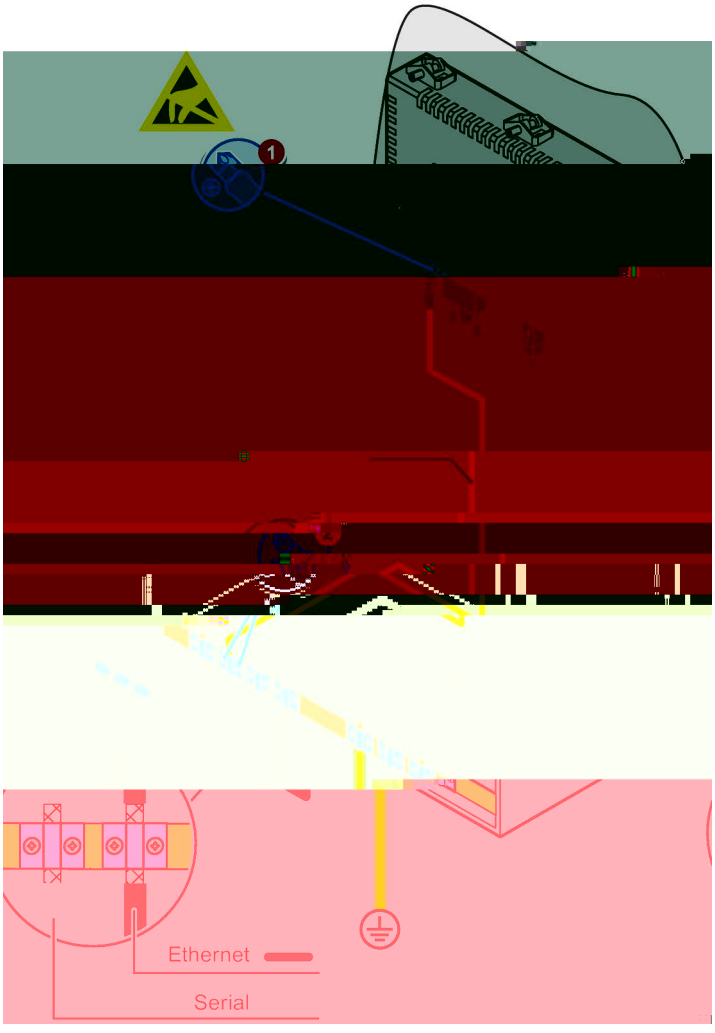
SIEMENS

SIMATIC HMI

HMI
Smart 700 IE V3, Smart 1000 IE V3

1
2
3
4
5
6
7
8
A
B

10/2015
A5E35936633-AB

	Smart 700 IE IE

3

1 9

1.1 9

1.2 HMI 10

1.3 11

1.4 11

2 12

2.1 12

2.2 13

3 15

3.1 15

3.1.1 15

3.1.2 15

3.1.3 16

3.1.4 17

3.1.5 18

3.2 HMI 19

3.3 HMI 21

3.3.1 21

3.3.2 22

3.3.3 24

3.3.4 PC 26

3.3.5 PLC 27

3.3.6 USB 28

3.4 HMI 29

3.5 30

4 31

4.1 31

4.2 32

4.3 33

4.4 34

5 35
5.1 35
5.2 36
5.3 36
5.4 37
5.4.1 37
5.4.2 38
5.5 39
5.6 40
5.7 HMI 41
5.8 42
5.9 HMI 43
5.10 43
5.11 44
5.12 45
5.13 45
6 46
6.1 46
6.2 47
6.3 48
6.4 48
6.4.1 48
6.4.2 48
6.4.3 49
6.4.4 50
6.5 52
6.5.1 52
6.5.2 ProSave 53
6.6 54
6.6.1 54
6.6.2 54
6.6.3 ProSave 55
7 56
7.1 56
7.2 56

8 57
8.1 57
8.2 58
8.2.1 58
8.2.2 58
8.3 58
8.3.1 58
8.3.2 59
8.4 59
8.4.1 59
8.4.2 60
8.4.3 60
8.5 61
8.5.1 61
8.5.2 61
8.6 62
8.6.1 Smart 700 IE V3 62
8.6.2 Smart 1000 IE V3 63
8.7 64
8.8 65
8.8.1 DC24V - X80 65
8.8.2 PPI / RS422 / RS485 - X2 66
8.8.3 Ethernet (LAN) - X1 66
8.8.4 USB - X60 67
8.9 PLC 67
8.10 WinCC flexible Smart 71
A 74
A.1 74
A.2 74
B 75
..... 76
..... 79

1

1.1

- Smart Panel V3

Smart Panel

HMI

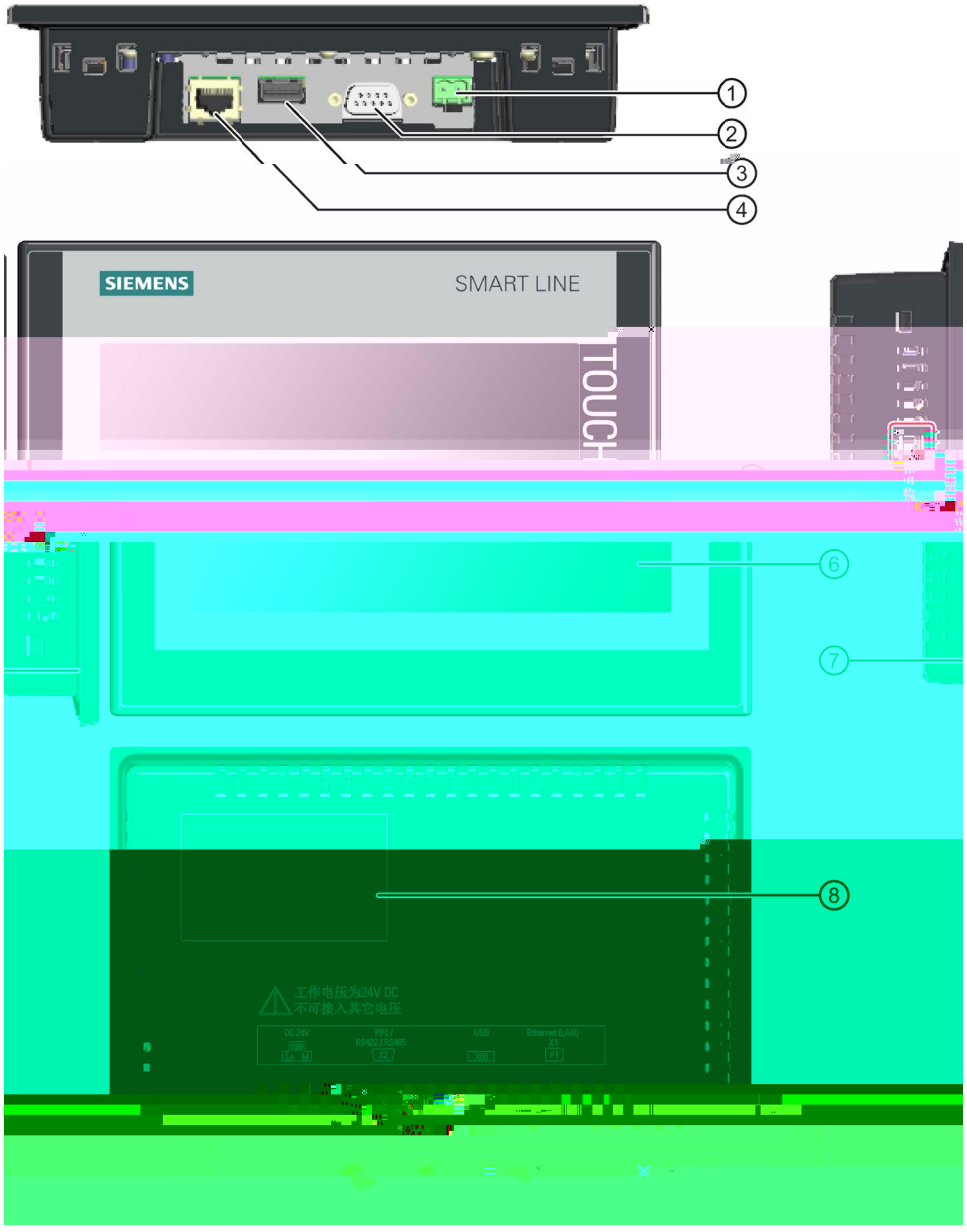
Smart Panel Smart Panel V3

Smart Panel V3 CPU
USB RTC
- WinCC flexible Smart V3

“ (57)”

1.2 HMI

Smart 700 IE V3 HMI



/

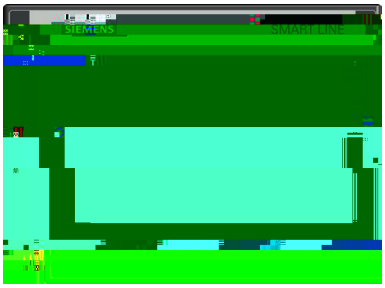
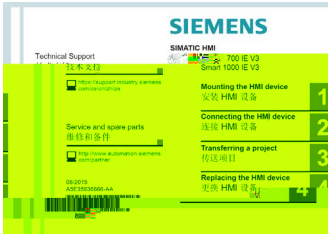
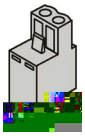
RS 422/485
USB

WinCC flexible Smart

RS 422/485 WinCC flexible Smart

1.3

HMI

HMI		1
		1
1 OSS mini DVD		
1		
		1

1.4

HMI Internet Industry Mall (http://mall.industry.siemens.com)

2

2.1

⚠

HMI HMI

HMI

⚠

HMI 2006/42/EC HMI

ESD

ESD

Industrial Security

/

Internet
(http://www.industry.siemens.com/topics/global/en/industrial-security)

Internet (https://support.industry.siemens.com/cs/cn/zh/ps)

/ Siemens
Siemens AG Siemens AG /

Internet (http://www.automation.siemens.com/mcms/automation-software/en/software-update-service)

2.2

HMI HMI HMI

HMI

EN 61000-6-4:2007+ A1:2011

DIN EN 61000-6-2:2005 ESD

HMI HMI

HMI EN 55011
B

HMI

–

–

–

–

IP
HMI

HMI PLC HMI
“#”

HMI PLC
“0”

3

3.1

3.1.1

(11)

HMI

3.1.2

HMI

(57)

(58)

(58)

(59)

(61)

(64)

3.1.3

“ ”

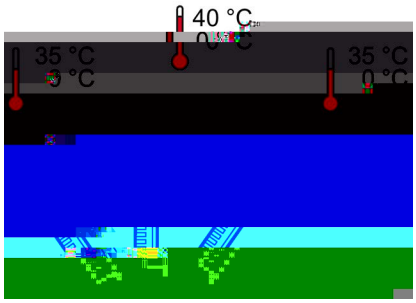
HMI
+/-35°

0° +50 °C

35° +40 °C

0° +40 °C

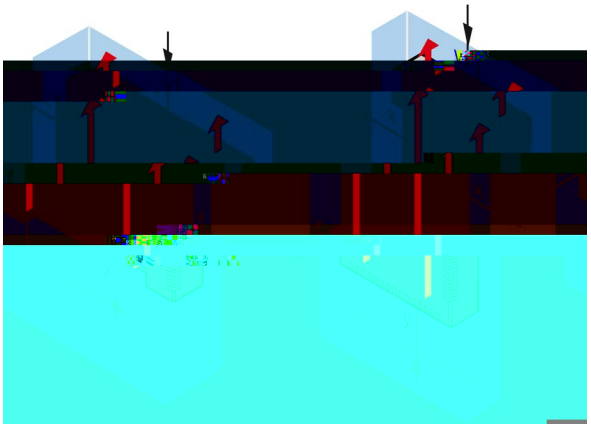
35° +35 °C



(60)

3.1.4

HMI

HMI mm	

3.1.5

HMI

HMI

HMI

1.

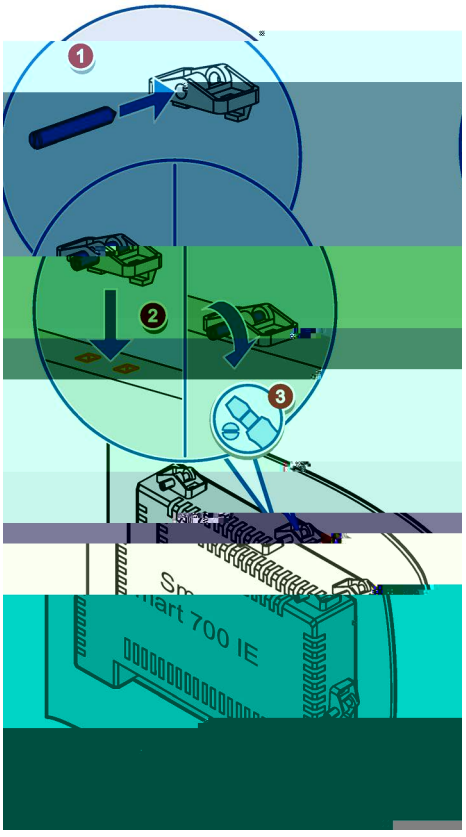
2.

3. 2

0.2 Nm

4. 1 3

HMI



3.3 HMI

3.3.1

3.3.2

/

10

16 mm²

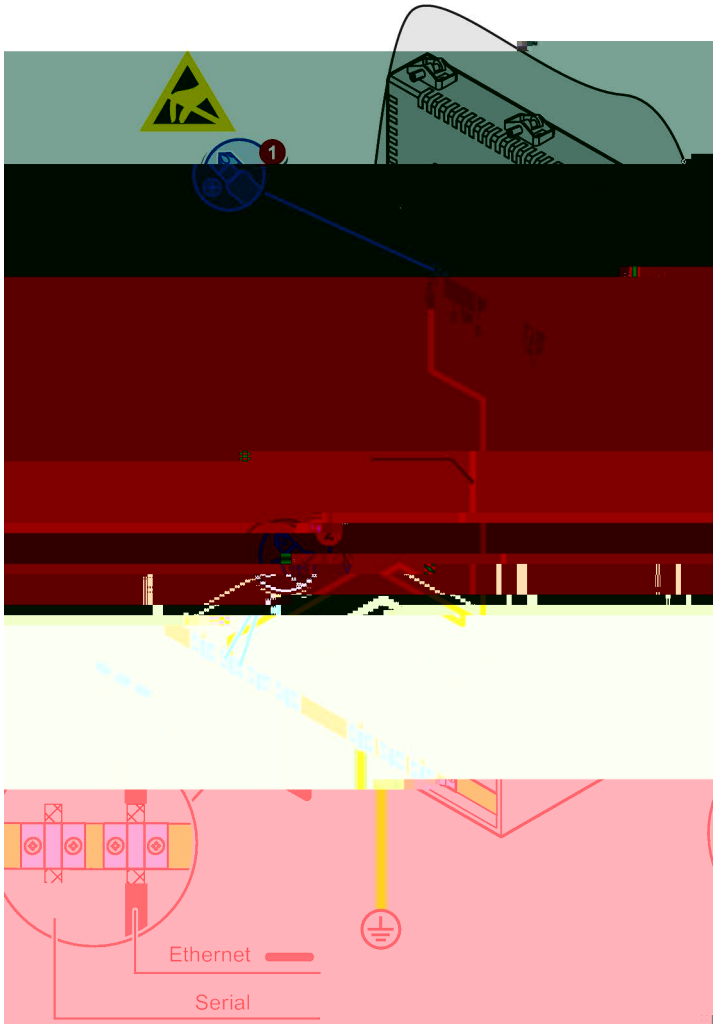
/

HMI

HMI

16 mm² MPI

1. 4 mm² HMI
2.
3.
4.



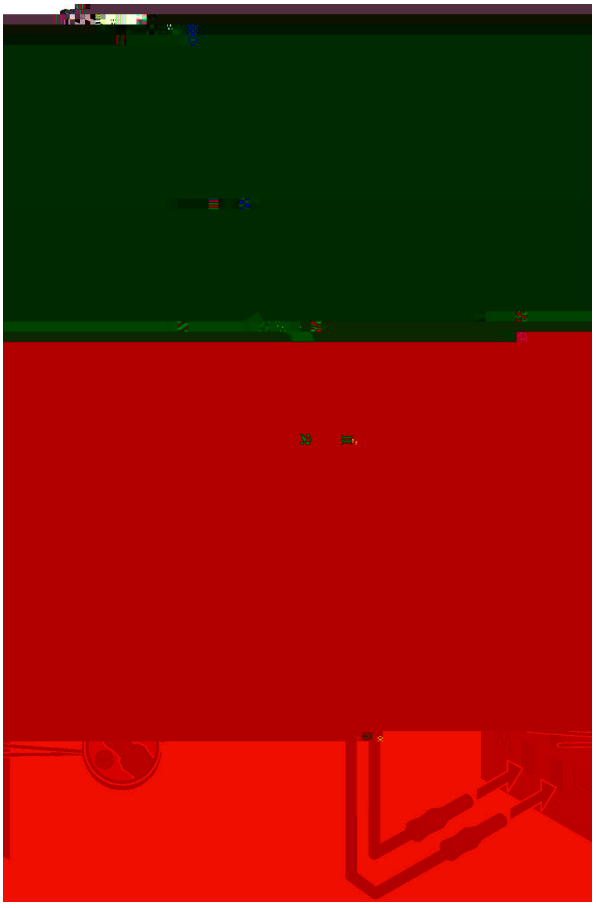
3.3.3

1.

2. HMI

3.

4.



3.3.4 PC

PC

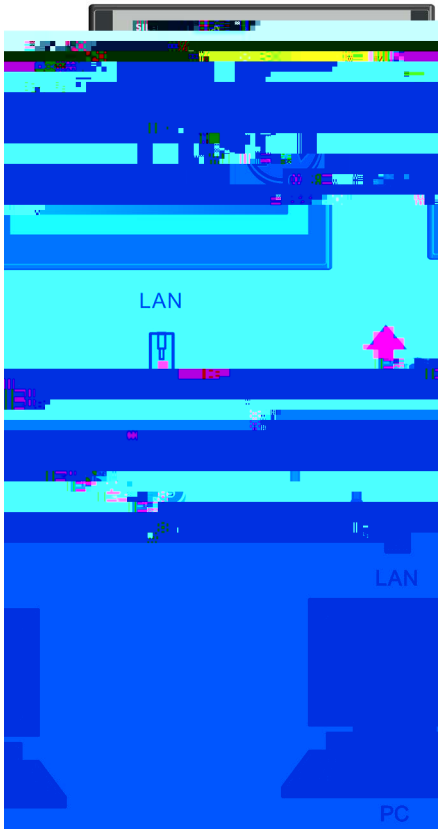
HMI

HMI

HMI

5 PC

1. HMI
2. LAN RJ45
   HMI
3. LAN RJ45
   PC



3.3.5 PLC

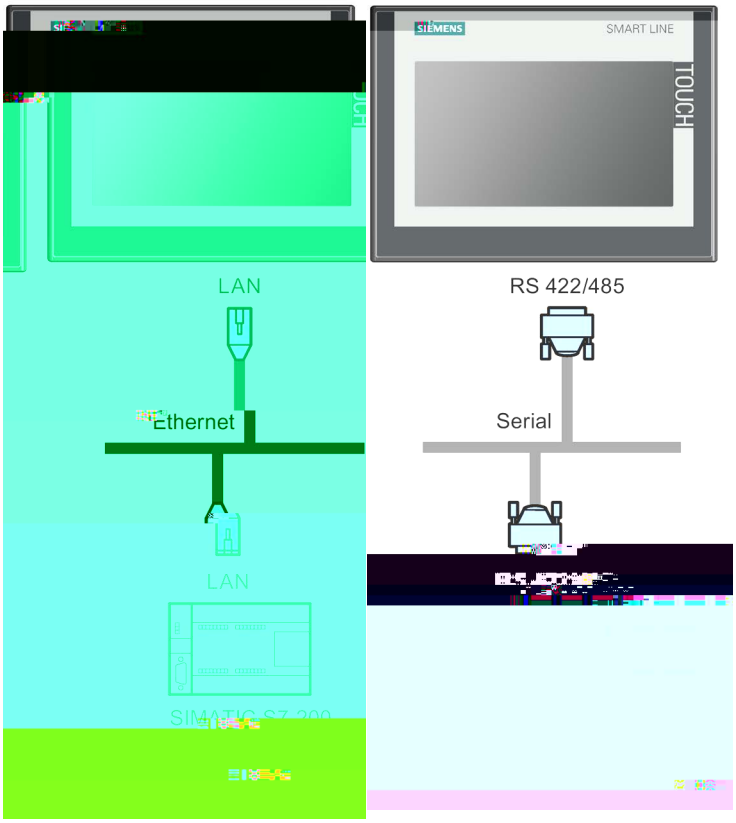
HMI HMI PLC

PLC

-
-

PLC PLC

SIMATIC PLC PLC SIMATIC PLC



“ PLC (67)”

3.3.6 USB

HMI USB

USB
USB

USB USB USB
16 GB SIMATIC USB

USB 2.0

USB 2.0 USB
“Certified HI-SPEED USB 2.0” USB

3.4 HMI

HMI

HMI

- R Ñ“•CTransfer”

HMI

1. HMI
2. HMI
   –
   – HMI

3.5

4

“ ” “ ”

I/O

I/O

HMI WinCC flexible Smart

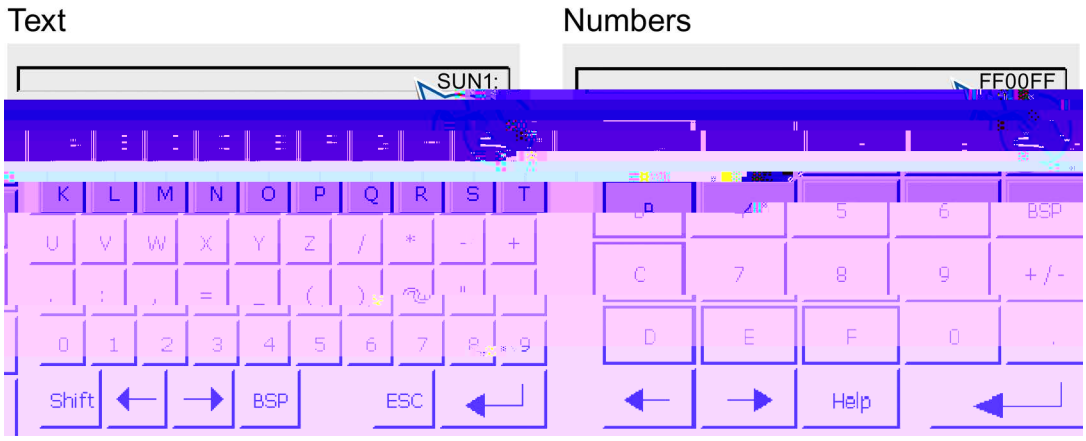
“ ”

4.2

Smart Panel

4.3

HMI


Text
Numbers
SUN1:
FF00FF
K L M N O P Q R S T
U V W X Y Z / * - +
. : , = _ ( ) " '
0 1 2 3 4 5 6 7 8 9
Shift BSP ESC
5 6 BSP
7 8 9 +/-
D E F 0 .
Help

51“ ”

4.4

1.

2. HMI

<Shift>

3. < >

<ESC>

1.

2. HMI

3. < >

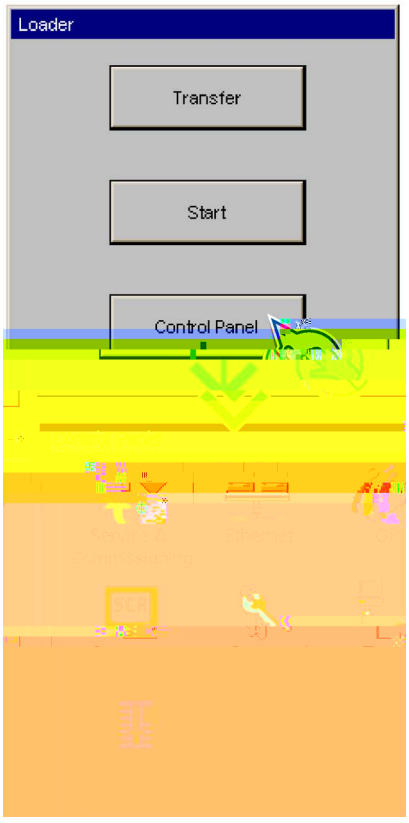
<ESC>

5

5.1

HMI Loader

“Control Panel”



-
-
- OP
-
-
-
- /

HMI

5.2

HMI

Service & Commissioning	USB • (37) • (38)
Ethernet	(39)
OP	(40) HMI (41) (42) HMI (43)
Screensaver	(43)
Password	(44)
Transfer	(45)
Sound Settings	(45)

5.3

OK	

5.4.2

“Service and Commissioning”
“Restore” USB

“ (37)”

1. “Service & Commissioning”
   “Service & Commissioning”

2. “Restore”

3. “Next”

4. “USB Storage Devices”
   USB USB
   Smart Panel
   “Refresh”

5. “Next”

6. “Compatible backup files”

7.
   – “Details”

     -
     - USB
     -
     -
   – “Next”
   – “Delete”
   – “Cancel”

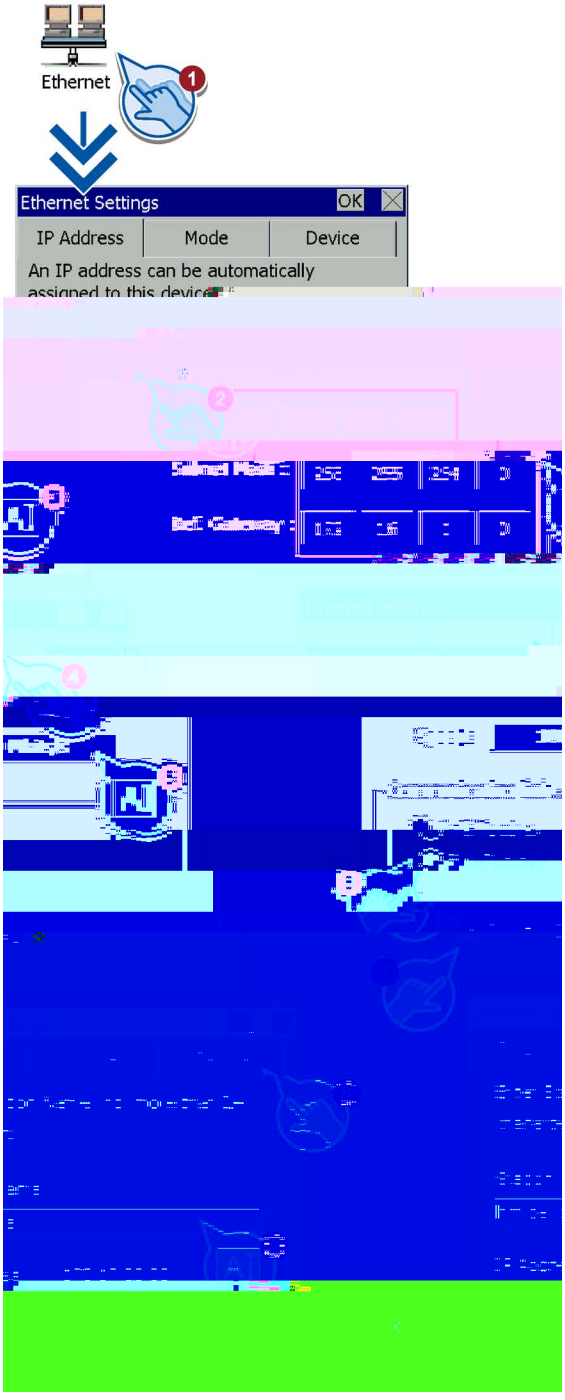
5.5

IP

IP

HMI IP

1. “Ethernet”
   “Ethernet Settings”
2. “DHCP”
3. “IP address”
   “Subnet mask”
   “Default gateway”
4. “Mode”
5. “Speed”
   10 Mbps 100 Mbps
6. Communication Link
   “Half duplex” “Full duplex”
7. “Auto Negotiation”
8. “Device”
9. “Device name” HMI
   “a” “z” “0”
   “9” “-” “.”

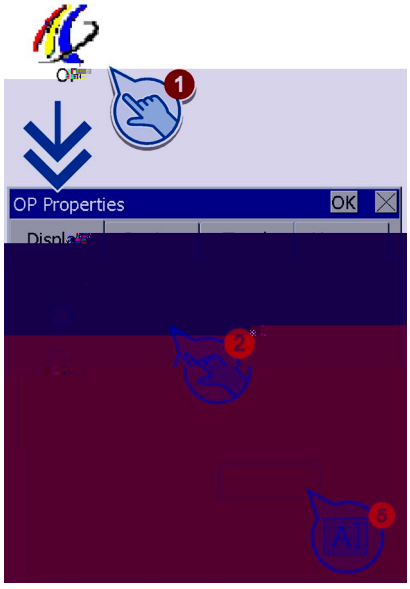


5.6

HMI

HMI

1. “OP” “OP Properties”



2.
   - “0° (Landscape)”
   - “90° (Portrait)”

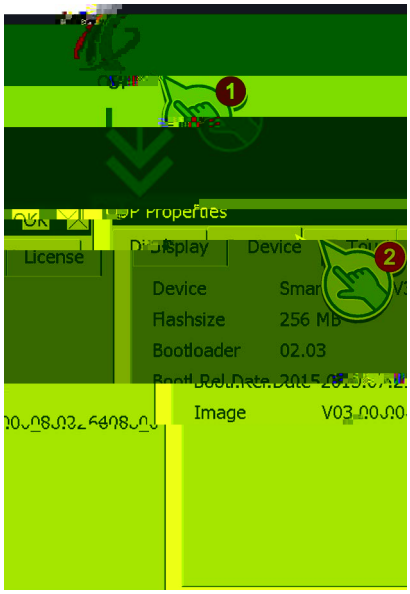
3. Startup delay “Delay time”

   Loader

   0 ... 60

5.7 HMI

1. “OP” “OP Properties”



2. “Device”

“Device” HMI
“ ”

– “Device” HMI
– “Flashsize”
– “Bootloader”
– “Bootl. Re. Date”
– “Image”

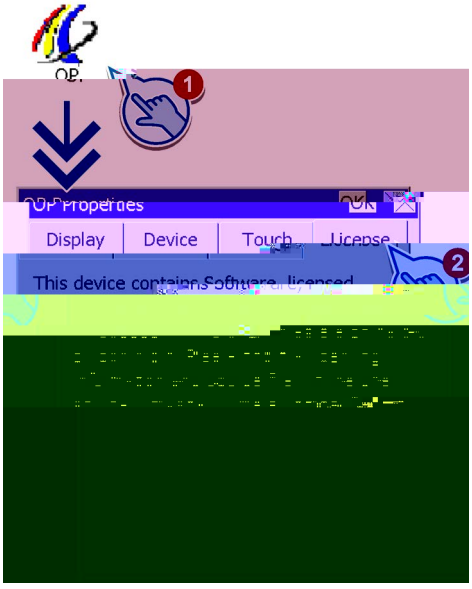
5.8

1. “OP” “OP Properties”
2. “Recalibrate”
3.
4.

5.9 HMI

1. “OP” “OP Properties”

2. “License”
   “License” HMI



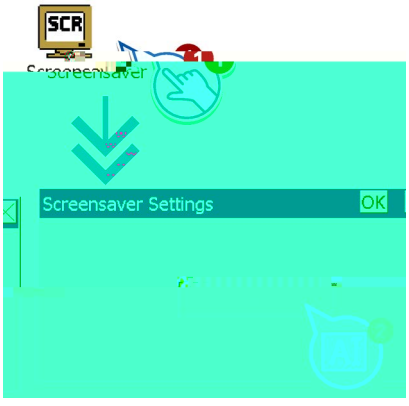
5.10

“ ”

1. “Screensaver”
   “Screensaver Settings”

2. “Wait time”

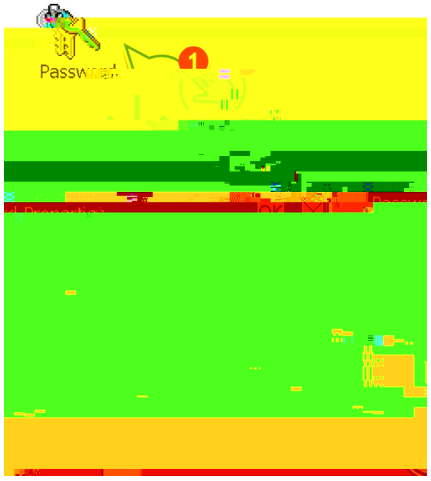
   5 360
   “0”



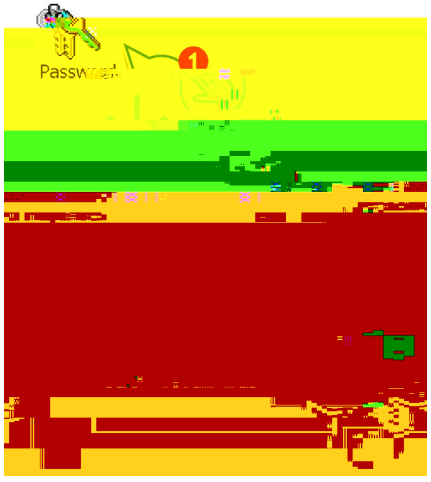
5.11

HMI

1. “Password”
   “Password Properties”
2. “Password”
3. “Confirm Password”



1. “Password”
   “Password Properties”
2. “Password”
3. “Confirm Password”



5.12

6

6.1

PC

HMI

HMI PLC - -

HMI

HMI

PC

ProSave PC

PC HMI PC

ProSave HMI ProSave
HMI

Pack & Go

ProSave PC HMI PC

USB

“ (38)”

HMI

HMI

HMI

6.2

HMI

6.3

HMI PC

	USB		
/ HMI • • •		-	
	-	-	
“ ”	-	-	
	-	-	

6.4

6.4.1

PC HMI

HMI “ ”

HMI

6.4.2

HMI “ ”

HMI Loader

WinCC flexible Smart

HMI PC

HMI

HMI “ ”

1. PC WinCC flexible Smart “ > ”(Project > Transfer)
   “ ”(Transfer settings)
   “ ”(Select devices for transfer)
2. HMI
3. HMI PC
4.
5. “ ”(Transfer) WinCC flexible Smart
   PC HMI HMI
   PC

HMI

6.4.3

PC HMI
“Transfer”

HMI

WinCC flexible Smart

HMI PC

HMI

1. PC WinCC flexible Smart “ > ”(Project > Transfer)
   “ ”(Transfer settings)
   “ ”(Select devices for transfer)
2. HMI
3. HMI PC
4.
5. WinCC flexible “ ”(Transfer)

PC HMI HMI “ ”
HMI PC

HMI

6.4.4

PC
PC
WinCC flexible Smart

HMI
HMI PLC

HMI
HMI PLC

“ ” “ ”

HMI

1.
2.
3.
4.

HMI

HMI

HMI “ ”

“ ” HMI PLC

PLC

PLC

HMI

HMI “ ”

“ ” HMI PLC

PLC

6.5

6.5.1

PC USB HMI

HMI

ProSave

USB “ (37)”

HMI

HMI

6.5.2 ProSave

HMI ProSave PC
HMI

HMI

1. PC Windows“ ”(Start) ProSave
2. “ ”(General) HMI
3. HMI PC
4. “ ”(Backup)
   – “ ”(Complete backup) PSB
   HMI
   – “ ”(Recipes) PSB HMI
   – “ ”(User management) PSB HMI
5. “*.psb”
6. HMI “ ”
   HMI HMI “ ”
7. “ ”(Start Backup) ProSave
   ProSave

HMI

1. PC Windows“ ”(Start) ProSave
2. “ ”(General) HMI
3. HMI PC
4.
5. “ ”(Restore) “*.psb”
   HMI
6. HMI “ ”
   HMI “ ”
7. PC ProSave “ ”(Start Restore)
8. ProSave

6.6

6.6.1

HMI

HMI HMI

PC

HMI

HMI HMI

HMI

6.6.2

ProSave

HMI “ ”

ProSave

6.6.3 ProSave

HMI ProSave PC

HMI

1.
HMI
2. PC Windows“ ”(Start) ProSave
3. “General” HMI
4. HMI PC
5. “OS Update”
6. “Reset to factory settings”
7. “Image path” HMI “*.fwf”
HMI WinCC flexible Smart “WinCC flexible Images”

HMI
8.
HMI “Transfer”
HMI “Transfer”
9. PC “Update OS”
10. HMI
11. ProSave

7

7.1

HMI

PLC

HMI

HMI

1. HMI
2. HMI
3. HMI

7.2

HMI

HMI

8

8.1

HMI

CE

HMI EC
(EN)
2004/108/EC“ ” EMC

EC

EC

Siemens AG
Digital Factory
Factory Automation
DF FA AS DH AMB
PO Box 1963
D-92209 Amberg, Germany

8.3.2

HMI

IEC 60721 3M3

IEC 60068-2-6	5 ... 8.4 Hz 3.5 mm 8.4 ... 200 Hz 1 g
IEC 60068-2-27	150 m/s² 11 ms 3

8.4

8.4.1

IEC 60721-3-2 2K2

	-20 ... +60 °C
	1080 ... 660 hPa 1000 m 3500 m
	10 ... 90%
	SO2 < 0.5 ppm < 60% H_2S < 0.1 ppm < 60%

HMI

HMI HMI
HMI 4

8.4.2

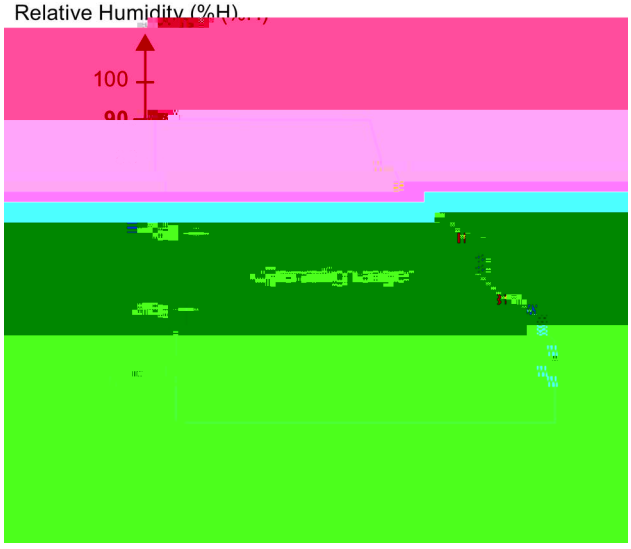
HMI

IEC 60721-3-3 3K3

		0 ... 50 °C
	35°	0 ... 40 °C
		0 ... 40 °C
	35°	0 ... 35 °C
	1080 ... 795 hPa	1000 m 2000 m
	10 ... 90%	
	SO2 < 0.5 ppm < 60% H_2S < 0.1 ppm < 60%	

8.4.3

IEC 60721-3-3 3K3



8.5

8.5.1

EN 61131-2

U_e	
< 50 V	500 V AC

8.5.2

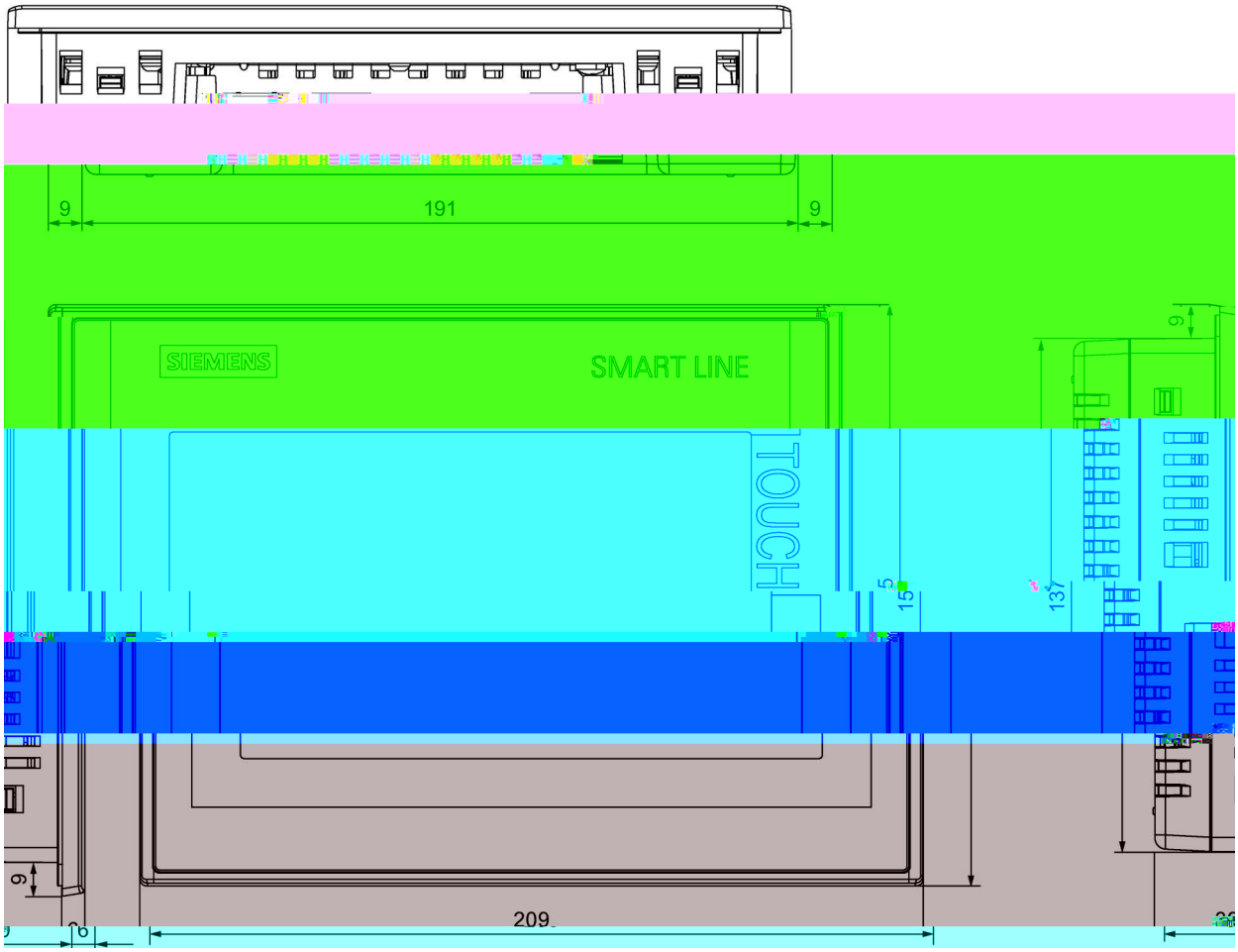
EN 60529

	IP65
	IP20

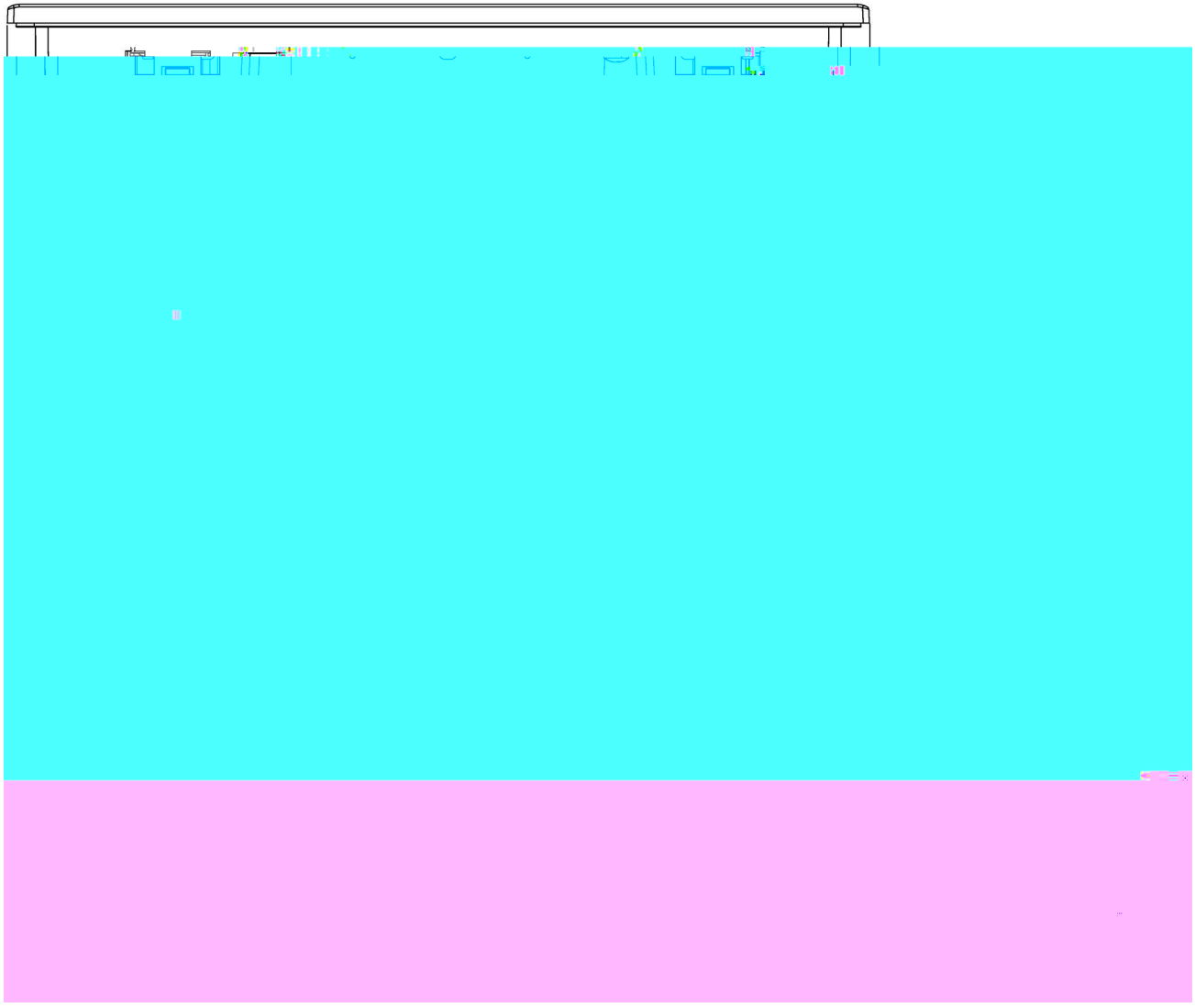
“ (18)”

8.6

8.6.1 Smart 700 IE V3



8.6.2 Smart 1000 IE V3



8.7

	Smart 700 IE V3	Smart 1000 IE V3
	770 g	1200 g

	Smart 700 IE V3	Smart 1000 IE V3
	LCD TFT	

		Smart 700 IE V3	Smart 1000 IE V3
		+24 V DC 19.2 28.8 V (–20%, +20%)	
		35 V (500 ms)	
		50 s	
		200 mA	230 mA
		340 mA	370 mA
	I^2t	0.1 A^2s	

	Smart 700 IE V3	Smart 1000 IE V3
[1]		

[1] 6

8.8

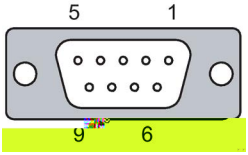
8.8.1 DC24V - X80

2

1	+24 V DC (L+)
2	GND 24 V (M)

8.8.2 PPI / RS422 / RS485 - X2

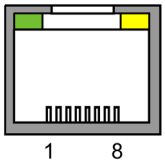
Sub-D 9



	RS 422	RS 485
1		
2		
3	TxD+	B (+)
4	RXD+	RTS
5	GND 5 V	GND 5 V
6	+5 V DC	+5 V DC
7		
8	TxD–	A (-)
9	RxD–	NC

8.8.3 Ethernet (LAN) - X1

RJ45



1	Tx+
2	Tx–
3	Rx+
4	n. c.
5	n. c.
6	Rx–
7	n. c.
8	n. c.

LED

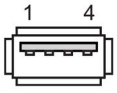
LED

“Link”LED

“Activity”LED

8.8.4 USB - X60

USB



USB

1	+5 V DC	500 mA
2	USB-DN	
3	USB-DP	
4	GND	

8.9 PLC

PLC

PLC Smart V3

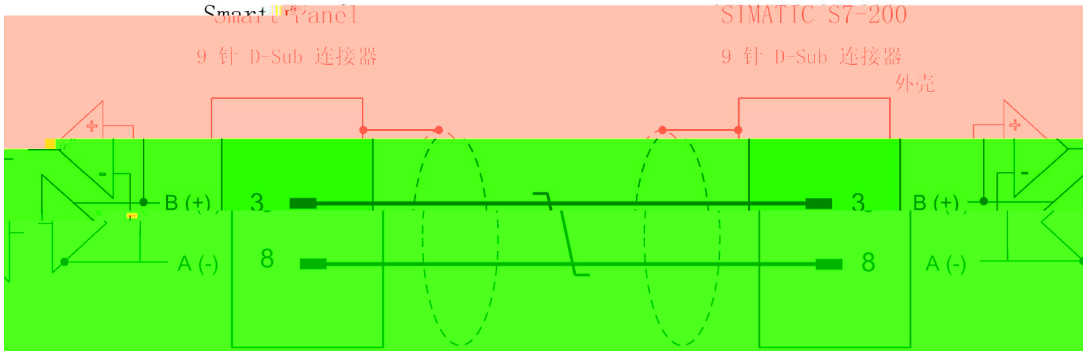
PLC	
SIEMENS S7-200	PPI MPI
SIEMENS S7-200 CN	PPI MPI
SIEMENS S7-200 Smart	PPI MPI
SIEMENS LOGO!	
Mitsubishi FX *	
Mitsubishi Protocol 4 *	
Modicon Modbus PLC *	
Omron CP CJ *	

* PLC PLC

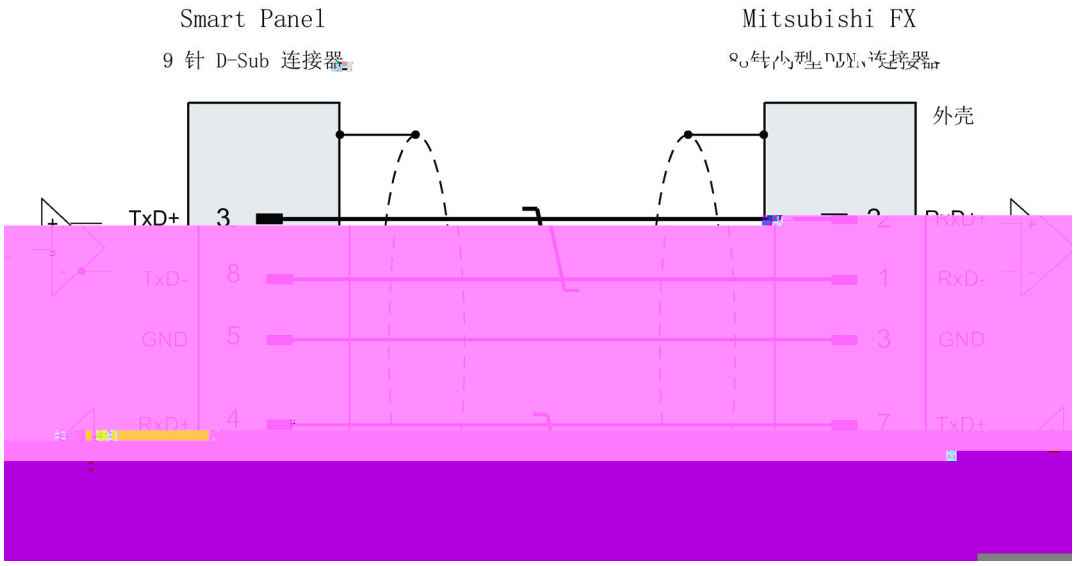
PLC

PLC Smart Panel

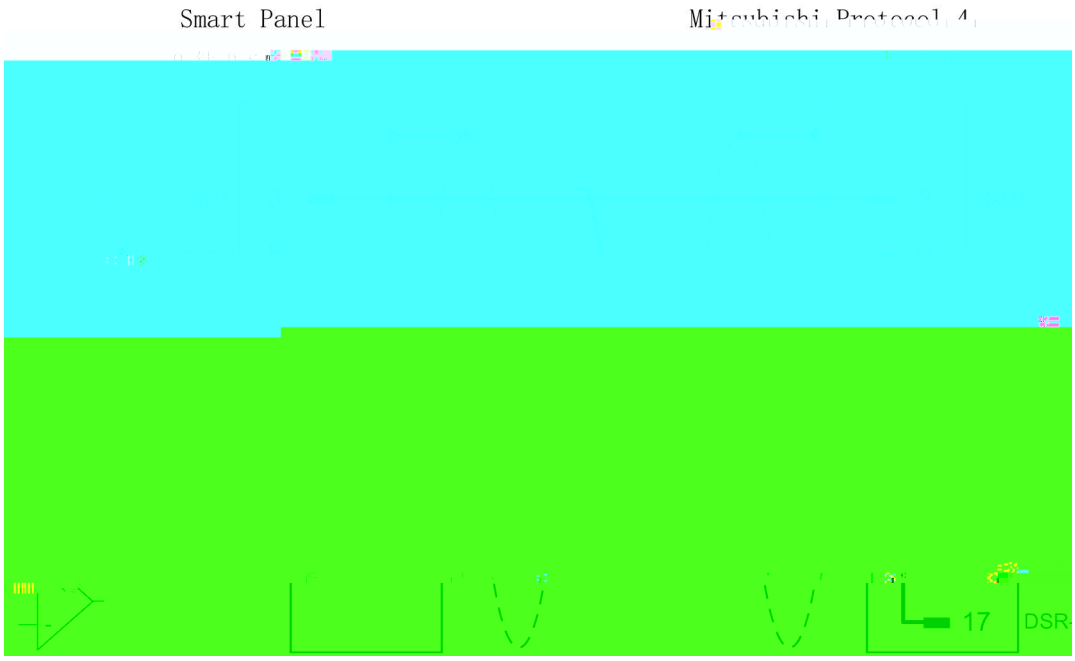
S7-200



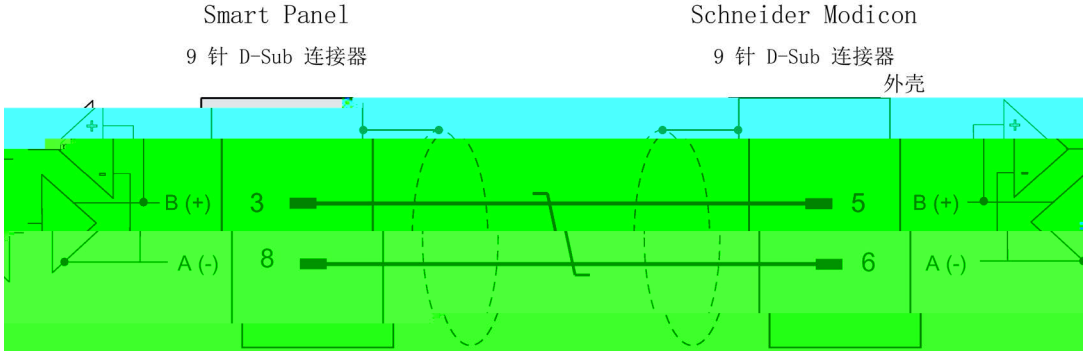
Mitsubishi FX



Mitsubishi Protocol 4



Schneider Modicon



Omron

8.10 WinCC flexible Smart

Smart Panel

HMI

		800
	/	
	/	
		100
		200
		100

		32
		400
		20
		80
		8
		16
		256
		64

		150
		100
		100
	[1]	5
		10
		8
		1
		20
	[2]	100

1 “ ”(Controls)

2

		10
	[1]	50
		100
	KB	32
		128 KB
1		

		2
		5
	[1]	10,000
		400
		1 s

1 “ ”

		25

		100
		200
		50

		50
		50
		32

		320
	I/O	

		5

“ ”		8 MB

B

CPU	
CTS	
DC	
DHCP	
DP	I/O
DSR	
DTR	
IO	
ESD	
EMC	
EN	
GND	
HMI	
IEC	
IP	Internet
LED	
MPI	
MTBF	
n. c.	
OP	
PC	
PPI	(SIMATIC S7)
PELV	
PLC	
RJ45	45
RTC	
RTS	
RxD	
SELV	
Sub-D	D
TCP/IP	/Internet
TFT	
TxD	
USB	

“ ”

HMI PC HMI

HMI

HMI
HMI HMI

HMI

HMI PC HMI HMI HMI

I/O

HMI PLC

PLC

PLC HMI SIMATIC S7

PLC

PLC HMI

ProSave

ProSave PC HMI

WinCC flexible Smart ProSave
WinCC flexible Smart PC ProSave

WinCC flexible Smart

WinCC flexible Smart Smart panel

50%

PLC HMI

PLC

PC HMI

HMI

I/O

I/O

HMI

PLC

EEPROM

HMI

“ ”

“ ”

“ ” HMI PLC

PC HMI HMI

PC PC

HMI HMI HMI

HMI

PC

PC PC

WinCC flexible Smart

CE , 57

EC , 57
EMC , 57
ESD, 12

HMI
, 30
, 19
, 64
, 21
, 71
, 71
, 29
, 29

Mitsubishi
FX, 68
Protocol 4, 69
Modicon , 69

Omron , 70

PELV, 24
PLC
, 68
, 67
PLC , 27
PLC , 68

S7-200 , 68

USB
USB , 28
USB
, 28
USB
, 28
, 28

, 47
, 47
, 47
, 47

, 34

, 14

, 45

Smart 1000 IE V3, 63
Smart 700 IE V3, 62

, 71, 73
, 72
, 73
, 71
, 71
, 72
, 73
, 73
, 71
, 71
, 71
, 73
, 73
, 73
, 72
, 73

, 24
, 22

Smart 1000 IE V3, 65
Smart 700 IE V3, 65
, 52

Smart 1000 IE V3, 64
Smart 700 IE V3, 64

, 56

, 46, 47, 48
, 48
, 49
, 46
, 45

HMI , 30

, 57
, 24
, 12

USB , 28
, 56
, 28
, 52
, 59
, 56
, 59
, 13
, 52

, 14
, 22
, 56
, 54
, 54

, 12
, 12

HMI , 19
, 17
, 16
, 18

, 20
, 16

, 43

EC , 57

, 22

, 61
, 61

, 65
, 64
, 64
, 64
, 64

, 45

ProSave, 55
, 54

PLC, 27
USB , 28
, 24
, 22

Smart 1000 IE V3, 65
Smart 700 IE V3, 65

, 65

, 74
, 74

HMI , 71

, 24

, 41

, 35

, 46

, 40

, 12

, 24

, 20

, 4

, 3

, 37, 38, 48, 52, 53

, 47
, 51

PLC, 67
, 52

, 3

, 24

Smart 1000 IE V3, 64
, 64

HMI , 29

, 12
, 12

, 36

, 4

, 24
, 15

, 5

, 44
, 44
, 35

, 56
, 3
, 37, 38

, 4

, 22
, 22
, 22
, 23

, 12

Smart 1000 IE V3, 64
Smart 700 IE V3, 64

, 42

, 34

, 65

, 75

USB , 28

, 3

, 54
ProSave , 55

, 3
, 3