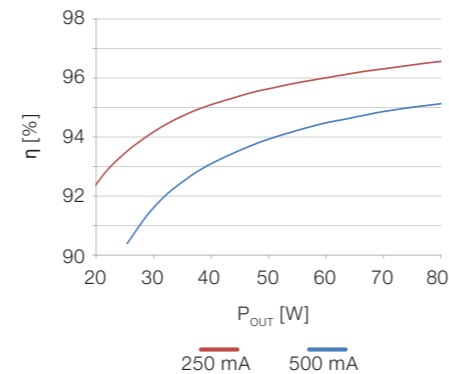
Output characteristic	Constant current, non-SELV
Output voltage	50 – 325 V (see graph)
Output current	500 mA max.
Output power	80 W max.
No. of output channels	1
Output current accuracy	+/- 5 %
Output current ripple	< 10 % at 100 Hz
Output dimming	AM, PWM (500 Hz) @ I _{out} < 128 mA*
Dimming range	3 – 100 %, 15 mA min.



* smaller AM output currents available in accordance with customer's working point

Efficiency

Stand-By Power consumption	< 0.5 W
No-load Power consumption	0.5 W
Electrical efficiency	> 0.95 at full load (see graph)



Interface

Dimming Interface	DALI, non SELV
Interface control current	≤ 2 mA
Dimming curve	log. / linear

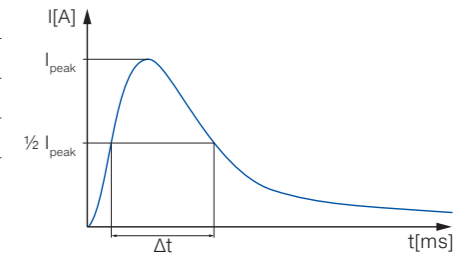
Temperature, Lifetime

Ambient temperature range	-40 – 60 °C		
Max. case temperature	80 °C		
T _a	40 °C	50 °C	60 °C
T _c	60 °C	70 °C	80 °C
lifetime	> 200,000 h	> 200,000 h	120,000 h

Inrush current

Input voltage	230 V
I _{peak}	54 A
Δt	≈ 125 μs

(measured with network impedance = 850 mΩ)



Max. No. of ECG per circuit breaker

Type	B10	8 pcs.
	C10	13 pcs.
	B16	12 pcs.
	C16	21 pcs.

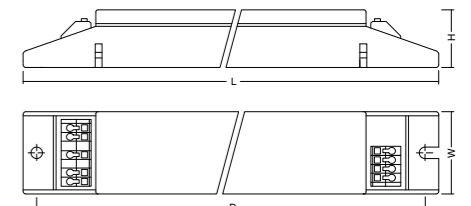
Dimensions

Length x Width x Height	360 x 30 x 21 mm
Mounting hole distance D	350 mm
Mounting screws	M4 max.

(see schematic view on the right)

Ordering data

Weight	0.18 kg
Packaging unit	72 pcs.
Order No.	3 C 180 18 6



Emergency lighting, performance during DC power supply

The electronic ballast is equipped with an integrated supply voltage detection which allows a certain DC-supply mode.

The following values are factory-adjusted:

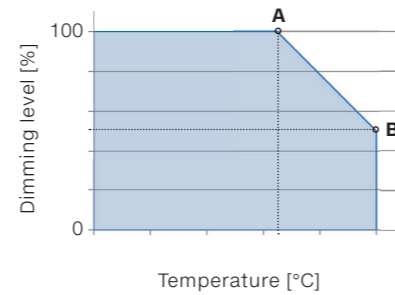
DC supply level	229	≈ 50% EOF (Emergency Output Factor)
“Time to light”	0.3 s	suitable for high-risk task area lighting

Temperature protection

The unit operates an integrated temperature overload protection which reduces the output power by linear decrease if a certain operating point “A” is reached and reduces the output power to zero if the temperature at operating point “B” is exceeded. The control gear restarts automatically if the temperature decreases by 5 K.

The following values are factory-adjusted:

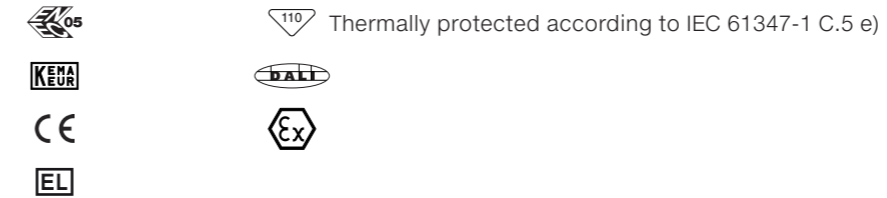
Temperature “A”	$T_{\text{board}} = 90 \text{ °C} \approx T_c = 75 - 80 \text{ °C}$
Temperature “B”	$T_{\text{board}} = 95 \text{ °C} \approx T_c = 80 - 85 \text{ °C}$
Temperature limit level “B”	229 ≈ 50%



Standards

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 62386
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 60079-0
- EN 60079-7

Markings

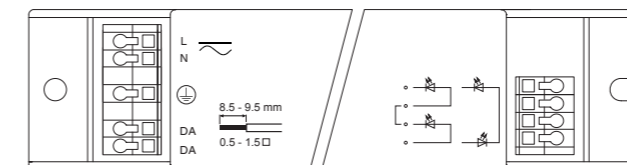


Wiring

Max. output cable length	200 cm
Input wire cross-section	0.5 – 1.5 mm ²
Output wire cross-section	0.5 – 1.5 mm ²

The wiring should be short and without crossings for best EMC results.

Wiring diagram



ECG 100 – 500 mA, 80 W, 220 – 240 V, DALI

Safety instructions

Please carefully read these instructions prior to installation and keep them for later reference.

This control gear is intended for operation of LED modules in explosion protected luminaires. Please ensure that ratings of the LED module match with the output range of the ECG. Do not use this product for other than intended use.



Hadler GmbH declares that this control gear is in conformity with the EU explosion protection directive.

An attestation of conformity according to directive 2014/35/EU (ATEX), covering types of protection "ec" and "nA", is available at www.hadler-gmbh.de.

The sign „U“ placed after certificate number and ATEX marking indicates, that the corresponding certificate is not equivalent to a Statement of Conformity for an equipment or protective system. It is intended to be used as a basis for certifying an equipment or protective system.

Certificates and detailed product datasheets are available at www.hadler-gmbh.de.

For operation conditions see pages 28 – 30.

Installation precautions

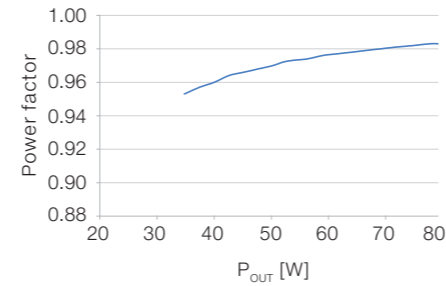
The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfills degree of protection of at least IP54.

The maximum permitted service temperature of the terminals is 85 °C.

Creepages and clearances have to be considered depending on the rated voltage when assembled in an enclosure.

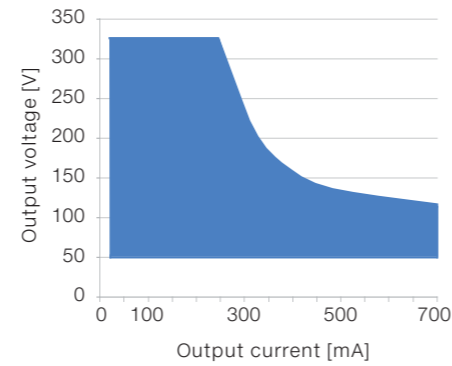
Input

Rated supply voltage	220 – 240 V
Mains frequency	0 / 50 – 60 Hz
Input voltage range a.c.	198 – 264 V
Input voltage range d.c.	176 – 275 V
Power factor	0.98 at full load (see graph)
Total Harmonic Distortion	< 8 % at full load



Output

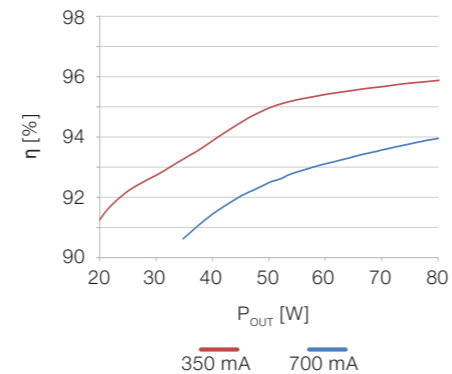
Output characteristic	Constant current, non-SELV
Output voltage	50 – 325 V (see graph)
Output current	700 mA max.
Output power	80 W max.
No. of output channels	1
Output current accuracy	+/- 5 %
Output current ripple	< 10 % at 100 Hz
Output dimming	AM, PWM (500 Hz) @ I _{out} < 200 mA*
Dimming range	3 – 100 %, 21 mA min.



* smaller AM output currents available in accordance with customer's working point

Efficiency

Stand-By Power consumption	< 0.5 W
No-load Power consumption	0.5 W
Electrical efficiency	> 0.94 at full load (see graph)



Interface

Dimming Interface	DALI, non SELV
Interface control current	≤ 2 mA
Dimming curve	log. / linear

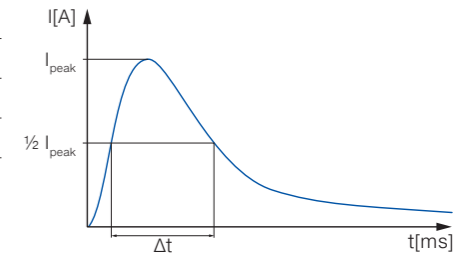
Temperature, Lifetime

Ambient temperature range	-40 – 60 °C		
Max. case temperature	80 °C		
T _a	40 °C	50 °C	60 °C
T _c	60 °C	70 °C	80 °C
lifetime	> 200,000 h	> 200,000 h	120,000 h

Inrush current

Input voltage	230 V
I _{peak}	54 A
Δt	≈ 125 μs

(measured with network impedance = 850 mΩ)



Max. No. of ECG per circuit breaker

Type	B10	8 pcs.
	C10	13 pcs.
	B16	12 pcs.
	C16	21 pcs.

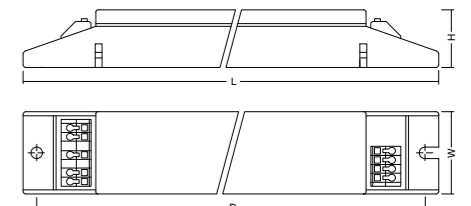
Dimensions

Length x Width x Height	360 x 30 x 21 mm
Mounting hole distance D	350 mm
Mounting screws	M4 max.

(see schematic view on the right)

Ordering data

Weight	0.19 kg
Packaging unit	72 pcs.
Order No.	3 C 180 28 6



Emergency lighting, performance during DC power supply

The electronic ballast is equipped with an integrated supply voltage detection which allows a certain DC-supply mode.

The following values are factory-adjusted:

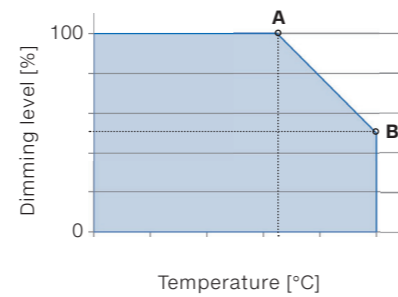
DC supply level	229	≈ 50% EOF (Emergency Output Factor)
“Time to light”	0.3 s	suitable for high-risk task area lighting

Temperature protection

The unit operates an integrated temperature overload protection which reduces the output power by linear decrease if a certain operating point “A” is reached and reduces the output power to zero if the temperature at operating point “B” is exceeded. The control gear restarts automatically if the temperature decreases by 5 K.

The following values are factory-adjusted:

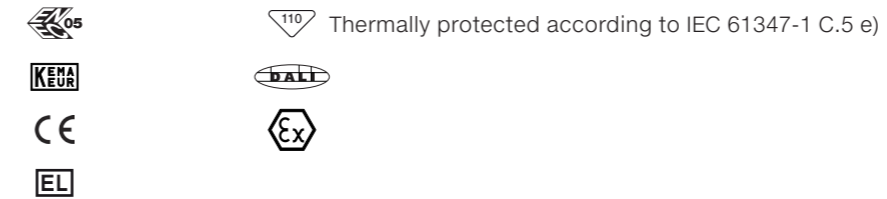
Temperature “A”	$T_{\text{board}} = 90 \text{ °C} \approx T_c = 75 - 80 \text{ °C}$
Temperature “B”	$T_{\text{board}} = 95 \text{ °C} \approx T_c = 80 - 85 \text{ °C}$
Temperature limit level “B”	229 ≈ 50%



Standards

- EN 61347-1
- EN 61347-2-13
- EN 62384
- EN 62386
- EN 55015
- EN 61547
- EN 61000-3-2
- EN 61000-3-3
- EN 60079-0
- EN 60079-7

Markings

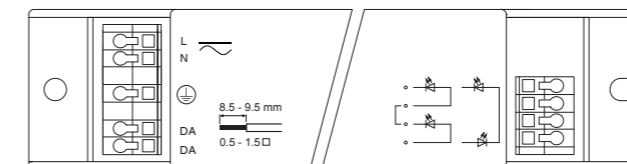


Wiring

Max. output cable length	200 cm
Input wire cross-section	0.5 – 1.5 mm ²
Output wire cross-section	0.5 – 1.5 mm ²

The wiring should be short and without crossings for best EMC results.

Wiring diagram



ECG 250 – 700 mA, 80 W, 220 – 240 V, DALI

Safety instructions

Please carefully read these instructions prior to installation and keep them for later reference.

This control gear is intended for operation of LED modules in explosion protected luminaires. Please ensure that ratings of the LED module match with the output range of the ECG. Do not use this product for other than intended use.



Hadler GmbH declares that this control gear is in conformity with the EU explosion protection directive.

An attestation of conformity according to directive 2014/35/EU (ATEX), covering types of protection "ec" and "nA", is available at www.hadler-gmbh.de.

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Certificates and detailed product datasheets are available at www.hadler-gmbh.de.

For operation conditions see pages 34 – 36.

Installation precautions

The LED Control Gear has to be installed in a suitable and separately certified enclosure which complies with the requirements of IEC 60079-7 or IEC 60079-15 and fulfills degree of protection of at least IP54.

The maximum permitted service temperature of the terminals is 85 °C.

Creepages and clearances have to be considered depending on the rated voltage when assembled in an enclosure.



<http://www.hadler-gmbh.de/en/luxtronic/all-products/>

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