



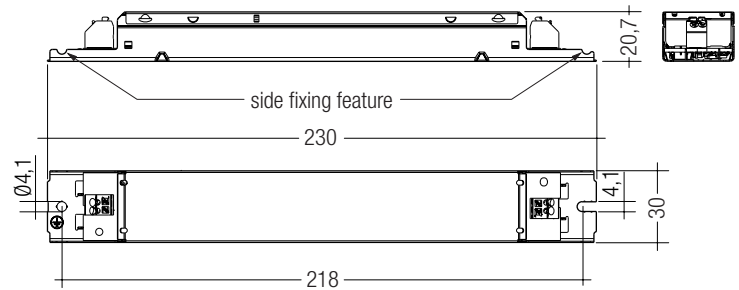
IP20 

### Driver LC 25W 250/300/350/500mA fixC Ip SNC

ESSENCE series

#### Technical data

Rated supply voltage	220 – 240 V
AC voltage range	198 – 264 V
Input current (at 230 V, 50 Hz, full load)	0.13 A
Mains frequency	50 / 60 Hz
Output power range	15 – 25 W
THD (at 230 V, 50 Hz, full load)	< 20 %
Output current tolerance <sup>①</sup>	± 7.5 %
Typ. current ripple (at 230 V, 50 Hz, full load)	± 30 %
Turn on time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Turn off time (at 230 V, 50 Hz, full load)	≤ 0.5 s
Hold on time at power failure (output)	0 s
Ambient temperature ta	-20 ... +50 °C
Ambient temperature ta (at life-time 50,000 h)	40 °C
Storage temperature ts	-40 ... +80 °C
Dimensions L x W x H	230 x 30 x 21 mm
Hole spacing D	218 mm



#### Ordering data

Type	Article number	Packaging, carton	Packaging, low volume	Packaging, high volume	Weight per pc.
LC 25W 250mA fixC Ip SNC	87500440	50 pc(s).	1,050 pc(s).	3,150 pc(s).	0.126 kg
LC 25W 300mA fixC Ip SNC	87500439	50 pc(s).	1,050 pc(s).	3,150 pc(s).	0.126 kg
LC 25W 350mA fixC Ip SNC	87500438	50 pc(s).	1,050 pc(s).	3,150 pc(s).	0.126 kg
LC 25W 500mA fixC Ip SNC	87500464	50 pc(s).	1,050 pc(s).	3,150 pc(s).	0.126 kg

#### Specific technical data

Type	Output current <sup>③</sup>	Max. input power	Typ. power consumption (at 230 V, 50 Hz, full load)	Power factor at full load <sup>①</sup>	Efficiency at full load <sup>①</sup>	Power factor at min. load <sup>①</sup>	Efficiency at min. load <sup>①</sup>	Min. forward voltage <sup>②</sup>	Max. forward voltage <sup>②</sup>	Max. output voltage	Max. peak output current at full load <sup>②③</sup>	Max. peak output current at min. load <sup>②③</sup>	Max. casing temperature tc
LC 25W 250mA fixC Ip SNC	250 mA	28.0 W	27.5 W	0.95	89 %	0.9C	88 %	60 V	100.0 V	300 V	330 mA	350 mA	65 °C
LC 25W 300mA fixC Ip SNC	300 mA	28.5 W	27.0 W	0.95	90 %	0.9C	88 %	50 V	83.5 V	300 V	370 mA	400 mA	65 °C
LC 25W 350mA fixC Ip SNC	350 mA	28.5 W	27.0 W	0.95	90 %	0.9C	88 %	43 V	71.5 V	300 V	430 mA	475 mA	65 °C
LC 25W 500mA fixC Ip SNC	500 mA	28.0 W	27.5 W	0.95	89 %	0.9C	86 %	30 V	50.0 V	300 V	620 mA	680 mA	65 °C

<sup>①</sup> Test result at 230 V, 50 Hz.

<sup>②</sup> The trend between min. and full load is linear.

<sup>③</sup> Output current is mean value.

**Standards**

EN 55015  
 EN 61000-3-2  
 EN 61000-3-3  
 EN 61347-1  
 EN 61347-2-13  
 EN 61547

**Overload protection**

If the output voltage range is exceeded the LED Driver will protect itself and LED may flicker. After elimination of the overload, the nominal operation is restored automatically.

**Short-circuit behaviour**

In case of a short circuit on the output side (LED) the LED Driver switches into hic-cup mode. After elimination of the short-circuit fault the LED Driver will recover automatically.

**No-load operation**

The LED Driver works in burst working mode to provide a constant output voltage regulation which allows the application to be able to work safely when LED string opens due to a failure.

**Installation instructions**

The LED module and all contact points within the wiring must be sufficiently insulated against 4 kV surge voltage.  
 Air and creepage distance must be maintained.

**Replace LED module**

1. Mains off
2. Remove LED module
3. Wait for 30 seconds
4. Connect LED module again

Hot plug-in or output switching of LEDs is not permitted and may cause a very high current to the LEDs.

**Expected life-time**

Type	ta	40 °C	50 °C	60 °C
<b>LC 25W 250mA fixC Ip SNC</b>	tc	55 °C	65 °C	x
	Life-time	50,000 h	25,000 h	x
<b>LC 25W 300mA fixC Ip SNC</b>	tc	55 °C	65 °C	x
	Life-time	50,000 h	25,000 h	x
<b>LC 25W 350mA fixC Ip SNC</b>	tc	55 °C	65 °C	x
	Life-time	50,000 h	25,000 h	x
<b>LC 25W 500mA fixC Ip SNC</b>	tc	55 °C	65 °C	x
	Life-time	50,000 h	25,000 h	x

The LED Driver is designed for a life-time stated above under reference conditions and with a failure probability of less than 10 %.

**Maximum loading of automatic circuit breakers**

Automatic circuit breaker type	C10	C13	C16	C20	B10	B13	B16	B20	Inrush current
Installation Ø	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	I <sub>max</sub> Time
<b>LC 25W 250mA fixC Ip SNC</b>	70	90	110	140	60	80	100	125	4 A 32 µs
<b>LC 25W 300mA fixC Ip SNC</b>	70	90	110	140	60	80	100	125	4 A 32 µs
<b>LC 25W 350mA fixC Ip SNC</b>	70	90	110	140	60	80	100	125	4 A 32 µs
<b>LC 25W 500mA fixC Ip SNC</b>	70	90	110	140	60	80	100	125	4 A 32 µs

**Harmonic distortion in the mains supply (at 230 V / 50 Hz and full load) in %**

	THD	3.	5.	7.	9.	11.
<b>LCI 25W 250mA fixC Ip SNC</b>	< 20	< 13	< 2	< 1	< 1	< 1
<b>LCI 25W 300mA fixC Ip SNC</b>	< 20	< 13	< 3	< 1	< 2	< 2
<b>LCI 25W 350mA fixC Ip SNC</b>	< 20	< 17	< 5	< 2	< 1	< 1
<b>LCI 25W 500mA fixC Ip SNC</b>	< 20	< 14	< 3	< 2	< 2	< 2

**Mounting of device**

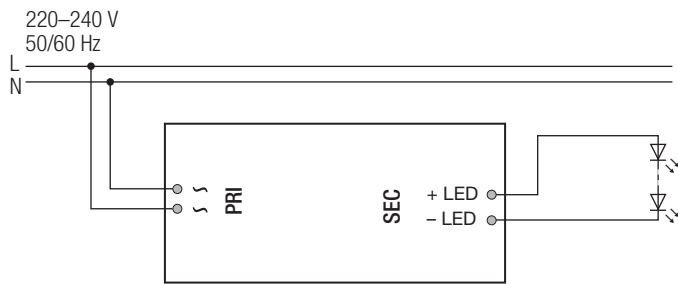
Max. torque for fixing: 0.5 Nm/M4

**Storage conditions**

Humidity: 5% up to max. 85 %,  
 not condensed  
 (max. 56 days/year at 85 %)

Storage temperature: -40 °C up to max. +80 °C

The devices have to be within the specified temperature range (ta) before they can be operated.

**Wiring diagram****Isolation and electric strength testing of luminaires**

Electronic devices can be damaged by high voltage. This has to be considered during the routine testing of the luminaires in production.

According to IEC 60598-1 Annex Q (informative only!) or ENEC 303-Annex A, each luminaire should be submitted to an isolation test with 500 V<sub>DC</sub> for 1 second. This test voltage should be connected between the interconnected phase and neutral terminals and the earth terminal. The isolation resistance must be at least 2 MΩ.

As an alternative, IEC 60598-1 Annex Q describes a test of the electrical strength with 1500 V<sub>AC</sub> (or 1.414 x 1500 V<sub>DC</sub>). To avoid damage to the electronic devices this test must not be conducted.

**Additional information**

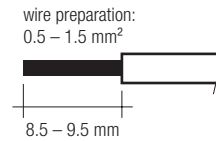
Additional technical information at [www.tridonic.com](http://www.tridonic.com) → Technical Data

Guarantee conditions at [www.tridonic.com](http://www.tridonic.com) → Services

Life-time declarations are informative and represent no warranty claim. No warranty if device was opened.

**Wiring type and cross section**

The wiring can be stranded wires with ferrules or rigid wires with a cross section of 0.5 – 1.5 mm<sup>2</sup>. Strip 8.5 – 9.5 mm of insulation from the cables to ensure perfect operation of the push-wire terminals (WAGO 250).

**Wiring guidelines**

- All connections must be kept as short as possible to ensure good EMI behaviour.
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Max. length of output wires is 2 m.
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metal parts, metal cable clips, louver, etc.).

**Earth connection**

The earth connection is conducted as protection earth (PE). The LED Driver can be earthed via metal housing. If the LED Driver will be earthed, protection earth (PE) has to be used. There is no earth connection required for the functionality of the LED Driver. Earth connection is recommended to improve following behaviour.

- Electromagnetic interferences (EMI)
- Transmission of mains transients to the LED output

In general it is recommended to earth the LED Driver if the LED module is mounted on earthed luminaire parts respectively heat sinks and thereby representing a high capacity against earth.

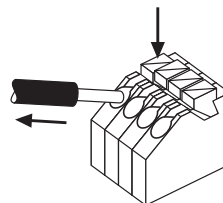
For Class I application, protection earth need to be connected with the metal housing (bottom part).

For Class II application, protection earth is no need to be connected, below 2 scenarios should be considered:

- If the LED Driver housing is screw on a metal part inside the luminaires, both LED Driver and LED module must be isolated.
- If the LED Driver housing is screw on a plastic part inside the luminaires, the LED module need to be isolated.

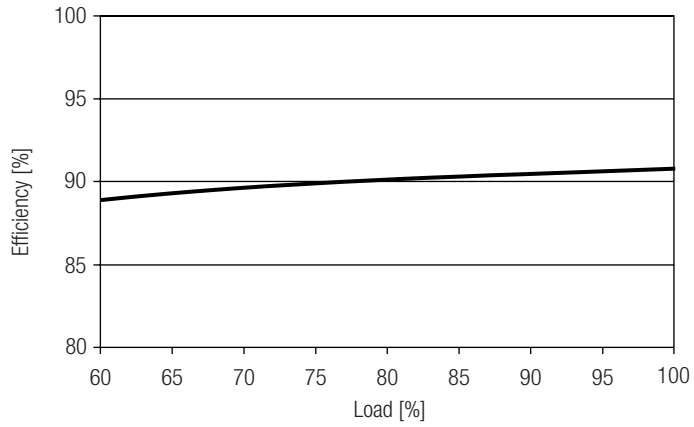
**Release of the wiring**

Press down the "push button" and remove the cable from front.

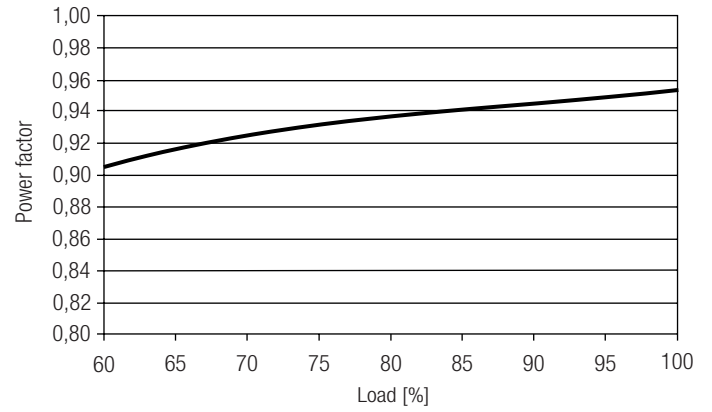


## Diagrams LC 25W 250mA fixC Ip SNC

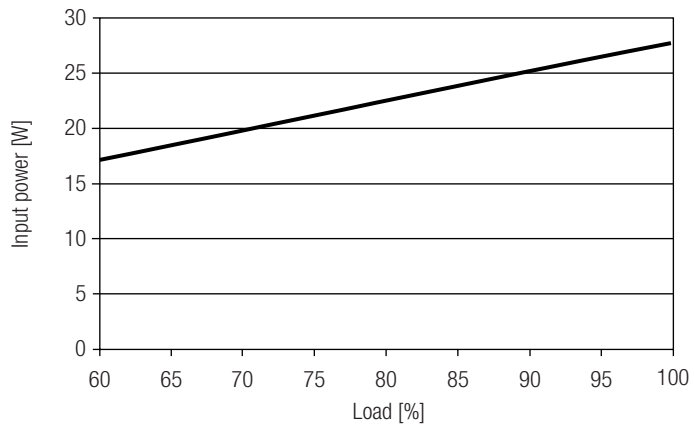
Efficiency vs load



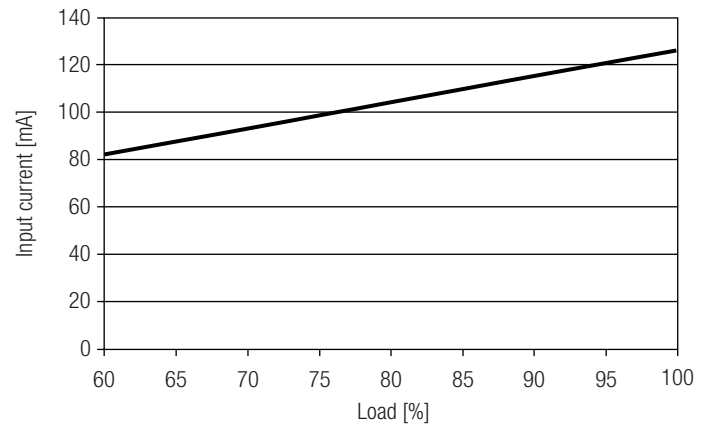
Power factor vs load



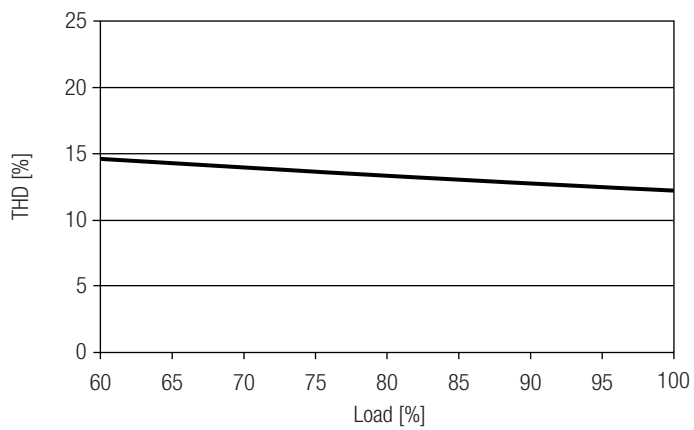
Input power vs load



Input current vs load

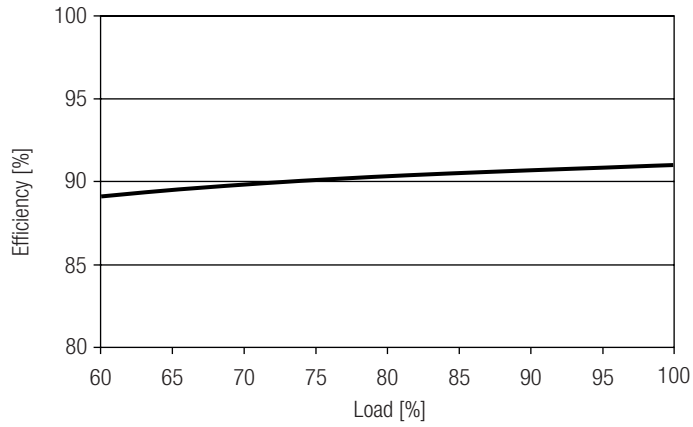


THD vs load

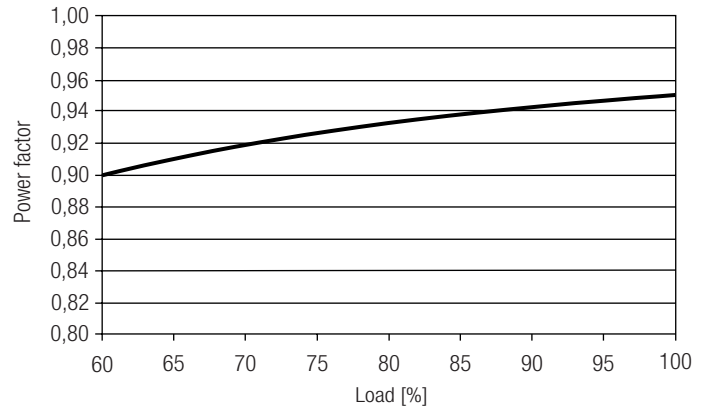


Diagrams LC 25W 300mA fixC Ip SNC

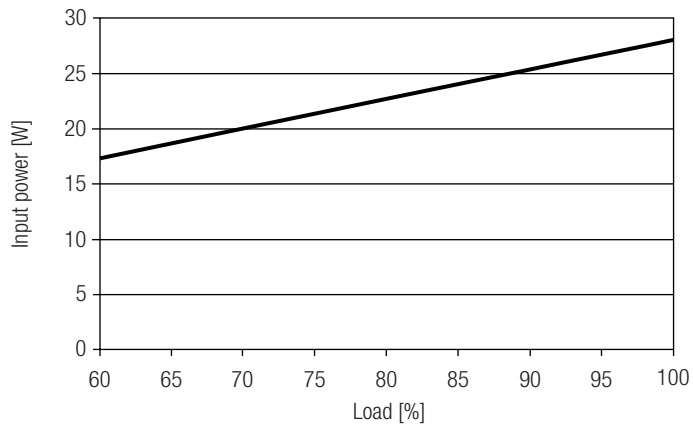
Efficiency vs load



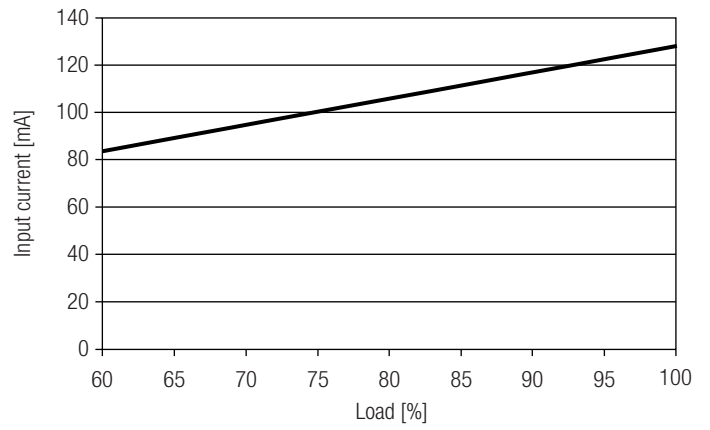
Power factor vs load



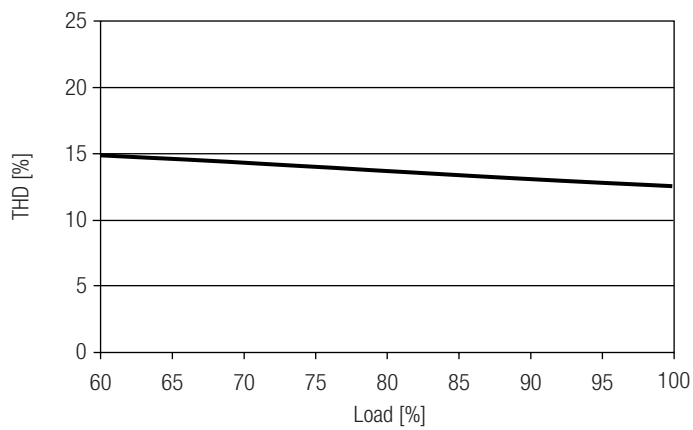
Input power vs load



Input current vs load

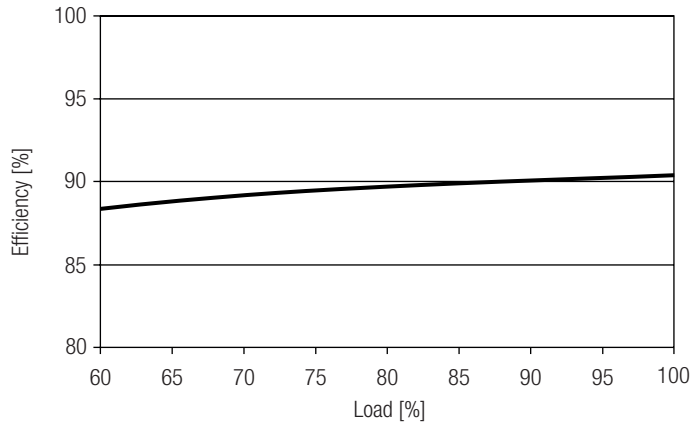


THD vs load

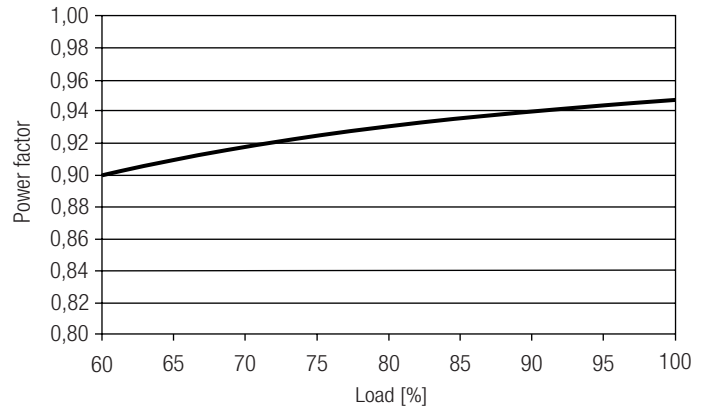


Diagrams LC 25W 350mA fixC Ip SNC

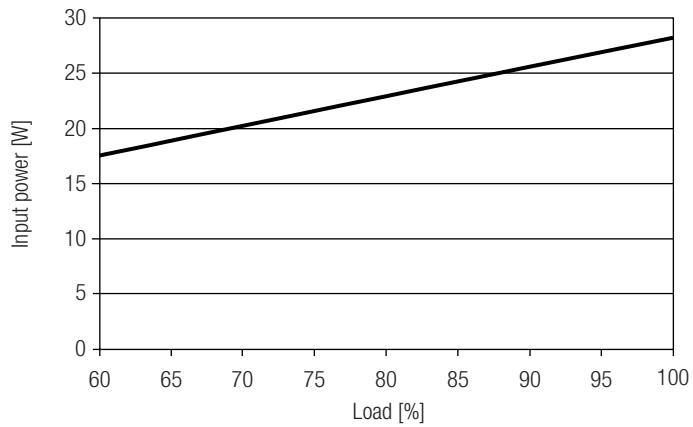
Efficiency vs load



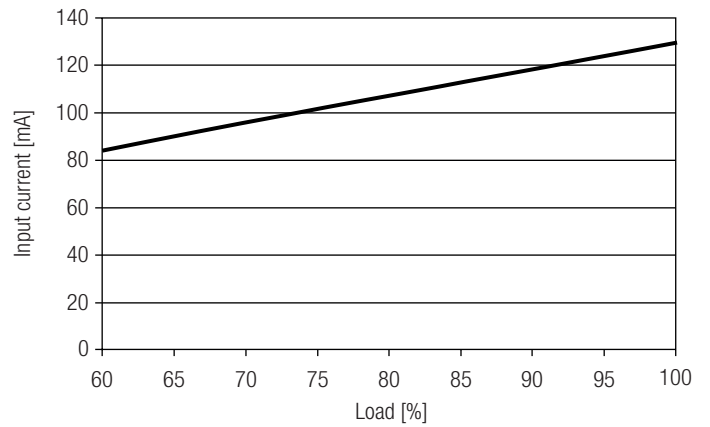
Power factor vs load



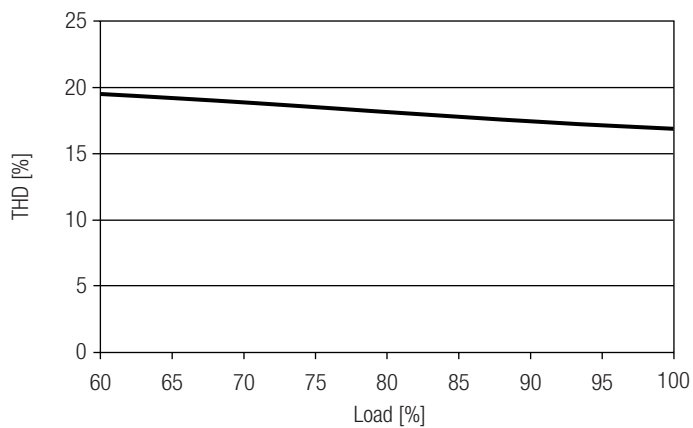
Input power vs load



Input current vs load

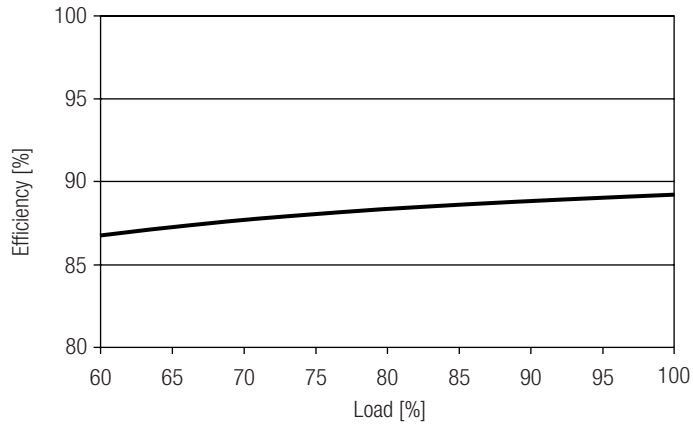


THD vs load

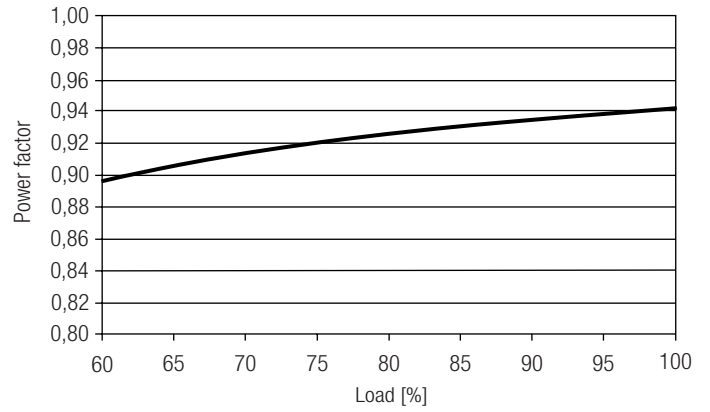


Diagrams LC 25W 500mA fixC Ip SNC

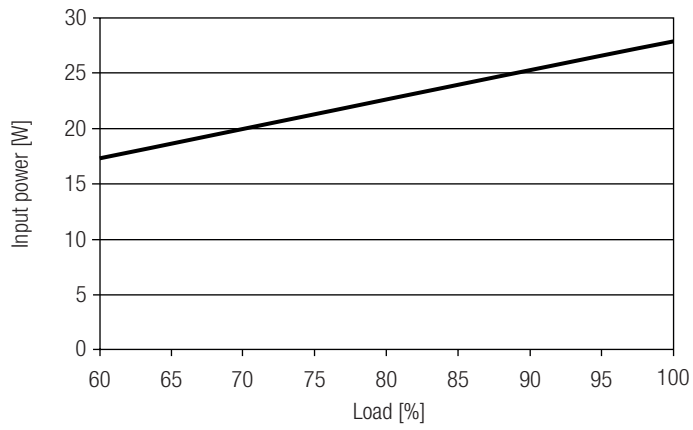
Efficiency vs load



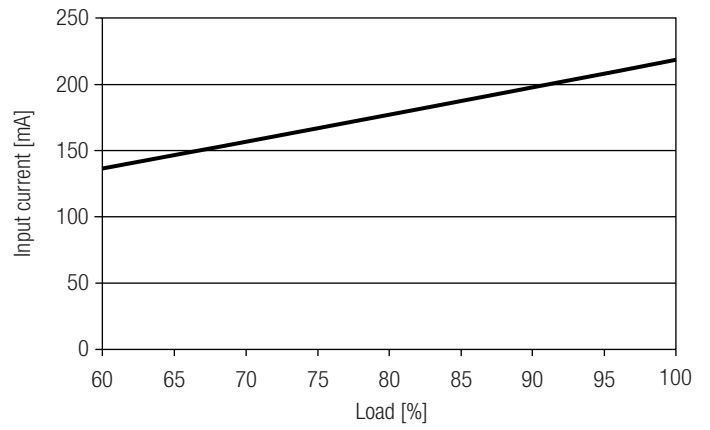
Power factor vs load



Input power vs load



Input current vs load



THD vs load

