



Firma / Company : FRIWO Gerätebau GmbH

Gerätetyp / Type : FW7713/EU

Artikelnr. / Part-No. : 1894289

Zeichnungsnr. / Drawing-No. : 15.3693.511-00

Datum / Date : 2011-10-25

Sachbearbeiter Verkauf / Contact Sales : Werk

Sachbearbeiter Mechanik / Contact Mech. Eng. : FESTSH

Sachbearbeiter Elektronik / Contact Elec. Eng. : FEJAJN

Freigabe App. / Approved App. : FEPAZH

Freigabe / Approved : FELCCH

Wir bitten Sie, ein Exemplar mit Freigabevermerk an uns zurückzusenden. Sollten Sie dieser Spezifikation nicht unverzüglich widersprechen, gilt die Zustimmung und Fertigungsfreigabe auf Grundlage dieser Spezifikation als erteilt.

We may ask you to return one signed copy of this specification for our records as having your approval. Unless you do not enter your objection to the latest specification issue without delay, your acceptance and release for production on the basis of this specification is deemed to be given.

Kundenfreigabe / Customer Release:

Datum / Date:

Unterschrift / Signature:

Index / Rev.	Datum / Date	Name	Einzelheit / Detail
Ⓐ	2011/12/07	James Jin	MR2012-1-1006:change the housing labelling,see 2.1.1;change the p...
Ⓑ	2012/02/14	James Jin	MR2012-1-1142:change the printing,see 2.1.1;change the ESD test l...
Ⓒ	2013/06/14	Kuhn	MR2013-0-1428: Declaration of conformity corrected, see point 8.
Ⓓ	2013/07/04	Schmidt	MR2013-0-1486: Bottom inscription changed to 15-3693-501-16FO.

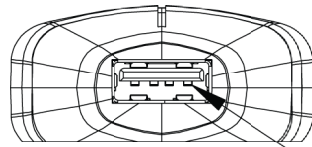
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 St.-Nr. 346/5840/0923
 Finanzamt Warendorf
 USt.-Ident.-Nr. DE811114890
 Amtsgericht Münster
 HRB 9325

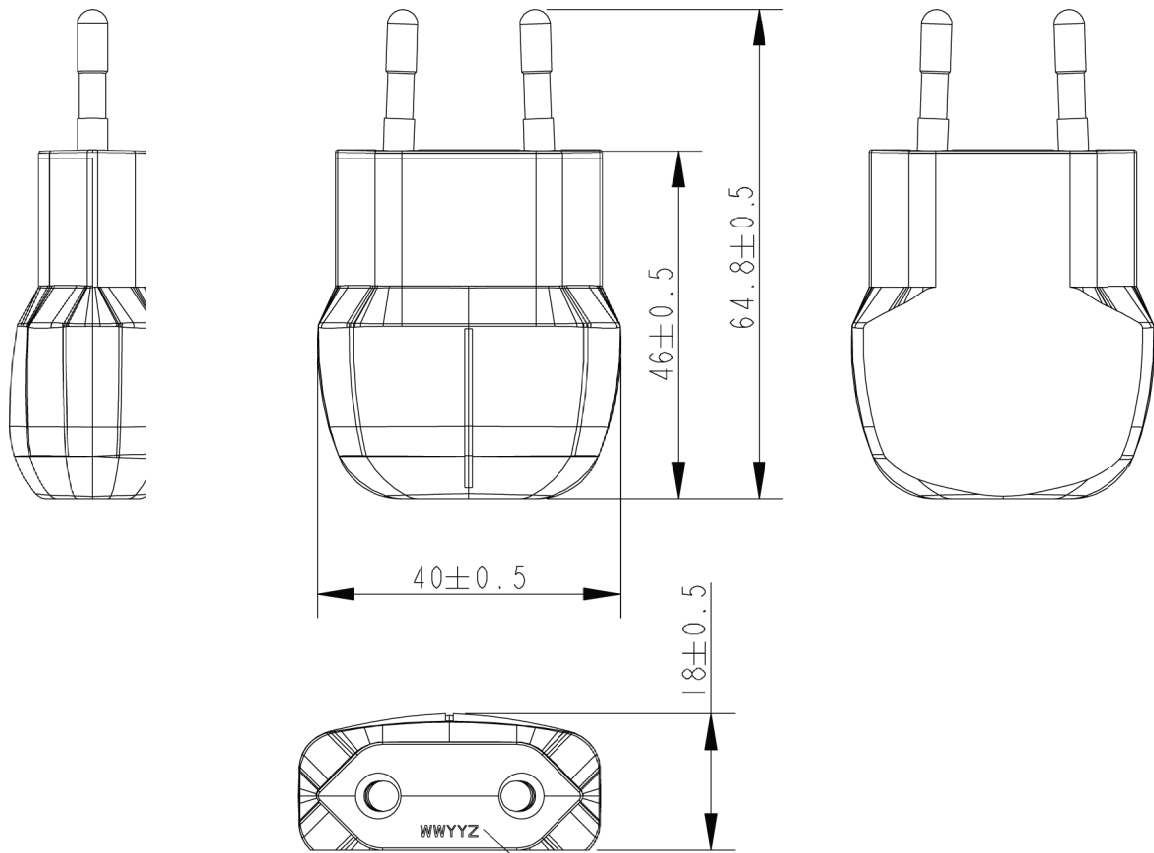
Bankverbindung / Bank Details
 Sparkasse Münsterland-Ost
 BLZ 400 501 50 (EUR) Kto. 5 000 526
 IBAN DE42 4005 0150 0005 0005 26
 BLZ 400 501 50 (USD) Kto. 86 0000 23
 SWIFT WELADED1MST
 Commerzbank AG, Frankfurt a. M.
 BLZ 500 400 00 Kto. 5 811 419
 IBAN DE05 5004 0000 0581 1419 00

1 Gehäuse / Housing:

Gehäusetyp / housing-typ: USB
 Material: PC/ABS V1 125°C
 Farbe Boden/ bottom colour: black
 Farbe Deckel/ cover colour: black



USB Socket "A" type



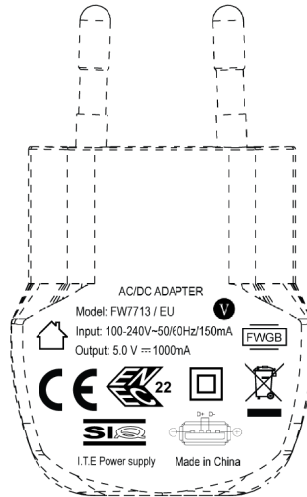
"WYYZ"
 W=Week Y=Year Z=Factory Code
 Note:without/ohne mark = FRIWO Gerätebau GmbH Germany

2 Gehäuseaufschriften / Housing labelling:

2.1 Bodenbeschriftung / Bottom labelling

2.1.1

15.3693.501-16FO



Print colour of font: white

3 Verpackung / packaging:**3.1 Einzelverpackung / individual packaging:**
15.3693.056-10

mit Beschriftung * / with printing *

* AC/DC ADAPTER
SPEC.-NO.:15.3693
PART-NO.:1894289
OUTPUT:5V DC/1,0A
INPUT:100-240V AC

3.1.1 Aussenabmessungen / Outer dimensions: 65mm x 25mm x 43mm

3.2 Sammelverpackung / bulk packaging:
28 er UMKARTON / Carton 28

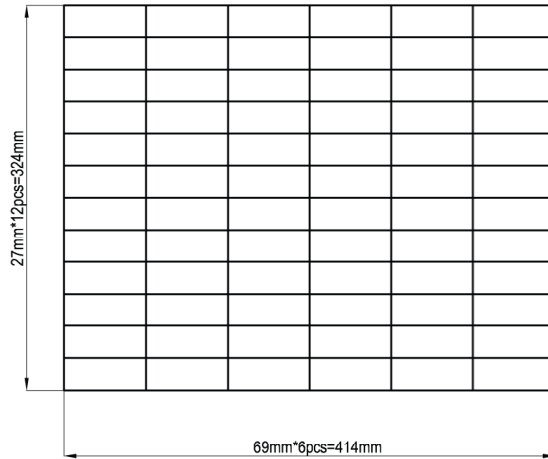
3.2.1 Aussenabmessungen / Outer dimensions: 433mm x 338mm x 196mm

3.3 Anzahl der Geräte pro Umkarton / amount of units per master carton: 288
72 units per Layer/4layer per carton**3.4 Gewicht pro Stück / weight per unit: 25 g****3.5 Lagertemperatur / storage temperature: -20°C - +70°C / 5 to 95 rel. hum.**

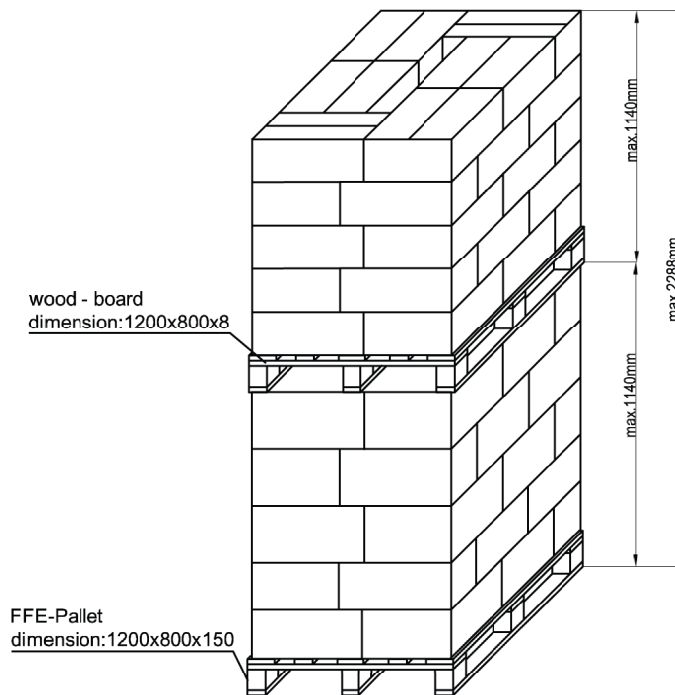
3.6 Verpackungsvorschriften / packaging specification:

- 1, 1821105 white label 152x102mm: for printing Model Number, Part Number etc.
- 2, One label on each master carton, labels must face out on a loaded pallet.

Inner package:



Pallet package:



Notes:

- 1) 288 pcs per carton
- 2) 6 carton per layer
- 3) 5 layer per pallet
- 4) total 8640 pcs per 5-layer-pallet

Notes:

- 1) 288 pcs per carton
- 2) 6 carton per layer
- 3) 5 layer per pallet
- 4) total 8640 pcs per 5-layer-pallet

1 stack (5-layer-pallet and 5-layer-pallet)
 = (8640pcs. + 8640 pcs.)
 = 17280 pcs per stack

22 pallets (11 stacks of each type)
 =190080 pcs. per 20ft container

48 pallets (24 stacks of each type)
 =414720 pcs. per 40ft container

4 Allgemeine Prüfbedingungen / General test conditions:

4.1 In einem Bereich der Umgebungstemperatur von 0°C bis +40°C bei 90% relativer Luftfeuchte, keine Betauung, muss die einwandfreie Funktion des Gerätes gewährleistet sein.

Within an ambient temperature range from 0°C to +40°C at 90% relative humidity, no condensation, the faultless function of the unit must be guaranteed.

5 Elektrische Prüfbedingungen / electrical tests:

5.1 Alle nachstehend aufgeführten Werte werden bei +25°C Raumtemperatur und nach 15 Minuten Einschaltdauer gemessen.

All values listed below are measured at an ambient temperature of +25°C and after 15 minutes of operation.

5.2 Eingangsdaten / Input data:

- 5.2.1 Nenneingangsspannung : 100-240V AC +10/-10%
Nominal input voltage : 100-240V AC +10/-10%
- 5.2.2 Nenneingangsfrequenz : 50-60Hz
Nominal input frequency : 50-60Hz
- 5.2.3 Nenneingangsstrom : 0.15Arms @ bei Maxlast
Nominal input current : 0.15Arms @ max load
- 5.2.4 Leerlaufleistungsaufnahme bei U_E : 230V AC : $\leq 0.1W$
Stand-by power consumption at U_{In} : 230V AC : $\leq 0.1W$

5.3 Ausgangsdaten / Output data

Messaufbau siehe / Measuring setup see <http://www.friwo.de>

- 5.3.1 Ausgangsspannung: U_A : 5V DC +5% / -5% U_{Br} : $\leq 300mV_{ss}$
Nominal output voltage: U_{out} : 5V DC +5% / -5% U_{Br} : $\leq 300mV_{pp}$

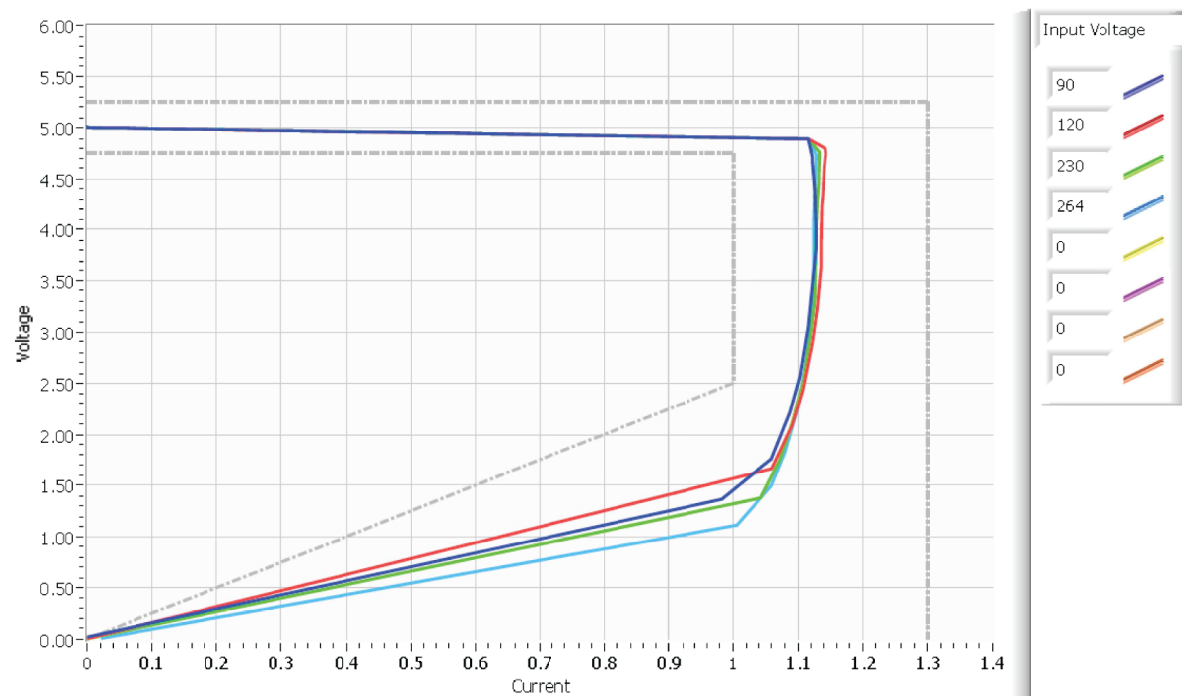
Ripple&Noise Test: Add 0.1uF/50V ceramic capacitor in parallel with a 10uF/50V E-Cap across the output terminal. Measured with 20MHz Bandwidth Oscilloscope. Ripple&Noise should be less than 300mV_{p-p}.

- 5.3.2 Nennausgangsstrom : I_A : 1000mA
Nominal output current : I_{out} : 1000mA

5.4 Efficiency

Efficiency can meet Energy Star Level " V " ($\geq 68.2\%$ measured at USB socket)

5.4.1 Ausgangskennlinie / Output characteristic:



5.4.2 Startup and Turn-on Delay

Power supply shall be able to start up into a resistive load up to the maximum rated current. The elapsed time between the application of input power and the attainment of output voltage to the nominal value shall not exceed 3 seconds.

5.4.3 Short-Circuit Protection

The power supply shall withstand a continuous output short circuit without damage. The short circuit may be applied before power-up, or after power-up. The power supply shall resume normal operation after the short circuit is removed.

6 Sicherheitsanleitung / Safety details:

Sicherheitsaufbau nach / Safety-standard: EN60950-1
 acc. to

Schutzklasse / Protection class : II

Trennung (prim.-sek.) : Galvanisch durch Wandler

Separation (prim.-sec.) : Galvanic by transformer

Kriech- und Luftstrecken / Creepage distance and clearance : \geq Kr : 5mm, Lu : 4,4mm ; Cr : 5mm, Cl : 4,4mm

Ableitstrom : I Ableit \leq 250 μ A
 Gemessen nach EN60950-1 siehe www.friwo.de

Leakage current : I leak \leq 250 μ A
 According to EN60950-1 see www.friwo.de

Hochspannungstest / High-voltage test : \geq 3kVac

Anwendungsbereich : Einrichtungen der Informationstechnik, einschließlich elektrische Büromaschinen

Range of application : Information Technology Equipment including electrical office equipment

Umgebungstemperatur / Ambient temperature range : 0°C bis / to +40°C

*This product complies with USB-IF Battery Charging Specifications Version 1.2.

7 CE-Konformitätserklärung / Declaration of Conformity

Wir, der Hersteller, erklären hiermit, dass das Produkt: /
 We, the manufacturer, hereby confirm, that the product:

Gerätetyp / Type: FW7713/EU
 Artikel-Nr. / Part-No.: 1894289
 Zeichnungs-Nr. / Drawing-No.: 15.3693.511-00

weitere Merkmale /
 additional information:

mit der beiliegenden Beschreibung die Anforderungen der Niederspannungsrichtlinie 2006/95/EG, der EMV-Richtlinie 2004/108/EG und Öko-Design Richtlinie 2009/125/EG erfüllt.

Hiermit bestätigen und garantieren wir, dass unsere Produkte, unabhängig von der Produktionsstätte, RoHS-konform produziert werden und die Anforderungen der EU Richtlinie 2002/95/EC (Neufassung der Richtlinie 2011/65/EU) erfüllen.

with the enclosed description fulfils the requirements of the Low Voltage Directive 2006/95/EC, the regulations of the EMC Directive 2004/108/EC and the eco design Directive 2009/125/EC.

Hereby, we certify and guarantee that our products, regardless of the production location, RoHS compliant and fulfill the directive 2002/95/EC (revised version: directive 2011/65/EU).

Das Gerät entspricht der / The unit corresponds to:

a) Niederspannungsrichtlinie / Low Voltage Directive	b) EMV-Richtlinie / EMC Directive	c) Öko Design / ECO Design
<input type="checkbox"/> EN 60950-1 01/2011	<input type="checkbox"/> EN 55022 12/2011 <input type="checkbox"/> EN 55024 09/2011	<input type="checkbox"/> Step 2



Quality Manager

i. V. Michael Meibeck

Ausstelldatum / Date of issue: 14.06.2013



FRIWO Gerätebau GmbH
 Von-Liebig-Straße 11
 48346 Ostbevern



Firmenstempel / Company stamp

Manager Product Design FPS

i. V. Armin Wegener

8 Links & Miscellaneous

EMC-specification

8.1 Noise-suppressed: acc. to EN55024 ,EN55022/B and FCC Part 15/B

8.2 Immunity to electrostatic discharge (ESD): acc. to IEC 61000-4-2

Discharge characteristic	Test level	Assessment criteria U _{in} 120Vac	Assessment criteria U _{in} 230Vac
Air discharge	±8KV	B	B
Contact discharge	±6KV	B	B
Indirect discharge	±8KV	B	B

8.3 Immunity to radiated electromagnetic field: acc. to IEC 61000-4-3 Test characteristic: 80 - 1000 MHz; 80% AM (1 kHz)

Test level	Assessment criteria
3V/m	A

8.4 Immunity to fast electric transients (burst): acc. to IEC 61000-4-4

Coupling	Test level	assessment criteria U _{in} 120Vac	assessment criteria U _{in} 230Vac
AC-input	2KV	B	B

8.5 Surge capability: acc. to IEC 61000-4-5

Surge voltage	assessment criteria U _{in} 120Vac	assessment criteria U _{in} 230Vac
1KV	B	B

8.6 Immunity to conducted disturbances, induced by radio frequency fields: acc. to IEC 61000-4-6

Test level	Assessment criteria
3V	A

8.7 Immunity to voltage dips, short interruptions and voltage variations.

Test acc. to IEC 61000-4-11

Test performed at U_{in} = 120Vac/230VAC

Voltage dips

Test level % U _N	Voltage dips and short interruptions	duration time of voltage dips (in halfsine)	Test result U _{in} 120Vac	Test result U _{in} 230Vac
0	100	0.5	A	A
40	60	1	B	A
		5	B	B
		10	B	B
		25	B	B
		50	B	B

8.8 Assessment criteria

- Agreed operational behaviour within the specified limits.
- Time limited functional diminishment of malfunction during the tests is permitted. The function is self-reactivated by the unit following completion of the tests.
- Malfunction is permitted. The function can be reactivated either by reconnection to the mains or by operator intervention.