



Firma / Company :

Distribution

Gerätetyp / Type :

FW7710/EU/0.7

Artikelnr. / Part-No. :

1891526

Zeichnungsnr. / Drawing-No. :

15.3091.511-00

Datum / Date :

AUG.18.2009

Sachbearbeiter Verkauf / Contact Sales :

Werk

Sachbearbeiter Mechanik / Contact Mech. Eng. :

FEWHJG

Sachbearbeiter Elektronik / Contact Elec. Eng. :

FEKVZU

Freigabe App. / Approved App.

FEWMZH

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
Ⓐ	2009/02/23	Heaven Li	MR 2009-1-1259:Change the carton 56 to carton 28
Ⓑ	2009/02/23	Norman werk	MR2009-0-2028:add date code;add efficiency marking"V" and I.T.E.Power Supply.

Geschäftssitz / Headquarter

FRIWO Gerätebau GmbH
 Von-Liebig-Straße 11
 D-48346 Ostbevern
 Tel +49 2532/ 81-0
 Fax +49 2532/ 81-112
 www.friwo.de
 www.ceag-ag.com
 WEEE-Reg.-Nr. DE 70846847

Geschäftsführung / Management Board

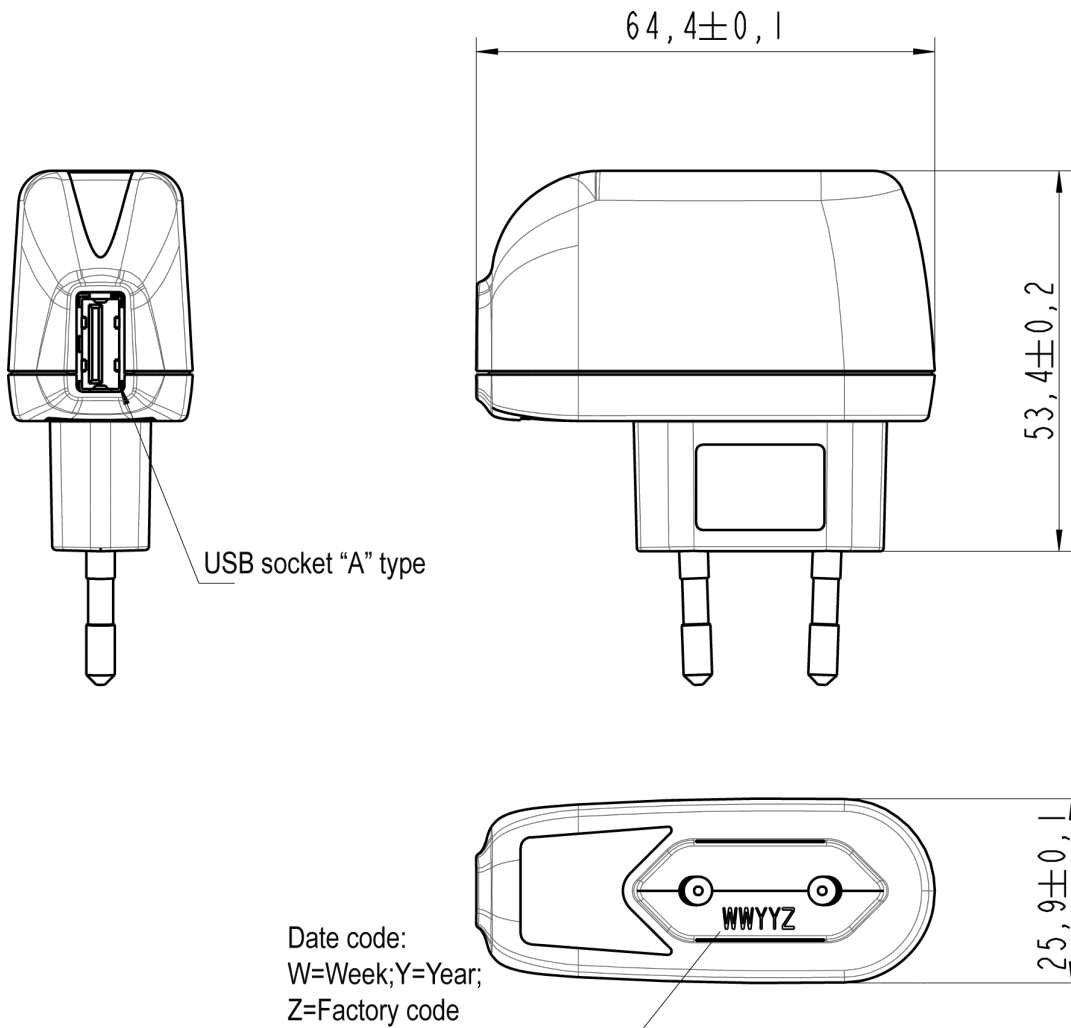
Felix Zimmermann
 St.-Nr. 346/5840/0923
 Finanzamt Warendorf
 USt.-Ident.-Nr. DE811114890
 Amtsgericht Münster
 HRB 9325

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:

Gehäusotyp / housing-typ: PP5-USBA
 Material: PC / ABS V0 125 C
 Farbe Boden/ bottom colour: schwarz / black
 Farbe Deckel/ cover colour: schwarz / black

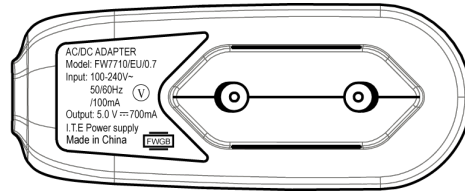


2 Gehäuseaufschriften / Housing labelling:

2.1 Bodenbeschriftung / Bottom labelling

2.1.1

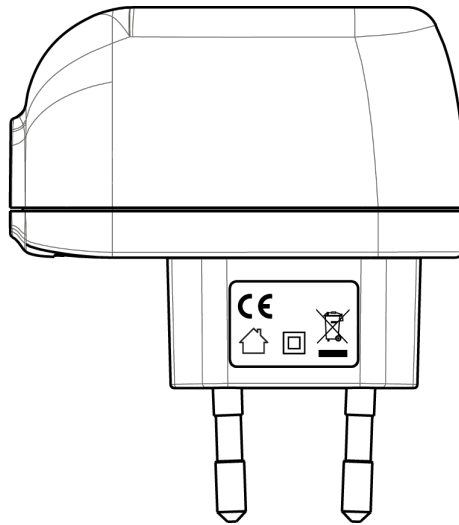
Tampoprint inscription
 15.3091.501-03FO



2.2 Deckelbeschriftung / cover labelling

2.2.1

15.3091.511-03



3 Verpackung / packaging:

3.1 Einzelverpackung / individual packaging:
15.2990.556-01

mit Beschriftung * / with printing *

* AC/DC ADAPTER
SPEC.-NO.:15.3091
PART-NO.:1891526
OUTPUT:5V DC/0,7A
INPUT:100-240V AC

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

3.2.1 Aussenabmessungen / Outer dimensions:

3.3 Anzahl der Geräte pro Umkarton / amount of units per master carton :156

3.4 Gewicht pro Stück / weight per unit: 36 g

3.5 Lagertemperatur / storage temperature: -40°C - +80°C / 20 to 90 rel. hum.

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 Leerlaufleistungsaufnahme bei U_E : 230V AC : $\leq 0.5W$
 Stand-by power consumption at U_{in} : 230V AC : $\leq 0.5W$

5.3 Ausgangsdaten / Output data

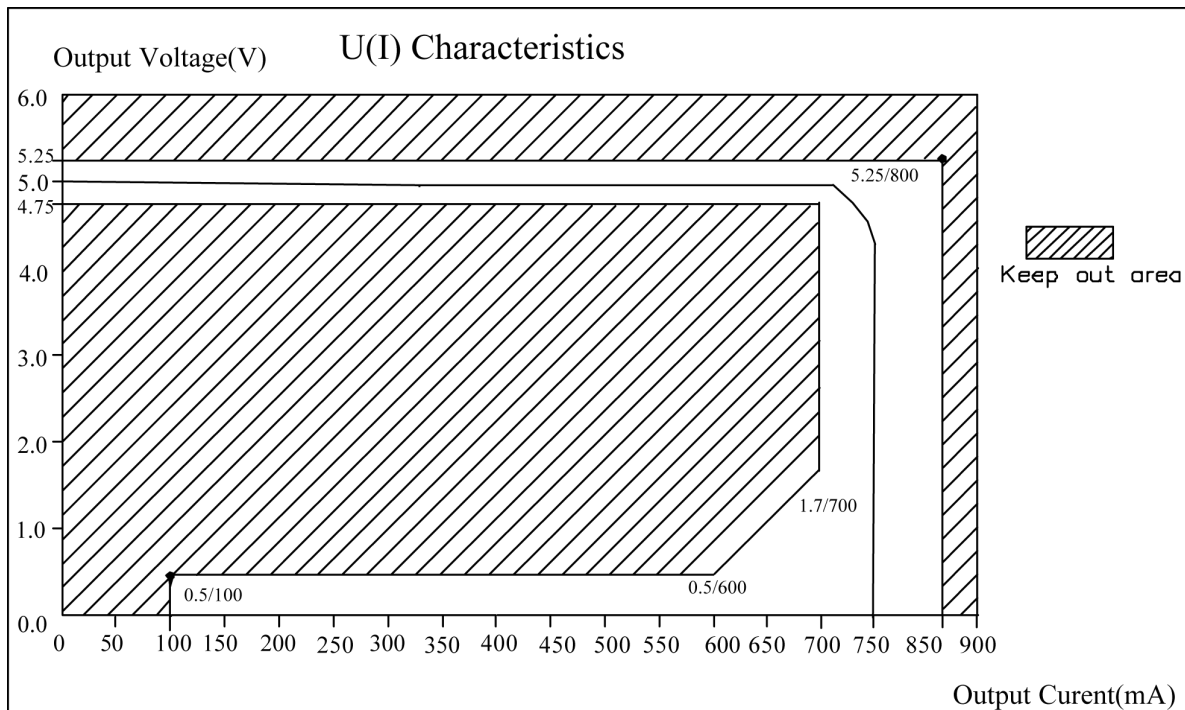
Messaufbau siehe / Measuring setup see <http://www.friwo.de>

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/16V E-Cap across the output terminal. Measured with 20MHz Bandwidth Oscilloscope. Ripple&Noise should be less than 300mV_{p-p}.

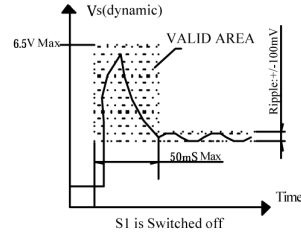
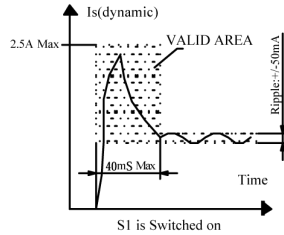
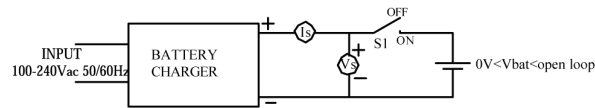
5.3.2 Nennausgangsstrom : I_A : 700mA
 Nominal output current : I_{out} : 700mA

5.3.3 Ausgangskennlinie / Output characteristic:



5.3.4 Dynamic output Template

The output current and voltage during transients shall meet as following figure:



5.3.5 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 1 second.

5.3.6 Short-Circuit Protection

The power supply shall withstand a continuous output without damage. The short may be applied before power-up, or after power-up. The power supply shall resume normal operation after the short 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 : 6.4mm, Lu : 4mm ; Cr : 6.4mm, Cl : 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

7 CE-Konformitätserklärung / Declaration of Conformity

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

Gerätetyp / Type: FW7710/EU/0.7

Artikel-Nr. / Part-No.: 1891526

Zeichnungs-Nr. / Drawing-No.: 15.3091.511-00

weitere Merkmale /
additional information:

mit der beiliegenden Beschreibung die Anforderungen der Niederspannungsrichtlinien 2006/95 EG,
 und der EMV-Richtlinien 2004/108 EG erfüllt.

with the enclosed description fulfils the requirements of the Low Voltage Directives 2006/95 EG, and the regulations of the EMC Directives 2004/108 EC

Das Gerät entspricht der / *The unit corresponds to:*

- | | |
|---|--|
| a) Niederspannungsrichtlinie / <i>Low Voltage Directive</i> | b) EMV-Richtlinie / <i>EMC Directive</i> |
| <input type="checkbox"/> EN 60950-1 11/2006 | <input type="checkbox"/> EN 55022 05/2008 |
| | <input type="checkbox"/> EN 55024 10/2003 |

Ausstelldatum / *Date of issue:* 2009.02.13



Quality Manager i. A. Klaus Dieter Bischoff




Firmenstempel / Company stamp

Manager Product Design FPS i. V. Armin Wegener

8 Links & Miscellaneous

EMC-specification

8.1 Noise-suppressed: acc. to EN55024 ,55022/B and FCC part 15 B

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

Discharge characteristic	Test level	Assessment criteria U _{in} 120Vac	Assessment criteria U _{in} 230Vac
Air discharge	±8KV	B	B
Contact discharge	±4KV	B	B
Indirect discharge	±8KV	B	B

8.3 Immunity to radiated electromagnetic field: acc. to EN 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 EN 61000-4-4

Coupling	Test level	assessment criteria U _{in} 120Vac	assessment criteria U _{in} 230Vac
AC-input	2KV	B	B
DC-output (capacitive coupling clamp)	2KV	B	B

8.5 Surge capability: acc. to EN 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 EN 61000-4-6

Test level	Assessment criteria
3V	A

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

Test acc. to EN 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

a. Agreed operational behaviour within the specified limits.



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b. Time limited functional diminshment of malfunction during the tests is permitted.The function is self-reactivated by the unit following completion of the tests.

c. Malfunction is permitted.The function can be reactivated either by reconnection to the mains or by operator intervention.