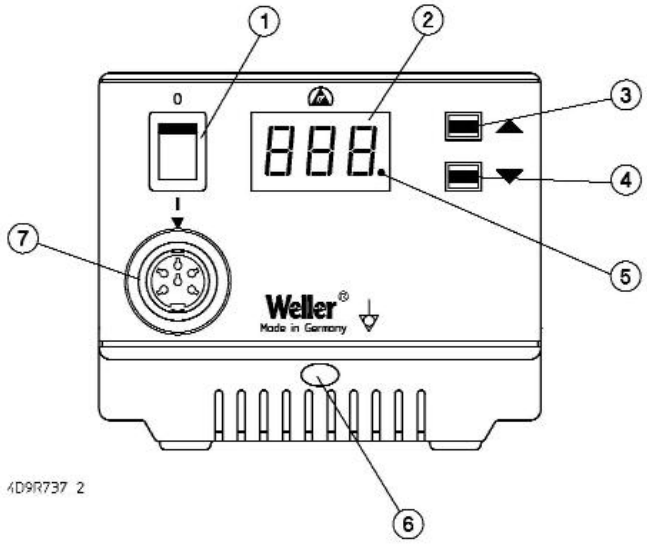
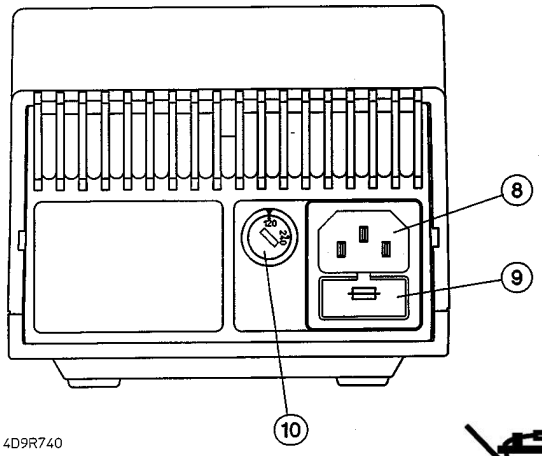
Weller®

WSD 81

Betriebsanleitung - Mode d'emploi - Gebruiksaanwijzing - Istruzioni per l'uso - Operating Instructions - Instruktionsbok - Manual de uso - Betjeningsvejledning - Manual do utilizador - Käyttöohjeet - Οδηγίες Λειτουργίας - Kullanım kılavuzu - Návod k použití - Instrukcja obsługi - Üzemeltetési utasítás - Návod na používanie - Navodila za uporabo - Kasutusjuhend - Naudojimo instrukcija - Lietošanas instrukcija





1. Netzschalter
2. Digitalanzeige
3. „UP“ Taste
4. „DOWN“ Taste
5. Optische Regelkontrolle
6. Potenzialausgleichsbuchse
7. Anschlußbuchse für Lötkolben
8. Netzanschluß
9. Netzsicherung
10. Spannungswahlschalter (nur umschaltbare Version)

1. Interrupteur secteur
2. Afficheur numérique
3. Touche "Up"
4. Touche "Down"
5. Contrôle visuel du réglage
6. Prise de compensation du potenziel
7. Prise de raccordement du fer à souder
8. Raccordement secteur
9. Fusible secteur
10. Sélecteur de tension (uniquement version commutable)

1. Netschakelaar
2. Digitaaldisplay
3. ”Up” toets
4. ”Down” toets
5. Optische regelcontrole
6. Potenziaalcompensatiebus
7. Aansluitbus voor soldeerapparaat
8. Netaansluiting
9. Netzekering
10. Spanningskeuzeschakelaar (alleen omschakelbare versie)

1. Interruttore di rete
2. Display digitale
3. Tasto "Up"
4. Tasto "Down"
5. Controllo di regolazione ottico
6. Presa per equalizzazione dei potenziali
7. Presa di collegamento per stilo saldante
8. Collegamento a rete
9. Fusibile di rete
10. Selettore di tensione (solo nella versione commutabile)

1. Power cable
2. Digital display
3. UP button
4. DOWN button
5. Optical regulator
6. Equipotencial bonding bush (not USA)
7. Connection bush for soldering iron
8. Power supply connector
9. Fuse
10. Voltage selection switch (dual-voltage version only)

1. Nätströmbrytare
2. Digitalindikation
3. UP-tangent
4. DOWN-tangent
5. Optisk regleringskontroll
6. Potentialutjämningsbussning
7. Anslutningsbussning till lödkolv
8. Nätanslutning
9. Nätsäkring
10. Spänningsvalbrytare (endast omkopplingsbar version)

1. Interruptor de red
2. Indicación digital
3. Tecla ”UP”
4. Tecla ”DOWN”
5. Control óptico de regulación
6. Conector hembra para compensación de potencial
7. Conector hembra para soldador
8. Conexión de red
9. Fusible de red
10. Conmutador selector de tensión (sólo versión conmutable)

1. Netafbryder
2. Digitalvisning
3. “UP”-taste
4. “DOWN”-taste
5. Optisk regulatorkontrol
6. Potenzialudligningsbøsning
7. Tilslutningsbøsning til lodde kolbe
8. Nettilslutning
9. Netsikring
10. Spændingsomskifter (kun omskiftelig version)

1. Interruptor de rede
2. Mostrador digital
3. Tecla "Up"
4. Tecla "Down"
5. Controlo visual da regulação
6. Conector para a ligação equipotencial
7. Conector para o ferro de soldar
8. Ligação à rede
9. Fusível de rede
10. Interruptor selector de tensão (apenas versão comutável)

WSD 81

Thank you for placing your trust in our company by purchasing the WELLER soldering stations WSD 81. Production was based on stringent quality requirements which guarantee the perfect operation of the device.

⚠ 1. Caution!

Please read these Operating Instructions and the attached safety information carefully prior to initial operation. Failure to observe the safety regulations results in a risk to life and limb.

The manufacturer shall not be liable for damage resulting from misuse of the machine or unauthorised alterations.

The WELLER soldering stations WSD 81 corresponds to the EC Declaration of Conformity in accordance with the basic safety requirements of Directives 2004/108/EC and 2006/95/EC.

2. Description

2.1 Control unit

The microprocessor-controlled soldering station WSD 81 is part of a family of units that has been developed for industrial production technology and for the service and laboratory sector. The digital control electronics and a high-quality sensor and heat exchange system in the soldering tool guarantee precise temperature control at the soldering tip. The highest degree of temperature precision and optimal dynamic thermal behavior under load conditions is obtained by the quick and accurate recording of measured values in a closed control circuit. The soldering tools themselves are recognized automatically by the WSD 81 and the corre sponding control parameters are assigned accordingly.

Various equipotenzial bonding possibilities for the soldering iron tip, zero power switch and antistatic design of control unit and iron complete the high quality standard. The possibility of connecting an external input unit further increases the variety of functions of this soldering station. With the optional input units WCB 1 and WCB 2 it is possible to implement time functions, locking functions, etc. Integrated temperature gauge and PC interface are included in the extended scope of the input unit WCB 2.

The temperature is set in a range between 50°C and 450°C (150°F and 850°F) using two buttons (up/down). The setpoint and actual value are displayed digitally. A blinking red LED in the display signals that the preset temperature has been reached – this serves as a optical regulator. Constant illumination means that the system is heating up.

2.2 Soldering irons

WP 80: WSP 80	The soldering iron WP 80 / WSP 80 is characterized by its capacity for reaching the soldering temperature quickly and precisely. Its slim design and heating power of 80 watts makes universal usage possible - from extremely fine to high-temperature soldering work. Work can be continued immediately after switching soldering tips, since the temperature is reached again quickly.
LR 82:	High-performance 80 watt soldering iron for soldering work with high heat requirements. The soldering tip is attached by a bayonet catch to ensure correct position when using different tips.
MPR 80:	The Weller Peritronic MPR 80 soldering iron has an adjustable working angle of 40° to enable an individually ergonomic soldering process. The 80-watt power and slim design makes this soldering iron suitable for fine soldering work.
LR 21:	Our "standard" soldering iron. With a power of 50 watts and a wide spectrum of soldering tips (ET series) this soldering iron can be used anywhere in the electronics sector.
WMP:	Due to its handy design, the Weller WMP micro soldering iron is suitable for work on professional SMD electronics. A short distance between the handle and the soldering tip ensures ergonomic handling of the 65 W soldering iron when performing the finest of soldering tasks.
WTA 50:	The unsoldering tweezers WTA 50 were specially designed for unsoldering SMD components. Two heating elements (2 x 25 watts), each with its own temperature sensor, ensure constant temperatures at both ends.

See "Accessories" for additional tools.

Technical Data	(refer to the details on type plate as well)
Dimensions in mm:	166 x 115 x 101 (l x w x h)
Supply voltage (8):	230 V / 50/60 Hz; 240/120 V / 50/60 Hz; 100 V / 50/60 Hz
Power input:	95 watts (230 V; 240 V/120V; 100 V), 85 watts (120V) cUL
Class:	1 (control unit) and 3 (soldering iron)
Fuse (9):	T500 mA (230 V / 50/60 Hz) T800 mA (240/120 V / 50/60 Hz) (for dualvoltage version) T1,0 A (120V / 60Hz) T1,25 A (100 V / 50/60Hz)
Temp. control:	50°C - 450°C (150°F - 850°F)
Precision:	± 2% from target value
Equipotential bonding (6):	via 3.5mm jack bushing on the bottom of the unit. (State (not USA) upon delivery: hard grounded, plug is not inserted)

3. Commissioning

Assemble soldering iron rest (see exploded drawing). Place the soldering iron in the safety rest. Insert the soldering iron plug into the connection bush (7) of the control unit and lock by turning to the right. Check that the power supply corresponds to the specifications on the type plate and that the power switch (1) is in the OFF position. On version that can be switched, set the voltage on the selection switch (set in the factory to 240 V). Connect the control unit to the power supply. Switch on the unit at the power switch (1). When switching on the unit, a self-test is carried out in which all display elements (2) are switched on briefly. The electronic system then switches automatically to the actual temperature and displays this value. LED (5) illuminates. These light emitting diodes are optical regulator monitors. Constant illumination means that the system is heating up. The blinking light signals that the operating temperature has been reached.

Setting the temperature

The digital display (2) shows the actual value temperature. By pressing the UP or DOWN key (3) (4) the digital display (2) switches to the setpoint. The setpoint can be changed by tapping or by firmly pressing the UP or DOWN button (3) (4) in the desired direction. Pressing the button will change the setpoint quickly. The digital display (2) returns automatically to the actual value approximately 2 seconds after releasing the button.

Standard setback

If the soldering tool is not used within a period of 20 minutes the temperature will be automatically reduced to a standby temperature of 150 °C (300 °F). After three setback periods (60 min.) the "AUTO OFF" function will be activated and the soldering iron will be switched off.

Activating the standard setback function:

When switching on the unit press the "UP" button until "ON" appears in the display. The setting is saved when the "UP" button is released.Use the same process to switch the unit off. "OFF" will appear in the display (state upon delivery).

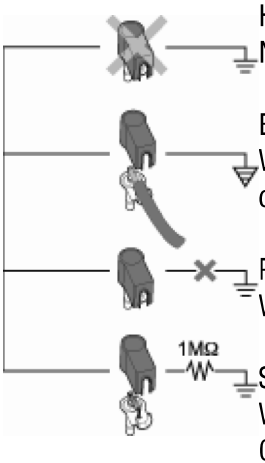
The use of very fine soldering tips may have a negative effect on reliable function.

Maintenance

The transition between the heating element / sensor and the tip of the soldering iron may not come in contact with dirt, foreign particles or become damaged, since this affects the precision of the temperature control.

4. Equipotenzial bonding (not USA)

The various circuit elements of the 3.5 mm jack bush make 4 variations possible:



Hard-grounded:
No plug (delivery form)

Equipotential bonding:
With plug, equalizer at center contact (impedance 0 ohms)

Potential free:
With plug

Soft-grounded:
With plug and soldered resistance.
Grounding via set resistance value.

5. Instructions for use

For initial heating, coat the selective tinnable tip with solder. This removes any oxidation or dirt on the tip which may have occurred during storage. During pauses between soldering and before storing the soldering iron, ensure that the tip of the soldering iron is well coated. Do not use aggressive fluxing agents.

Note:
Always ensure the proper position of the soldering iron tip.

These soldering irons have been adjusted for an average-size tip. Deviations can occur due to exchanging of the tip or using other tip designs.

External input unit WCB 2 (optional)
The following functions are possible when using an external input unit.

- Offset: The real temperature of the soldering iron can be changed by ± 40 °C by input of a temperature offset.
- Setback: Reduction of the setpoint temperature to 150 °C (standby). The setback time can be set at 0-99 minutes after the soldering station has switched to standby mode. After a period equal to three times the set-back time, the "Auto Off" function is activated. The soldering iron is switched off (flashing dash on the display).
- Lock: Locking the setpoint temperature. Settings cannot be changed after the soldering station has been locked.
- °C/°F: Switching the temperature display from °C to °F, and vice versa.
- Window: Limitation of the temperature range to max. ±99 °C based on a locked temperature resulting from the "LOCK" function. The locked temperature represents the median point of the adjustable temperature range. For units with a floating contact (optocoupler output) the "WINDOW" function is used to adjust a temperature window. If the actual temperature is within the temperature window the floating contact will be enabled (optocoupler output).
- Cal: Re-adjustment of the soldering station (WCB 2 only).
- PC interface: RS232 (WCB 2 only).
- Temp. gauge: Integrated temperature gauge for thermal element Type K (WCB 2 only).

6. Accessories

T005 29 180 99	Soldering iron set WP 80
T005 29 161 99	Soldering iron set WSP 80
T005 33 131 99	Soldering iron set MPR 80
T005 33 112 99	Soldering iron set LR 21, antistatic
T005 33 113 99	Soldering iron set LR 82
T005 33 155 99	Soldering iron set WMP
T005 33 133 99	Soldering iron set WTA 50
T005 27 028 99	Preheating plate WHP 80
T005 25 032 99	Thermal insulating unit WST 82 Kit 1
T005 25 031 99	Thermal insulating unit WST 82 Kit 2
T005 31 180 99	External input unit WCB 2
T005 15 161 99	WDH 10T Switching holder WSP 80/WP 80
T005 15 162 99	WDH 20T Switching holder WMP

7. Scope of supply

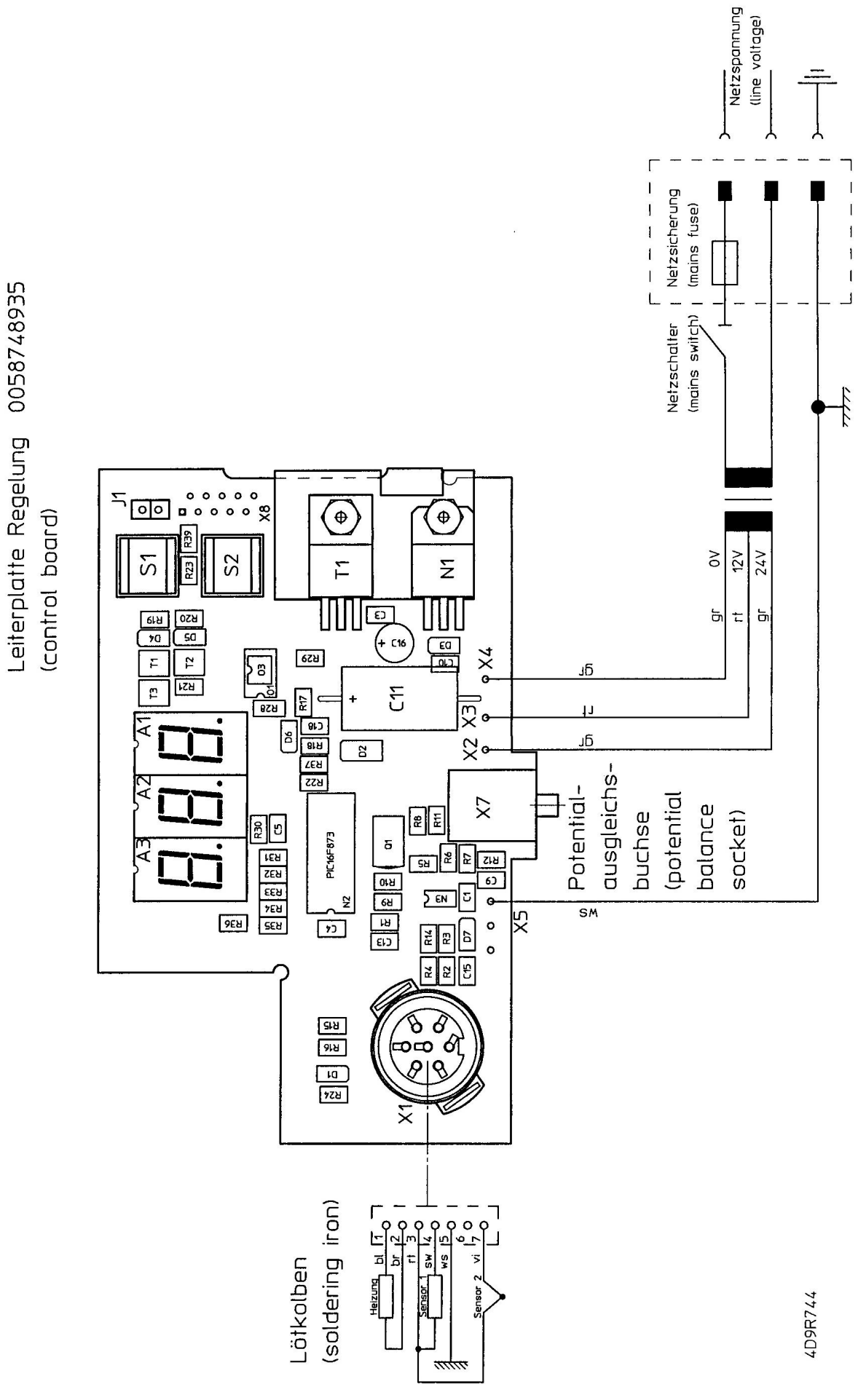
WSD 81
Control unit
Soldering iron WSP 80
Power cable
Operating instructions
Soldering iron rest
Jack (not USA)
Safety Information

PUD 80
Control unit
Power cable
Operating instructions
Jack (not USA)
Safety Information

Illustration: Circuit diagram, see Page 64.
Illustration: Exploded view, see Page 65.

Subject to technical change without notice!

See the updated operating instructions at www.weller-tools.com.


Leiterplatte Regelung 0058748935
(control board)
Netzspannung
(line voltage)
Netzsicherung
(mains fuse)
Netzschalter
(mains switch)
0V
12V
24V
gr
rt
gr
gr
rt
gr
Potential-
ausgleichs-
buchse
(potential
balance
socket)
ws
X1
X2
X3
X4
X5
X7
T1
N1
S1
S2
C11
C16
PIC16F873
Lötkolben
(soldering iron)
Heizung
Sensor 1
Sensor 2
bl
br
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sw
ws
vi
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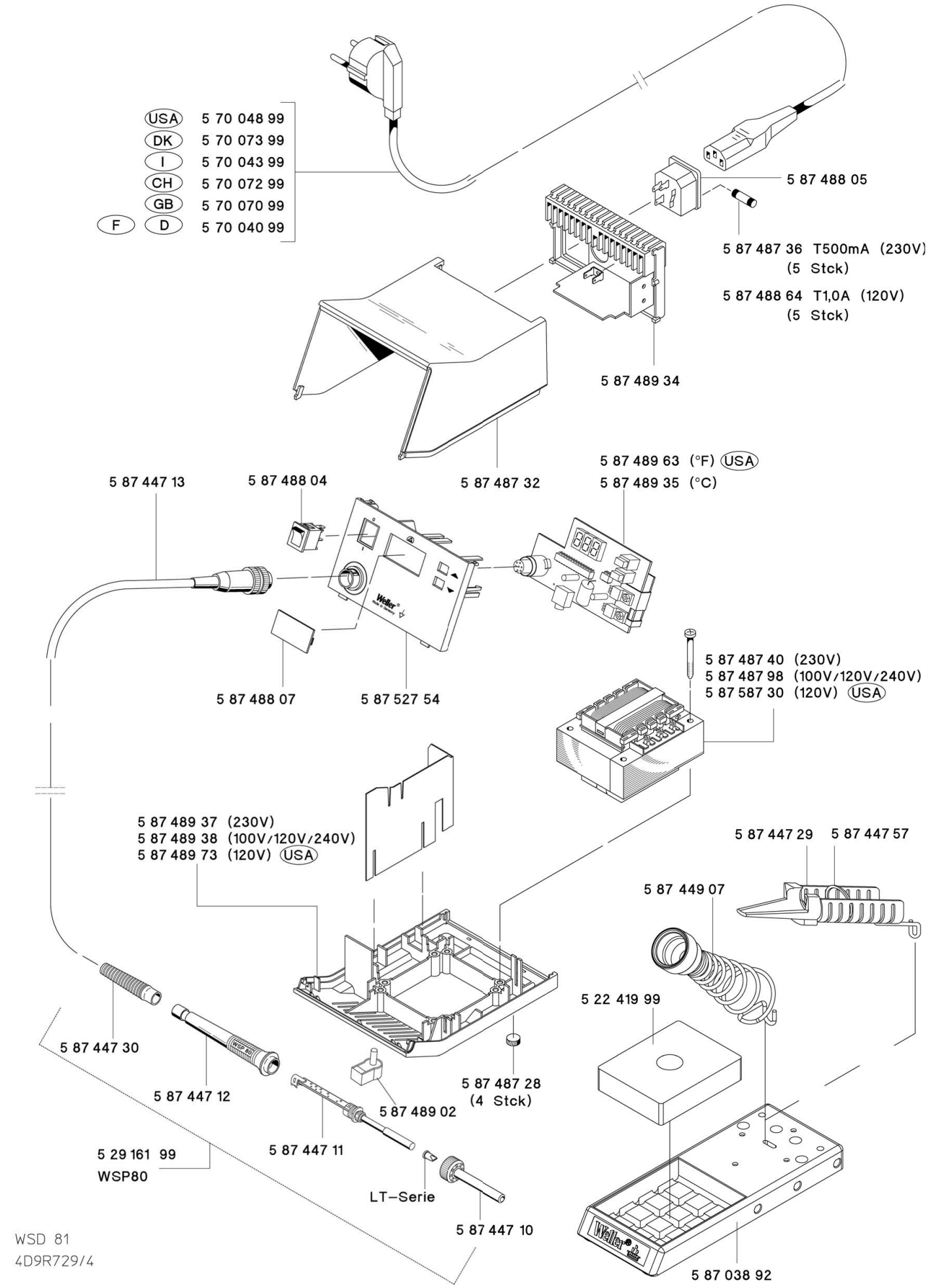
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I 5 70 043 99
CH 5 70 072 99
GB 5 70 070 99
F D 5 70 040 99
5 87 488 05
5 87 487 36 T500mA (230V)
(5 Stck)
5 87 488 64 T1,0A (120V)
(5 Stck)
5 87 489 34
5 87 487 32
5 87 489 63 (°F) USA
5 87 489 35 (°C)
5 87 447 13
5 87 488 04
5 87 488 07
5 87 527 54
5 87 487 40 (230V)
5 87 487 98 (100V/120V/240V)
5 87 587 30 (120V) USA
5 87 489 37 (230V)
5 87 489 38 (100V/120V/240V)
5 87 489 73 (120V) USA
5 87 447 29
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