# EM FIT 40/220...240/350 D CS L

# ELEMENT EM FIT Non SELV | Linear / Area Constant Current - Non dimmable



# Product family features

- Line frequency: 50 Hz | 60 Hz
- Supply voltage: 220...240 V
- Lifetime: up to 50,000 h (temperature at T<sub>c</sub> max. = -10 °C, max 10% failure rate)
- Wide output voltage range
- Fixed output (no dimming)

## Product family benefits

- Small housing design
- Flexible current setting (DIPswitch 4 currents)
- High efficiency and reliability
- Enhanced safety due to overload, overtemperature, short-circuit protection
- High light quality due to low ripple current
- Long lasting and high reliability

# Areas of application

- Linear and area lighting
- Shop lighting
- Offices, Public buildings, Supermarkets
- Industry lighting
- Suitable for luminaires of protection class I and II



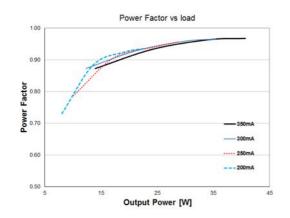
#### Technical data

#### **Electrical data**

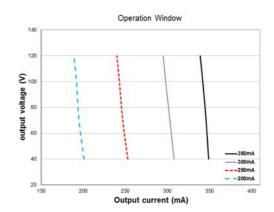
Nominal input voltage         220240 V           Mains frequency         50/60 Hz           Input voltage AC         198264 V           Current set         DipSwitch           Total harmonic distortion         < 20 % ¹¹           Power factor λ         ≥ 0.95 ²¹           Efficiency in full-load         90 % ³¹           Device power loss         5.0 W ⁴¹           Inrush current         50 A ⁵¹           Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV ⁶¹           Surge capability (L/N-Ground)         1 kV           Nominal output voltage         40120 V ⁻¹           U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA ⁶¹           Output ripple current (100 Hz)         < 10 % ⁰¹           Output PSTLM         ≤1           Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W           Galvanic isolation         Non isolated		
Input voltage AC         198264 V           Current set         DipSwitch           Total harmonic distortion         < 20 % ¹)           Power factor λ         ≥ 0.95 ²)           Efficiency in full-load         90 % ³)           Device power loss         5.0 W ⁴)           Inrush current         50 A ⁵)           Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV ⁶)           Surge capability (L-N)         1 kV           Nominal output voltage         40120 V ⁻)           U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA ⁶)           Output current tolerance         ±7.5 %           Output ripple current (100 Hz)         < 10 % ⁶)           Output SVM         ≤ 0.4           Nominal output power         4.2 W           Maximum output power         42 W	Nominal input voltage	220240 V
Current set         DipSwitch           Total harmonic distortion         < 20 % ¹¹	Mains frequency	50/60 Hz
Total harmonic distortion         < 20 % ¹)           Power factor A         ≥ 0.95 ²)           Efficiency in full-load         90 % ³)           Device power loss         5.0 W ⁴)           Inrush current         50 A ⁵)           Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV ⁶)           Surge capability (L-N)         1 kV           Nominal output voltage         40120 V ⁻)           U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA ⁶)           Output current tolerance         ±7.5 %           Output ripple current (100 Hz)         < 10 % ९)           Output PSTLM         ≤1           Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W	Input voltage AC	198264 V
Power factor λ         ≥ 0.95 <sup>2)</sup> Efficiency in full-load         90 % <sup>3)</sup> Device power loss         5.0 W <sup>4)</sup> Inrush current         50 A <sup>5)</sup> Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV <sup>6)</sup> Surge capability (L-N)         1 kV           Nominal output voltage         40120 V <sup>7)</sup> U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA <sup>8)</sup> Output current tolerance         ±7.5 %           Output ripple current (100 Hz)         < 10 % <sup>9)</sup> Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W	Current set	DipSwitch
Efficiency in full-load         90 % ³)           Device power loss         5.0 W ⁴)           Inrush current         50 A ⁵)           Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV ⁶)           Surge capability (L-N)         1 kV           Nominal output voltage         40120 V ⁻)           U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA ⁶)           Output current tolerance         ±7.5 %           Output ripple current (100 Hz)         < 10 % ց)           Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W	Total harmonic distortion	< 20 % <sup>1)</sup>
Device power loss         5.0 W ⁴¹           Inrush current         50 A ⁵¹           Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV ⁶¹           Surge capability (L-N)         1 kV           Nominal output voltage         40120 V ⁻¹           U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA ⁶¹           Output current tolerance         ±7.5 %           Output ripple current (100 Hz)         < 10 % ໑¹           Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W	Power factor λ	≥ 0.95 <sup>2</sup>
Inrush current         50 A 5)           Max. ECG no. on circuit breaker 10 A (B)         13           Max. ECG no. on circuit breaker 16 A (B)         22           Surge capability (L/N-Ground)         2 kV 6)           Surge capability (L-N)         1 kV           Nominal output voltage         40120 V 7)           U-OUT (working voltage)         250 V           Nominal output current         200 mA / 250 mA / 300 mA / 350 mA 8)           Output current tolerance         ±7.5 %           Output ripple current (100 Hz)         < 10 % 9)           Output SVM         ≤1           Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W	Efficiency in full-load	90 % <sup>3)</sup>
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U-OUT (working voltage)       250 V         Nominal output current       200 mA / 250 mA / 300 mA / 350 mA <sup>8</sup> )         Output current tolerance       ±7.5 %         Output ripple current (100 Hz)       < 10 % <sup>9</sup> )         Output PSTLM       ≤1         Output SVM       ≤0.4         Nominal output power       842 W         Maximum output power       42 W	Surge capability (L-N)	
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Output current tolerance     ±7.5 %       Output ripple current (100 Hz)     < 10 % 9)       Output PSTLM     ≤1       Output SVM     ≤0.4       Nominal output power     842 W       Maximum output power     42 W	U-OUT (working voltage)	250 V
Output ripple current (100 Hz)       < 10 % 9)         Output PSTLM       ≤1         Output SVM       ≤0.4         Nominal output power       842 W         Maximum output power       42 W	Nominal output current	200 mA / 250 mA / 300 mA / 350 mA <sup>8)</sup>
Output PSTLM         ≤1           Output SVM         ≤0.4           Nominal output power         842 W           Maximum output power         42 W	Output current tolerance	±7.5 %
Output SVM       ≤0.4         Nominal output power       842 W         Maximum output power       42 W	Output ripple current (100 Hz)	< 10 % <sup>9)</sup>
Nominal output power 842 W Maximum output power 42 W	Output PSTLM	≤1
Maximum output power 42 W	Output SVM	≤0.4
	Nominal output power	842 W
Galvanic isolation Non isolated	Maximum output power	42 W
	Galvanic isolation	Non isolated

- 1) At full load
- 2) Full load at 220...240  $V_{\rm AC}^{\rm}/50~{\rm Hz}$
- 3) at 230 V, 50 Hz
- 4) At 230 V
- 5) t  $_{\rm width}$  = 120 µs typical (measured at 50 % I  $_{\rm peak}$ ) 6) L/N PE acc to EN 61547 Cluase 5.7
- 7) At 200/250 mA output current / At 300/350 mA output current
- 8) ±7.5%
- 9) Ripple average at 100 Hz

### Typical Power Factor v Load

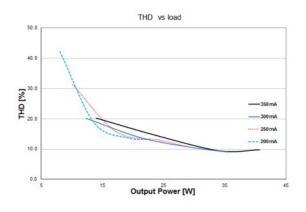


## **Operating Window**



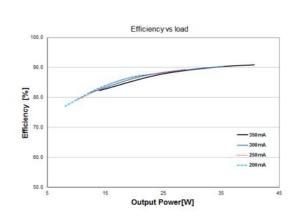
EM FIT 40 220-240 350 D CS L Typical Power Factor vs. Load

## Typical THD v Load



EM FIT 40 220-240 350 D CS L Operating Window

## Typical Efficiency v Load 230 V 50 Hz

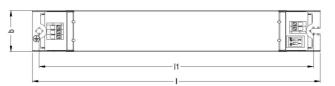


EM FIT 40 220-240 350 D CS L Typical THD vs Load

EM FIT 40 220 240 350 D CS L Typical Efficiency vs Load

## **Dimensions & weight**









Length	210.0 mm
Width	30.0 mm
Height	21.0 mm
Mounting hole spacing, length	200.0 mm
Cable cross-section, input side	0.51.5 mm <sup>2</sup> / 0.751.5 mm <sup>2</sup> <sup>1)</sup>
Cable cross-section, output side	0.51.5 mm² / 0.751.5 mm² <sup>1)</sup>
Wire preparation length, input side	78 mm
Wire preparation length, output side	78 mm
Product weight	130.00 g

<sup>1)</sup> Solid or flexible leads

## **Colors & materials**

Cooling motorial	Motel
Casing material	Metal

#### **Temperatures & operating conditions**

Ambient temperature range	-20+50 °C
Maximum temperature at tc test point	75 °C
Max.housing temperature in case of fault	110 °C
Temperature range at storage	-40+85 °C
Permitted rel. humidity during operation	590 % <sup>1)</sup>

<sup>1)</sup> Non-condensing



#### **Expected Lifetime**

Product name			
	ECG ambient temperature [ta]		
EM FIT 40/220240/350 D CS	Temperature at tc-point [°C]	75	
	Lifetime [h]		

#### Lifespan

ECG lifetime	35000 h / 50000 h <sup>1)</sup>

<sup>1)</sup> At maximum  $T_c = 65^{\circ}C / 10\%$  failure rate / At maximum  $T_c = 60^{\circ}C / 10\%$  failure rate

## Additional product data

Encapsulated N	No
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## Capabilities

Programming interface	Dipswitch
Dimmable	No
Constant lumen function	No
Max. cable length to lamp/LED module	2.0 m <sup>1)</sup>
Suitable for fixtures with prot. class	I
Type of connection, input side	Terminal
Type of connection, output side	Terminal
Number of channels	1
Overheating protection	Automatic reversible
Overload protection	Automatic reversible
Short-circuit protection	Automatic reversible
Intended for no-load operation	No
No-load proof	Yes

<sup>1)</sup> Output wires must be routed as close as possible to each other



## **Programming**

Programming device	DIPswitch
Tuner4TRONIC	No
Tuner4TRONIC Field App	No
Box programming	No

#### Certificates & standards

Approval marks – approval	CE / ENEC / CCC / UKCA / RCM / EAC / TISI
Standards	Acc. to IEC 61000-3-2 / Acc. to IEC 61347-1 / Acc. to IEC 61347-2-13 / Acc. to IEC 61547 / Acc. to IEC 62384 / CISPR 15/EN 55015
Type of protection	IP20
Protection class	I

# Logistical data

Commodity code	85044083900

#### **Environmental information**

Information according Art. 33 of EU Regulation (EC) 1907/2006 (REACh)		
Date of Declaration	24-03-2024	
Primary Article Identifier	4062172219914	
Declaration No. in SCIP database	In work	



#### **Download Data**

File				
Certificates	PDF	►OT constant current EAC DE PA01 B 34987 21 071221		
Certificates	PDF	►EM FIT D CS L CB NL 73951 M1 071221		
Certificates	PDF	►EM FIT CS L&D CS L ENEC 35 120653 071221		
Certificates	PDF	►EM FIT 40 D CS L CCC 2021171002004163 071221		
Certificates	PDF	►NSW27963 2 certificate of EM FIT D CS L		
Mandatory Publications	PDF	►EM FIT D CS L CE 4332160 161023		
Mandatory Publications	PDF	►EM FIT D CS L UK DoC 4332161 280721		
User instruction	PDF	►ELEMENT LED Power Supply		

#### Ecodesign regulation information:

Intended for use with LED modules.

The forward voltage of the LED light source shall be within the defined operating window of the control gear in all operating conditions including dimming if applicable.

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.



## **Logistical Data**

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4062172219914	EM FIT 40/220240/350 D CS L	Shipping carton box 20 Pieces	375 x 250 x 75 mm	7.03 dm³	3034.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit

#### Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.