



Product Overview Welding Controller

	Akzent 500	Akzent 1000	MFI-Maxi Inverter	Akzent 3000	Akzent 5000
Welding Cycles	4- or 5-times	6-times	8-times	8-times	8-times
Programs	1 or 8	8	16	128	512
Solenoid Valve Output	1	2	4	2	12
On going Contac		yes	yes	yes	yes
Locking Contact		yes	yes	yes	yes
External Program Selection		yes	yes	yes	yes
Analoge Output			2	2	3
Mains Compensation	yes	yes	yes	yes	yes
Stepper Function			yes	yes	yes
Measurement channels				Current, Voltage, Path	Current, Voltage, Force, Path
Current Control			primary CC	secondary CC	dynamic CC
Adaptive Control					yes
Process monitoring				yes	yes
PC-Interface			RS-232	Ethernet	ARC-Net
Field Bus Interface				yes	yes
Thyristor Power Module	100A or 500A	100A up to 3200A		100A up to 3200A	100A up to 3200A
Medium Frequency Inverter			400A up to 2x2400A	400A up to 2x2400A	400A up to 2x2400A

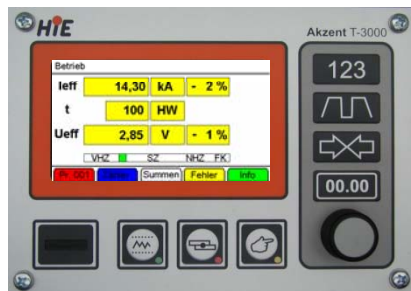
Series Akzent 3000

Welding controller for high requirements concerning quality, process monitoring and documentation in combination with simple operation

Field of application

Technical data

Advantages



T-3000
Operating Panel



2-Phase
Thyristor Module



MFI-1
Medium Frequency Inverter



Field of Application

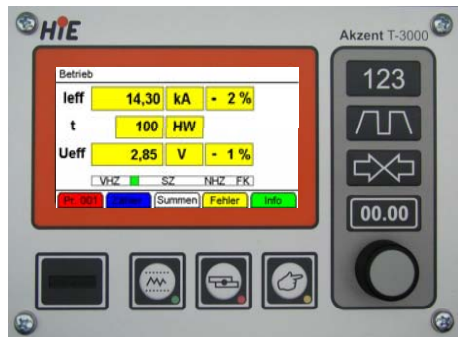
- 50/60Hz AC or Medium Frequency DC Resistance Welding
 - Spot Welding
 - Projection Welding
 - Seam Welding
- Easy to operate
- Process monitoring is needed,
- Concurrent process data documentation is needed,

Technical Data

- 4,3" TFT color display with 480x274 pixel
- Navigation via turning knob or touch screen
- Parameter setting via turning knob
- 7 function keys with direct access to the main functions
- Digital key with different user rights
- 128 welding programs
- 8 times (pre heat, welding, post heat)
- Constant current control
- 2 measuring inputs for process monitoring (current, voltage or penetration)
- 2 analogue outputs for control of proportional valves
- 2 outputs for solenoid valves
- free programmable digital in- and outputs (10 inputs, 10 outputs)
- Extension for second welding gun (optional)
- Ethernet interface for PC connection
- Program code on SD-Card
- Fieldbus interface as Profibus, Profinet or Interbus (optional)



Akzent 3000 / 2-Phase (50/60Hz AC)



T-3000
Operating Panel

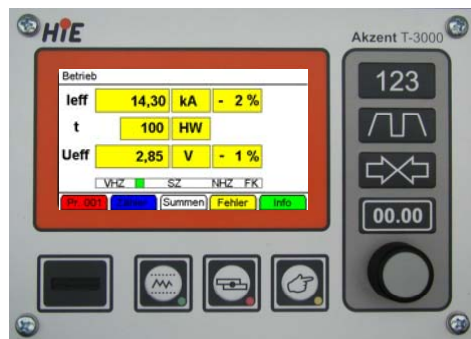


2-Phase Thyristor Module
with integrated SC-3000
System Controller

Thyristor size from
100A up to 2300A



Akzent 3000 / MF (1000Hz DC)



T-3000
Operating Panel

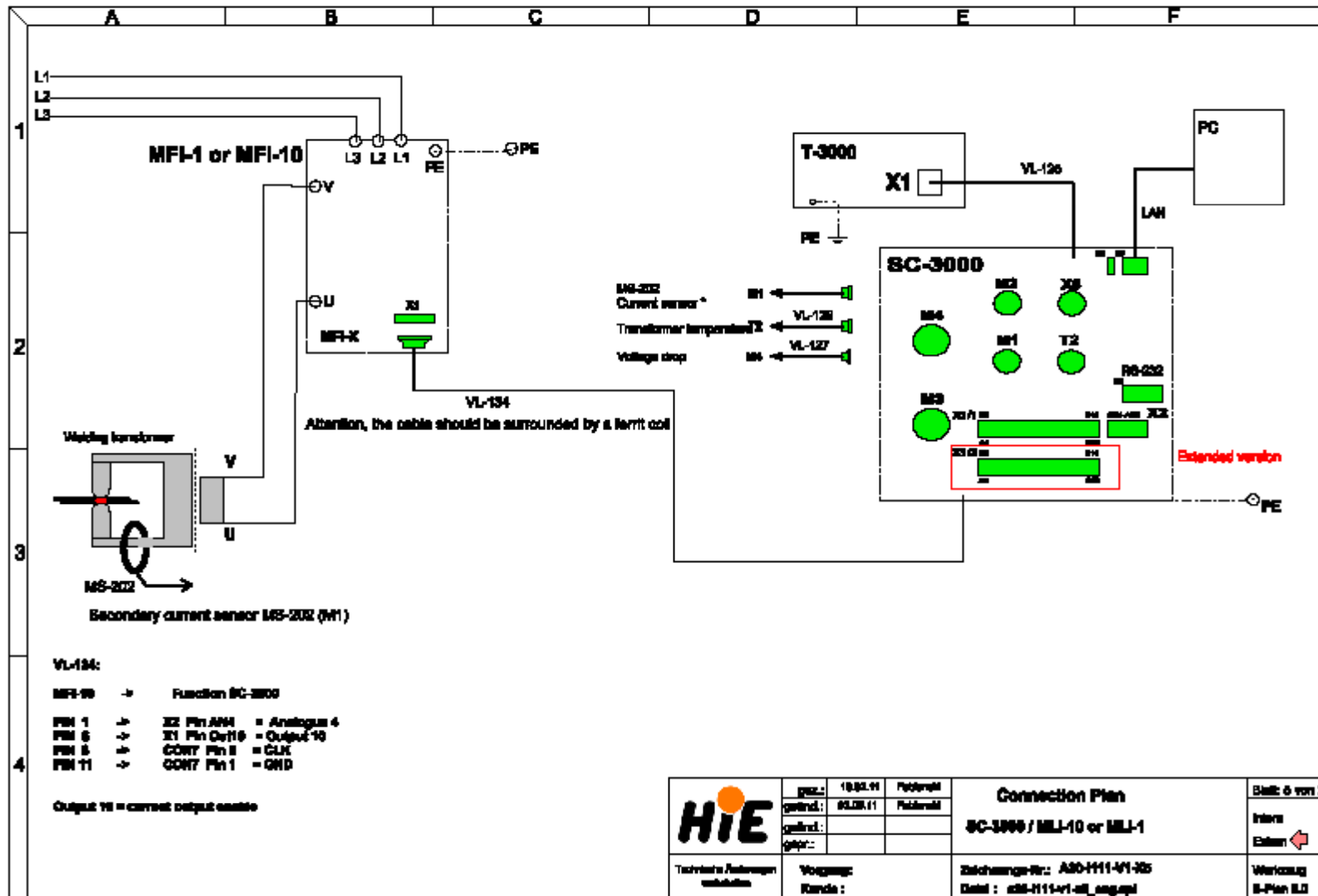


SC-3000
System Controller
with extension for
second welding gun

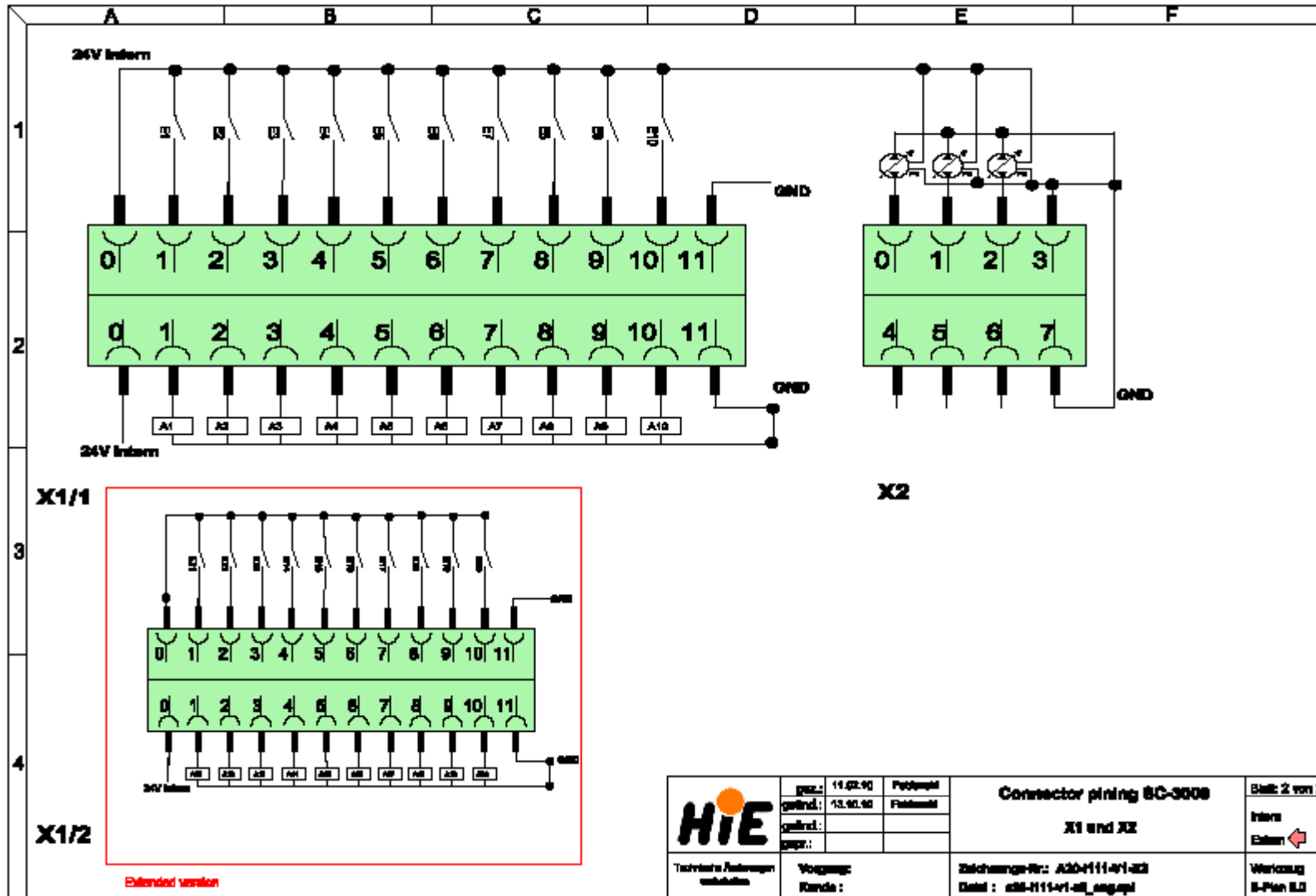


MFI-1
Medium Frequency Inverter
size from 200A up to 2400A

Akzent 3000 connection plan MF DC

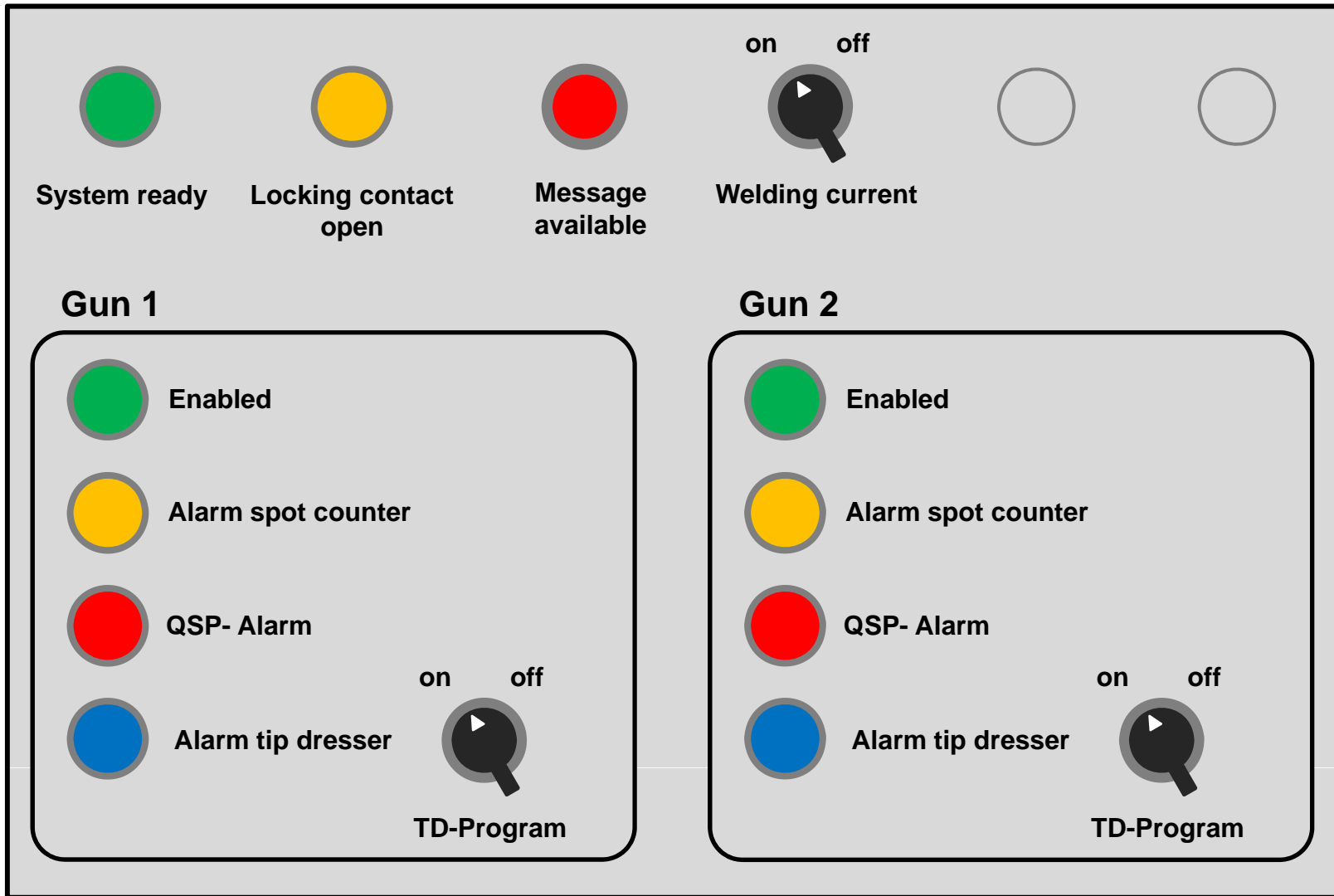


Akzent 3000 connection plan for digital I/O's



	ges.: 11.02.90	Projektzeit	Connector pinning BC-3008 X1 und X2	Blatt: 2 von 2 Intern Extern
	geänd.: 13.03.90	Feldarbeit		
	geprüf.: _____			
	gepr.: _____			
Technische Änderungen vorbehalten	Vorgang: Kunde:	Zeichnungs-Nr.: A20-H11-v1-a2 Datum: a20-H11-v1-a2_engl	Werkzeug B-Plan I,2	

Akzent 3000 cabinet operating panel



Akzent 3000 functions of control cabinet panel

Function	Type of operation	Remark
System ready	Signal light	green
Locking contact open	Signal light	yellow
Message available	Illuminated non locking button	red
Welding current on/off	2 position switch	
Enabled	Signal light	green
Alarm spot counter	Signal light	yellow
Alarm QSP	Signal light	red
Alarm tip dresser	Signal light	blue
TD-Program on/off	2 position switch	

Akzent 3000 functions of the gun handle

Function	Type of operation	Remark
Confirmation of error message	Nonlocking key	Related to gun specific messages
Start authentication	Nonlocking key	
Pre strocke	Nonlocking key	
Start	Nonlocking key	
Selection of programm	2 position switch	



List of suppliers for control cabinet equipment

No.	Part description	Quantity	Manufacturer	Remark
1	Cabinet 600x600x300mm	1	Rittal	
2	Welding controller	1	HIE, SC-3000-E/MF	
3	MF-Inverter	1	MFI-1/050	
4	Main switch 160A with over voltage and under current detection	1	EATON (Möller) NZ MB1-A-160	
5	24V Power supply unit	1	HIE	
6	Differential-current switch 100A/300mA	1	EATON (Möller)	
7	Load break-switch (type size NH-C00) socket 160A, fuse 63A	4		
8	Isolation contactor 75A	2	ABB 1SBL 411 001 R8100	
9	Illuminated signals, buttons and key switches	x	Siemens	
10	Emergency button	x		
11	Cable fanning block	x	WAGO	
12	Relay	x	FINDER	
13	Plug and connector for control cables of the welding gun	2	Harting HAN 16	
14	Plug and connector for measuring cables of the welding gun	2		
15	Plug for connection of T-3000	1	Lumberg M12/4-Pin	
16	PG-gland for external power supply	1		
17	PG-gland for external power output	2	Multi Contact	optional
18	Connectors for cooling water	2		dimensions ?

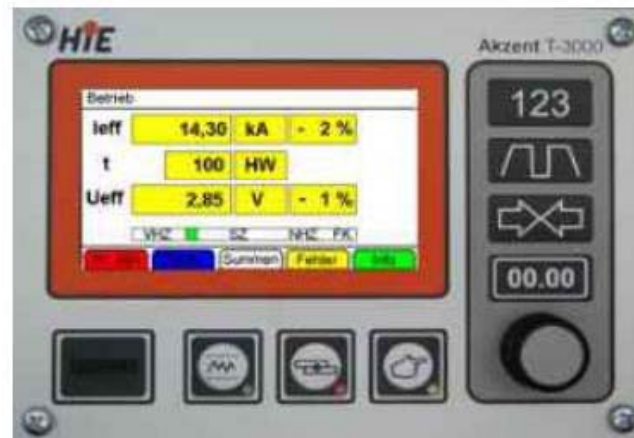


PC-Software

Akzent 3000

- home
- PC Settings
- programming
- configuration
- logging

HIE Weldingsystems GmbH better welding !



serialnumber SC	4294967295
software version SC	3.0.0
date	02.01.2008

[\[home\]](#) [\[PC Settings\]](#) [\[programming\]](#) [\[configuration\]](#) [\[logging\]](#)



Configuration via PC

Akzent 3000

- home
- PC Settings
- programming
- configuration
- > machine
- > SC-3000
- > counter
- > measure channel
- > inputs and outputs
- > control
- logging

send parameters

HIE Weldingsystems GmbH better welding !

T-3000 configuration

serialnumber	300311
software version	1.15

SC-3000 configuration

serialnumber	42949672
software version	3.0.0

language

terminal	german ▼
internet explorer	english ▼

[\[home\]](#) [\[PC Settings\]](#) [\[programming\]](#) [\[configuration\]](#) [\[machine\]](#) [\[SC-3000\]](#) [\[counter\]](#)
[\[measure channel\]](#) [\[inputs and outputs\]](#) [\[control\]](#) [\[logging\]](#)



Programming of welding parameters via PC

Akzent 3000

HIE Weldingsystems GmbH better welding !

programming : current/time











show / hide

program no.	1	
pre heat current		
upslope	---	per
curr. time	---	per
current	---	%
	---	kA
downslope	---	per
break time	---	per
main welding current		
upslope	0	per
curr. time	10	per
current	25,0	%
	1,5	kA
pulses	1	
pause time	0	per
downslope	0	per
after heat current		
break time	---	per
upslope	---	per
curr. time	---	per
current	---	%
	---	kA
downslope	---	per

send parameters

Software SPV-3000 for documentation of process data

SPV 3000

Stationen	Messwerte	Auftragsdaten																					
 Station auswaehlen																							
<table border="1"> <thead> <tr> <th>Name</th> <th>Letzte Uebertragung</th> <th>IP</th> <th>Zugriff</th> </tr> </thead> <tbody> <tr> <td>Akzent3000</td> <td>2010-11-05 09:42:08</td> <td>192.168.0.95</td> <td>T</td> </tr> <tr> <td>QMOD1</td> <td>2010-10-19 12:12:26</td> <td>192.168.0.144</td> <td>T    abc</td> </tr> </tbody> </table>	Name	Letzte Uebertragung	IP	Zugriff	Akzent3000	2010-11-05 09:42:08	192.168.0.95	T	QMOD1	2010-10-19 12:12:26	192.168.0.144	T    abc	<table border="1"> <thead> <tr> <th>Auswahl der Datenbank</th> </tr> </thead> <tbody> <tr> <td>Aktuelle Datenbank</td> </tr> </tbody> </table>	Auswahl der Datenbank	Aktuelle Datenbank								
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Software SPV-3000 overview of process data

SPV 3000

Stationen				Messwerte						Auftragsdaten								
Station : Akzent3000																		
+ Filter 1: << Datum >>				Von 09.11.2010		Bis 09.11.2010		anwenden <input type="checkbox"/>										
X																		
+1000 << -0 -25 -50 -75 -100 >> -1000																		
				X1: Rogowski					X2: Spannung									
ID	Datum	Zeit	Prog	Summe	Min	Max	Abw	Mittel	Fehler	Summe	Min	Max	Abw	Mittel	Fehler	Protokollname	Artikelnr	Seriennr
61	9.11.2010	11:55:32	1	1.407 kAs	5%	5%	0%	6.701 kA		0.26 Vs	5%	5%	2%	1.26 V		Regal A280	12345	6789
60	9.11.2010	11:55:28	1	1.391 kAs	5%	5%	-1%	6.623 kA		0.26 Vs	5%	5%	3%	1.27 V		Regal A280	12345	6789
59	9.11.2010	11:55:26	1	1.398 kAs	5%	5%	0%	6.655 kA		0.26 Vs	5%	5%	3%	1.27 V		Regal A280	12345	6789
58	9.11.2010	11:55:22	1	1.358 kAs	5%	5%	-3%	6.465 kA		0.27 Vs	5%	5%	5%	1.30 V		Regal A280	12345	6789
57	9.11.2010	11:54:58	1	1.233 kAs	5%	5%	-12%	5.873 kA		0.29 Vs	5%	5%	13%	1.39 V		Regal A280	12345	6789
56	9.11.2010	11:54:20	1	1.445 kAs	5%	5%	2%	6.883 kA		0.25 Vs	5%	5%	0%	1.21 V		Regal A280	12345	6789
55	9.11.2010	11:54:18	1	1.424 kAs	5%	5%	0%	6.782 kA		0.25 Vs	5%	5%	0%	1.22 V		Regal A280	12345	6789
54	9.11.2010	11:54:04	1	1.448 kAs	5%	5%	2%	6.894 kA		0.25 Vs	5%	5%	0%	1.21 V		Regal A280	12345	6789
53	9.11.2010	11:53:54	1	1.429 kAs	5%	5%	1%	6.805 kA		0.25 Vs	5%	5%	0%	1.23 V		Regal A280	12345	6789
52	9.11.2010	11:53:34	1	1.396 kAs	5%	5%	-1%	6.646 kA		0.26 Vs	5%	5%	2%	1.25 V		Regal A280	12345	6789
51	9.11.2010	11:53:10	1	1.400 kAs	5%	5%	0%	6.665 kA		0.26 Vs	5%	5%	1%	1.25 V		Regal A280	12345	6789
50	9.11.2010	11:53:08	1	1.399 kAs	5%	5%	0%	6.661 kA		0.26 Vs	5%	5%	3%	1.26 V		Regal A280	12345	6789
49	9.11.2010	11:53:04	1	1.396 kAs	5%	5%	-1%	6.646 kA		0.26 Vs	5%	5%	2%	1.25 V		Regal A280	12345	6789
48	9.11.2010	11:53:02	1	1.426 kAs	5%	5%	1%	6.789 kA		0.25 Vs	5%	5%	0%	1.23 V		Regal A280	12345	6789
47	9.11.2010	11:53:00	1	1.398 kAs	5%	5%	0%	6.656 kA		0.26 Vs	5%	5%	2%	1.25 V		Regal A280	12345	6789
46	9.11.2010	11:52:34	1	1.420 kAs	5%	5%	0%	6.763 kA		0.25 Vs	5%	5%	0%	1.23 V		Regal A280	12345	6789
45	9.11.2010	11:51:40	1	1.427 kAs	5%	5%	1%	6.793 kA		0.25 Vs	0%	0%	0%	1.23 V		Regal A280	12345	6789
44	9.11.2010	11:51:36	1	1.411 kAs	5%	5%	0%	6.719 kA		0.26 Vs	0%	0%	1%	1.24 V		Regal A280	12345	6789
43	9.11.2010	11:51:34	1	1.411 kAs	0%	0%	0%	6.719 kA		0.25 Vs	0%	0%	0%	1.22 V		Regal A280	12345	6789
43	9.11.2010	11:51:32	1	1.380 kAs	5%	5%	-2%	6.570 kA		0.26 Vs	0%	0%	2%	1.25 V		Regal A280	12345	6789
42	9.11.2010	11:51:28	1	1.427 kAs	5%	5%	0%	6.795 kA		0.25 Vs	0%	0%	0%	1.22 V		Regal A280	12345	6789
41	9.11.2010	11:51:24	1	1.426 kAs	5%	5%	0%	6.790 kA		0.25 Vs	0%	0%	0%	1.20 V		Regal A280	12345	6789

Software SPV-3000 single spot view (sheet mode)

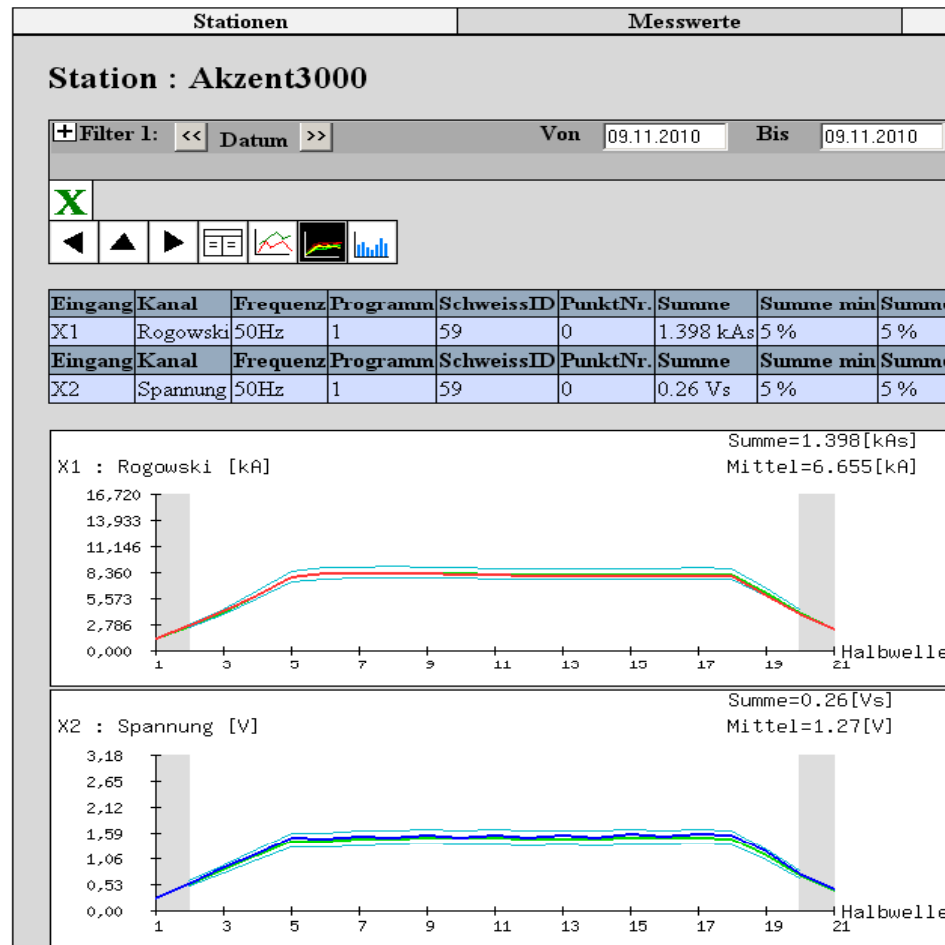
SPV 3000

Stationen	Messwerte	Auftragsdaten	Sta										
Ko													
Station : Akzent3000													
+ Filter 1: << Datum >> Von 09.11.2010 Bis 09.11.2010 anwenden <input type="checkbox"/>													
Eingang	Kanal	Frequenz	Programm	SchweissID	PunktNr.	Summe	Summe min	Summe max	Summe abw	Mittelwert	Verl min	Verl max	Verl abw
X1	Rogowski	50Hz	1	61	0	1.407 kAs	5 %	5 %	0 %	6.701 kA	7 %	7 %	3 %
Eingang	Kanal	Frequenz	Programm	SchweissID	PunktNr.	Summe	Summe min	Summe max	Summe abw	Mittelwert	Verl min	Verl max	Verl abw
X2	Spannung	50Hz	1	61	0	0.26 Vs	5 %	5 %	2 %	1.26 V	10 %	10 %	6 %

Halbwelle	X1: Rogowski			X2: Spannung		
	Messwert	Lernwert	Abweichung	Messwert	Lernwert	Abweichung
1	1.347 kA	1.317 kA	2 %	0.26 V	0.24 V	8 %
2	2.672 kA	2.572 kA	3 %	0.55 V	0.54 V	1 %
3	4.184 kA	4.097 kA	2 %	0.89 V	0.83 V	7 %
4	5.928 kA	5.928 kA	0 %	1.13 V	1.12 V	0 %
5	7.868 kA	7.918 kA	0 %	1.49 V	1.43 V	4 %
6	8.200 kA	8.230 kA	0 %	1.44 V	1.43 V	0 %
7	8.300 kA	8.300 kA	0 %	1.52 V	1.47 V	3 %
8	8.340 kA	8.360 kA	0 %	1.50 V	1.48 V	1 %
9	8.350 kA	8.300 kA	0 %	1.56 V	1.51 V	3 %
10	8.280 kA	8.260 kA	0 %	1.50 V	1.49 V	0 %
11	8.168 kA	8.174 kA	0 %	1.54 V	1.50 V	2 %
12	8.116 kA	8.115 kA	0 %	1.49 V	1.47 V	1 %

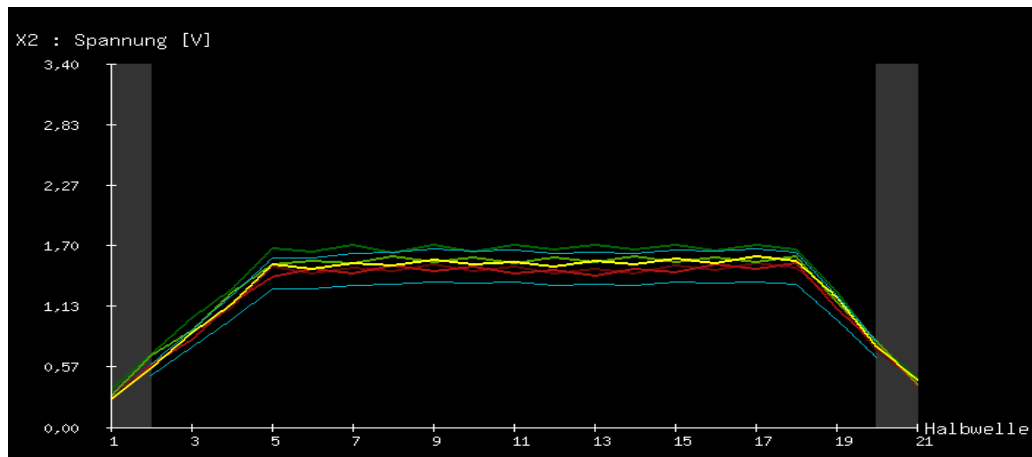
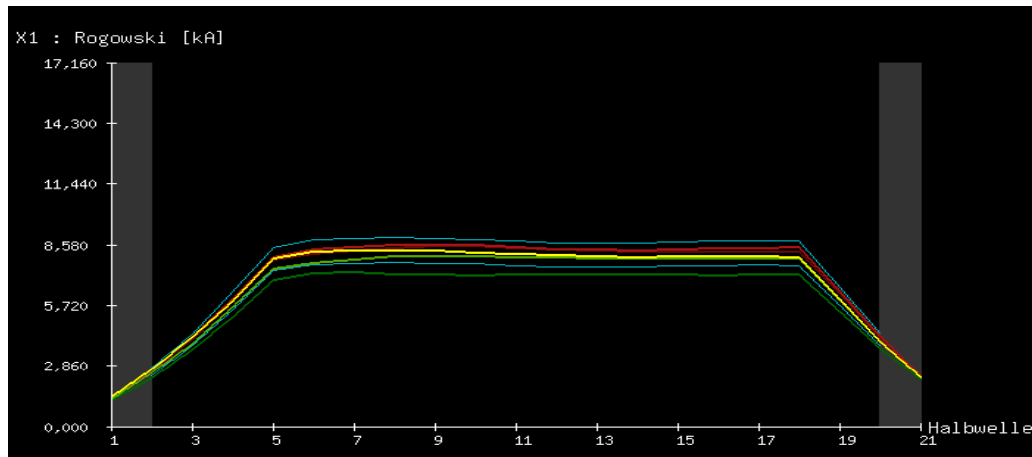
Software SPV-3000 single spot view (graphical mode)

SPV 3000





Software SPV-3000 single spot view (history)



Software SPV-3000 statistical view



Advantages

- Simple and intuitive operation
- Clear display of parameter settings and messages
- Compact size of controller, power modules and operating panel
- Individual setting of user access rights
- State-of-the-art technique
- Lot of interface possibilities
- Integrated quality control and monitoring functions
- Concurrent documentation of process data via SPV-3000 software (optional)