SIEMENS

¹ ˜B$ >

SIMATIC HMI

HMI
Smart 700 IE V3, Smart 1000 IE V3

ƀ

10/2015
A5E35936633-AB

ƀ

ƀ ɢ IEC 62079 Ţ ʁ ᴸ Ḥ Â ˢ Ḥ ŭ HMI ŭ ὶ Ũ’ à à ą ෂЂʊ à à ą ˇ Â

ƀ Ʊ Â Й ↓ ₹ ৬ ƀ Ţ Ѳ ɕ ≠ ˜ Â

	“ ŋ ”
ƀ ᵇ ƀ ᵇ ي L ƀ ˇ Â	“ ” “ ƀ ”
HMI ⌠ Ţˇ Ḡ L HMI ⊦ Â	Â HMI ĺ ᵣ ą , ˘ ˢ ᵀ ƀ ˜ ˘ ᴅ “ ˇ Ḡ Ī ” № Â
⌙ ¬ ᵇ ⌙ ¬ ᵇ L Ţ ₹ Â	Â HMI ĺ ᵣ ą , ˘ ˢ ᵀ ƀ ⌙ ¬ ᵇ ˜ ˘ ᴅ “ ˇ Ḡ Ī ” № Â
⌙ ¬ ᵇ ⌙ ¬ ᵇ ي L ḱ ˇ ƀ Â	ˇ Ḡ Ī

WinCC flexible Smart ي ^ Ţ ą ˚ Ḥ Â ي ^ ą 3 Ĕ ᴅ

ΐ ΅ ι Ь Ң ˘ ΄ Ъ Â

˘ ϶ ΰ Ъ ą Â

˝ طي ˇ

΄Ү ϙ طي Â ΄ طي يخ ΅΅΄ Ψ Ь ᴸ Ζ Â

ϒ Ϋ ˝ طي ˆ ɢ ΄ Ъ ΄

˝ طي	
	ΰ ⌠ ɢ κ ˍ ˘ ↕ شي ˗ ˗ ˗ حي ˝ Ω ɢ κ ˍ Â № ˝ يخ κ ˍ Ъ ˇ ΐ Â طي Ţ Ψ Smart 700 IE ˘ ϒ IE Â

ɣ Й ˷ ˆ ɢ ˢ ƀ ˙

˷	ɯɯ
“ ˙ ”	• ⁘ ₮ ˇ ɒ ˇ Ɋ à ⊣ à à ⊣ ѡ ɒ • ~ ɣ˅ ɒ ˇ Ꮮ ɣ à1 ɣ • Ḥ
“ ɐ > ”	ƀ ↓˅ ɒ ˇ ⊣ ѡ ɒ à ⊣ ѡ ɒ
<F1>	ƀ

˷ Ḥ Й ˙

. ɋ ɷ ˀ ℗℗ ɯ ŭ ĭ Ḥ ˇ ˀ ɞ Ḥ Â

ɐ Ɋ

ˢ ƀ ɦ : Smart IE V3 HMI Âخي ˢ Ţ˅ “HMI ” Ь “Smart IE V3 HMI ”Ƣ Ч Â

ɐ Ɋ

ɐ ˅ ɐ ĺ Ь Ƣ Ɋ ˇ ĺ ɾ Й˙

- “WinCC flexible Smart” ɢ ⇔ HMI ɐ Â
- “ ” خي HMI ⁘ “WinCC flexible Smart Runtime” ɐ Â

گ

ą ® ₋₌ Ɋ ﻣ ч Siemens AG ΄Yگ Â ą ĭ ᵩ Ɋ
Ӟ ϥ گ Â ĸ ᵥ ⁘ ₮ ɢ ≠ ą گ ˇ گ Â

- HMI®
- SIMATIC®
- SIMATIC HMI®
- WinCC®

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1

1.1 ﻪﻣ ﺲﻴ

٦ ﻩ - Smart Panel V3

ﻍ ﺠﺒ ـ ١ ٦ ₩ ٦ Smart Panel

ٰ ˘ ٦ ١ ٩ ﻢﻫ ‰ ˇ Ң ₩ Â ΄ ˇ HMI ŋ
ﺠﺒ ﻢﻫ ˇ ٦ Â

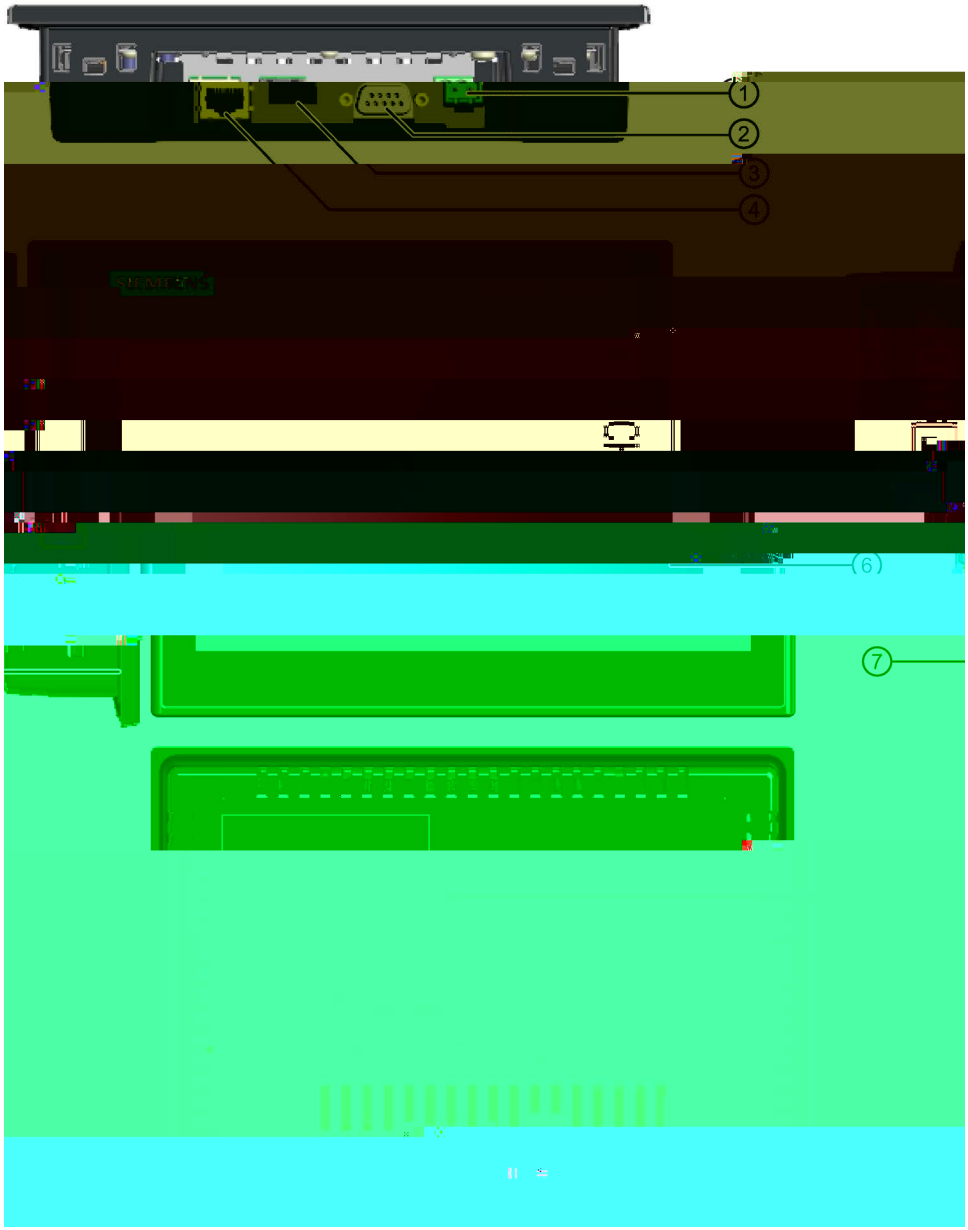
ٮ٦ Smart Panel Â ˘ Smart Panel V3 ٦
ʟ ˈ ˇ Â

Smart Panel V3 Â ɢ ﺠﺒ CPU ˇ Ũ ﻢﻫ ˇ ὶ ɣ
٧ Â USB h ˀ ˀ ₩ Â ₫ RTC
˘ ɹ ʊ ɾ Â Ș ˆ Đ - WinCC flexible Smart V3
٦ ١ ˘ ą ˘ ƀ ˚ Ḃ Â

˞ Ḥ ˘ ǐ “ (57)”₩ Â

1.2 HMI

Й ظ ر Smart 700 IE V3 ч ◦ ˘ ъ HMI Â



/

RS 422/485 ◦ مخي
USB ◦
ر ◦ ◦ شم
K

ر ◦ ך L WinCC flexible Smart Đ Â

RS 422/485 ◦ WinCC flexible Smart Đ Â

1.3 ´ ʊ ṕ

HMI ´ ʊ ɯ̧ ɣ Й ɒ˙

ٹ	ظ	
HMI		1
٩		1
1 ˇ°° س Ӈ OSS mini DVD		
1 ɕ ɋ ɒ		ʊ _ ɢ ˘ خ ɒ Ţ
		1˘ خ ɒ Ţ

1.4 ɒ

HMI ´ ʊ ɯ̧ ṕ Ь ɋ ɒ˘ ᵖ ٦ ɣ ŀ

2

2.1

HMI HMI

HMI HMI HMI

ESD

Industrial Security

ʒ

HMI ч ʒ Â ЊґЙ ↓ ‰

- EN 61000-6-4:2007+ A1:2011 Ţ ʒ ‰
- DIN EN 61000-6-2:2005 Ţ ESD

ي ٦ ą

HMI Ь ч ي ٦ ą Â ي ٦ Ţ ђ HMI ˘ ˅
Ψ0 ⌠ Â

ي ٦ Ţ ą HMI ˘ ↕ EN 55011 Ţ ˘ Ʊ
ą ⌠ B └ Â

3

3.1 ‰ ƀ

3.1.1 . ṗ

. ṗ ˘ ` ѫ ᴦ ŭ ѱ ` Â

ѫ Ð	
Ⓟ˜ ي	ѫ Ð Â w̄ Ð ₹ ѫ˘ Ь ך Â

´ ʊ ṗ (11) № ϗ ṗ Â

ι ي ŋ β Â ч HMI w̄ №˘ ғ ي ᴦ Ƶ Ţ ą Â

3.1.2 ƀ Ð

HMI ң ╠˘ ƀ ᴦ Й Ѳ № Ţ Ң

- й ˘ (57)
- Ɪ (58)
- Ð (58)
- Ṛ Ð (59)
- Ḡ ≠ (61)
- (64)

3.1.3 β

Ю ي ץ Й ß ‘

-
- └
-
- └ ┐

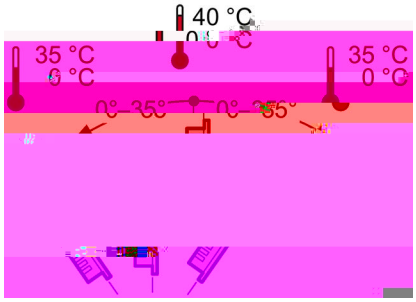
ץ Й ي “ ”Ţ Þ ч ĭ Â

HMI

Ъ

Ъ ṗ ‘

- Ъ ^ ẁ 0°~ ‘ +40 °C
- ẁ ^ ẁ 35°~ ‘ +35 °C

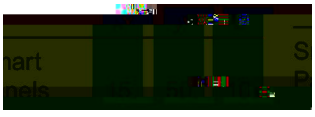
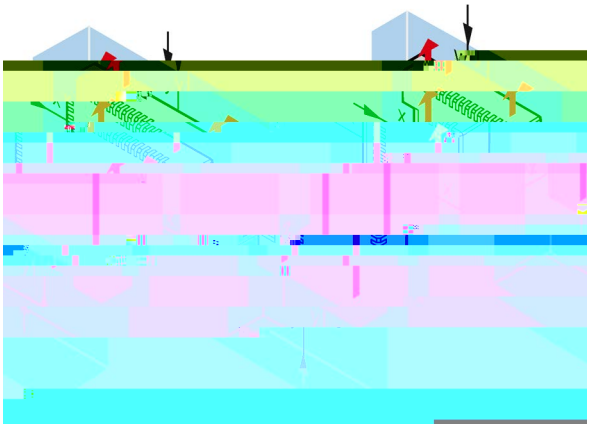


ĭ

Ð (60)

3.1.4

HMI ڂشم Ŧ ɣ Ѝ ˘ ɣ Ḡ ˇ Ḥ ‘

HMI ڂشم Â ϒ β ڂشم ч mm 	

3.1.5 ‰

٦	ɣ Ḡ 0 δ HMI ˇ ŋ Â
0 Ⱶ	ƀ Ƅ Ψ 1 ˘ ɪ ⌠ Ӣ Â

ˇ ﺧﻲ ɣ Ӣ ˘ Ḡ HMI ⌠ ˋ

- Ƕ ч IP65 ʌ ˋ 2 mm ⌠ 6 mm Â
- ˜Ḥ Ƅ Ẓ ˋ ≤ 0.5 mm

HMI Ƕ ƀ Â

- ٦ ˜Ḥ ˋ ≤ 120 µm (R_z 120)

˙I

Smart Panel Ƅ ɣ Ӣ SIMATIC HMI ˙I ˋ

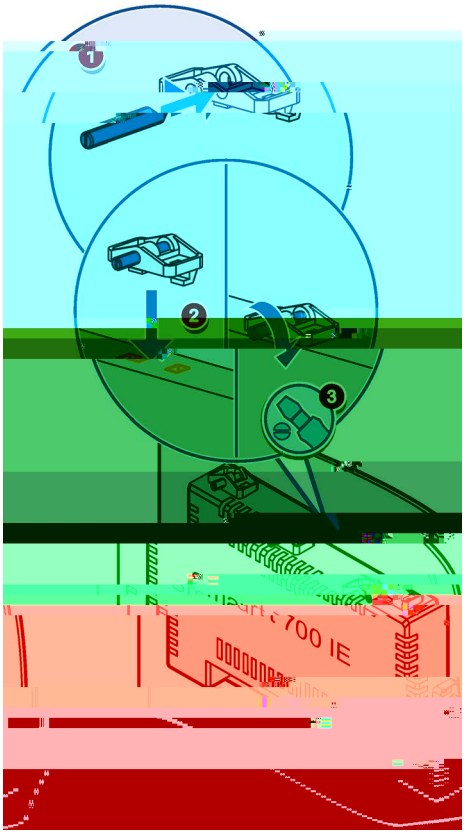
ą ę HMI

1. ~ ì
ū Â

2. w̄ ¢ ي Â

3. ą ч 2 Ќ ₴
Â ̈Ң ч 0.2 Nm Â

4. 1 ⌠ 3
ŕ ę HMI Â



3.3 HMI

3.3.1

3.3.3

1. ң ẅ ~ ⌠ ₪ Ţˇ ą ẅ Ҡ ₴ ὶ ₰ Â

2. ⌠ HMI Â

3. ˜ Â

4. ң ˋ ẅ ~ ⌠ Ţˇ ą ẅ Ҡ ₴ ὶ ₰ Â Ḡ Â

3.3.4 PC

PC

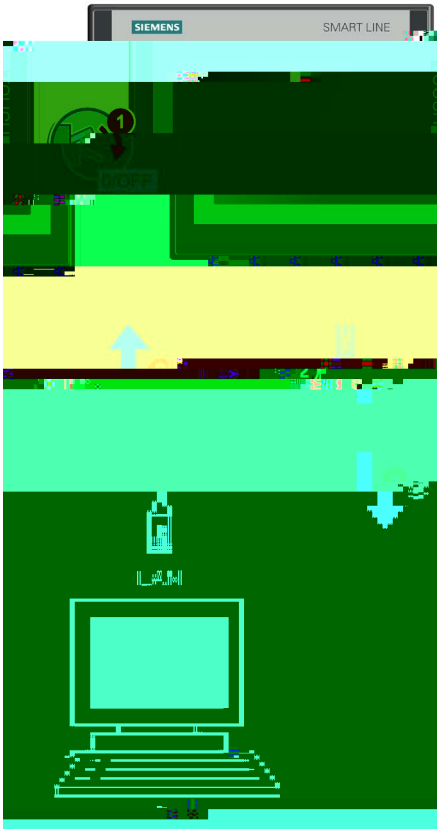
- D
- D HMI
- HMI
- HMI

a 5 PC

1. HMI

2. LAN RJ45
HMI

3. LAN RJ45
PC



3.3.5 PLC

HMI . ɋ ƀ ˇ ¬ ˇ ↕ HMI ⌠ PLC Â

PLC ⌠ γ Й Ң ˙

- ˇ β
- ﷺ

˘

3.3.6 USB

ץ Й ↓ е ъ Ғ ч ʒ ғ ђ ץ ∫ HMI USB

- USB
- USB ֍

Ң

USB USB ∫ USB ą Â
ą ч 16 GB SIMATIC USB Ũ : Â

ą USB 2.0
ą USB 2.0 USB ↕ ي D ђ Ψ Ŧ Â
ą “Certified HI-SPEED USB 2.0” USB Â

USB Ь 1.5 m
USB 1.5 m ↕ Ь Ḡ ŋ D Â
Ь ђ 1.5 m Â

USB
230 V ∫ USB ą ↕ ђ Ψ
∫ Â
ą Â

USB ђ Ψ Â
Ь USB ẏ Â ъ ẏ ǐ
“USB - X60 (67)” Â

∫

3.4 HMI

HMI

Â
Ƶ˘ Ψ˳ Â
HMI Ł˽ ˘ ↕ ╕
⁘ ǐ ϡ Â
˘ ì Â

ƀ Ł˽ Ƶ˘ Ł˽ Ţ Â
╕ ą ⁘ ƀ Ł˽ Ţ Â

- Й“Transfer”

HMI

1. HMI Â
2. HMI Â
   - Â
   - HMI Â

3.5

Ч Ч Â

4

4.1

Smart Panel Â ˥ ą Þ └ HMI Ţ
Â

. ˥ Ғ ʒ¬ ᵇ Þ
Ţ ą ˢ Þ ˥ Þ ᵇ ~ ɜ Â
Ḡ. Ғ ʒ¬ ᵇ Þ Â

Þ

ᵴ
≠ ᵣ ˥ Ψ ᵴ Â
ˇ ą Þ Â
ỡ ˍ Þ
Ƣ ɢ Þ ˝Ḥ ˥ Ψ ỡ ˍ Þ Â
ẅ ˇ ⁘ ẅ ɢ Þ ˝Ḥ Â

Þ ˝Ḥ HMI ⁘ ˗ Â
Þ ˝Ḥ Þ Ь Þ Ƣ Â Þ ˝Ḥ ỉ Â

HMI ˇ ⌠ Þ ˝Ḥ Ψ ˥ ỉ Â
˥ ỉ ˇ Ь PLC Ḥ ˇ Â ˇ ˥ ỉ Ḥ˗ Ь ˇˍ Þ `
Â

- ٦ ĺ ɣ Й ‘

“ ” “ ”

ˇ Ϳ ơ ˇ ơ

- ’ Й ي Ƶ Ь Â ي ’ Й Ь Ψ ʟ K ѵ
ƀ ĭ Â ᵖ ˇ ٦ ˇ ɣ Ḃ ي Ƶ ч
Â Ḡ ٦ ˇ ⌠ ì ƀ ″Ḥ Â
- I/O
ҍ I/O Ƶ^ ᴅ ˇ ч ҍ ~ ~ ˇ Ψ ƀ ч ٦ ĭ Â
ڜ Ɠ = ɢ β ˇ ƀ ″Ḥ Â
~ Ƶˇ ᵢ ᵎP Â

ƀ ″Ḥ

ˆ HMI ƀ ″Ḥ ŋ ˇ ĭ WinCC flexible Smart ي ^
“ ˇ ƀ ″Ḥ ” Â

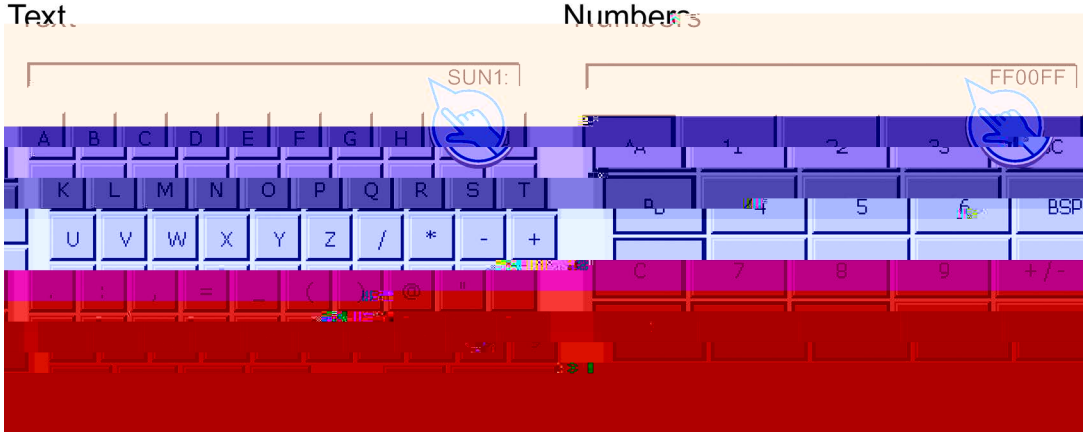
4.2 ɾ

Smart Panel ⁘ ѫ ĺ ɣ Й ‘

	ѽ Ъ
	ѽ Ъ Ϳ
	– ơ
	Ɠ ~
	~
	Ḥ Â ч ƀ ″Ḥ ҍ Ḥ ˇ Ψ Â

4.3

˜ ƀ ″Ḥ ˇ Ψ ڀ HMI ⁛ Â ƀ ″Ḥ
ڄ ˇ ˜˜ ٦ Â
ң ڌ Ծ ˇ Ծ Â



ƀ ʒ Ḥ

ƀ ʒ Ḥ 51“ ” ˇ ˜ Â

٦ w̄ Â
ڀ Ţ ƀ Ψ ف Â

4.4 ˜

˜ ɣ

1. ⁛ ƀ ˝Ḥ Â
   Â
2. ˜ ɣ Â ˇ HMI ˥ ₮
   Ḥ„ Â
   ˥ Ṣ ˆ <Shift> ˜ Ω Â
3. Ӣ < ⇜ > ˜ˇ ą
   <ESC> Ɒ ˜ Â
   ɳ ƀ ⇜ Ψ ˜ Â

˜ ɣ

1. ⁛ ƀ ˝Ḥ Â
   Â
2. ˜ ɣ Â ˇ HMI
   Ψ ₮ Ḥ„ Â
3. Ӣ < ⇜ > ˜ˇ ą
   <ESC> Ɒ ˜ Â
   ɳ ƀ ⇜ Ψ ˜ Â

ɣ L ɣ

5

5.1

HMI Loader

“Control Panel”

- OP
- Ḡ
- Ḡ
- D
- /

5.2

Й ъ L Ţ ㄱ ɢ HMI ˇ Â

¬	ˌ
	ą USB Ḡ ˇ Й Â • м (37) • (38)
	ˠ ǐ (39)

Ъ ˇ Ł (40)

HMI Ḥ (41)

5.4 ќ ˇ ˝

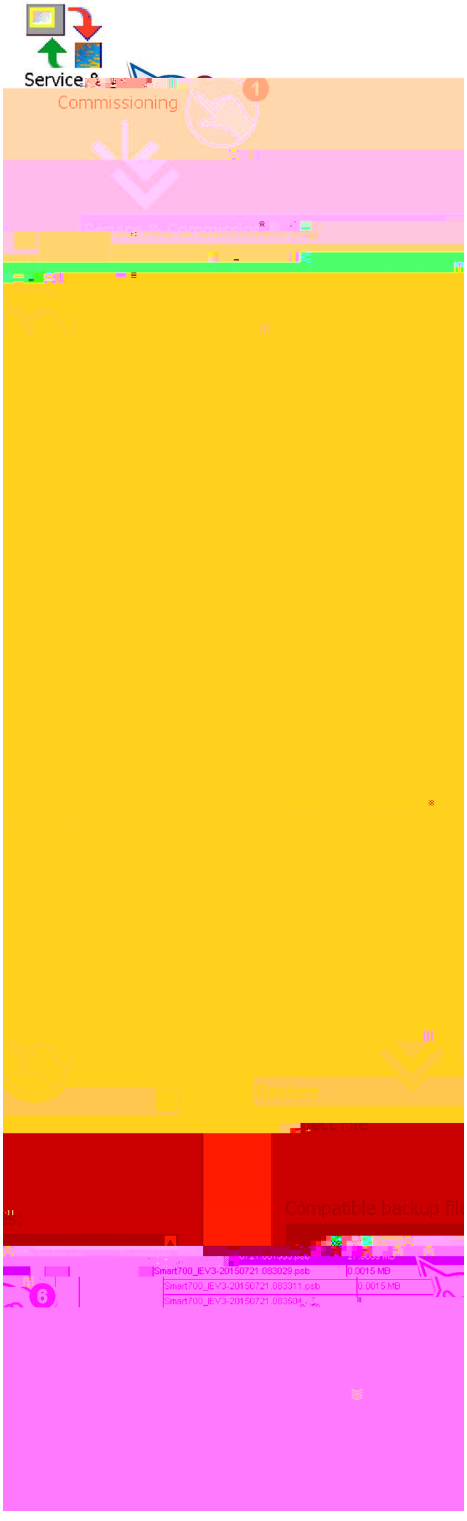
5.4.1 м

ћ ą “Service and Commissioning” Й “Backup”
˝ Ğ ⌡ USB Ũ Ţ Â

1. Й “Service & Commissioning” ˇ
   “Service & Commissioning” Â
2. м Â
   – “Complete backup” ﻲ PSB Ð
     Ţ à ˇ HMI ˝E
     м ◖ Â
   – “Recipe backup” ґ PSB HMI
     м ◖ Â
   – “User administration backup” ґ PSB
     HMI м ◖ Â
3. ℸ Ð “Next” Â
4. ŧ “USB Storage Devices” ↓ Ţ ₩ ₲ USB
   Â ↓ ч ˘ ↕ ₩ ₲ USB Ũ
   ⌡ Smart Panel ℸ Ð “Refresh” Â
5. ℸ Ð “Next” Â
6. ћ ґ “Backup File name” ˇ З ћ ґ ₩ ₲
   ﻲ м Ð
   “Compatible backup files” ↓ Ţ Ð Â

5.4.2

ך ą “Service and Commissioning” Йį “Restore”˝ ŧ USB Ũ Ţ˭ м ð Â ˭ Ʊ _ ɢ м ð ṗ Â ˜ Ḥ ˘ ĭ˚ “ м (37)” Â



1. Йį“Service & Commissioning”˝ “Service & Commissioning” Â
2. “Restore” ˧ Â
3. ˧ Ɗρ“Next” Â
4. ŧ “USB Storage Devices” ↓ Ţ ŵ ɷ USB Â ↓ ч ˘ ↕ ŵ ɷ USB Ũ ⌡ Smart Panel ˧ Ɗρ “Refresh” Â
5. ˧ Ɗρ“Next” Â
6. ŧ “Compatible backup files” ↓ Ţ Йį м ð Â
7. ˧ Ɗρ ì Ţ ŵ ɷ ‘
   – “Details” ɢ ﻲﺧ ↓ Ţ м ð ƴ Йį ‘
     - Ь м ð ˫I
     - USB Ũ ⁘ м
     - м ð Ղ
     - м ð
   – “Next” ɢ ƀ Йį Â
   – “Delete” ɢ ﻲﺧ Ƕ – м ð Â
   – “Cancel” ɢ Ţ ƀ Â

5.5 ɣ ĭ

IP شحشم ‖ Ḥ

Ţ ˜ ¸ w̃ ɕ IP شحشم ˇ ٦ Ψ ₮ Ḥ Â
ч Ţ ɕ HMI ѩ № ڊ w̃ IP شحشم Â

1. Й“Ethernet”
   “Ethernet Settings” Â
2. “DHCP” ˽ № شحشم
   شحشم№ Â
3. № شحشم ą
   ي“IP address” à
   “Subnet mask” Ţ ˜
   ẏ ˇ ˇ ي“Default gateway”
   Ţ Ƣ ˜ ẏ Â
4. Ⓟ “Mode” ٦ Â
5. ي“Speed” ˜ Ţ D Â
   ẏ ч 10 Mbps 100 Mbps Â
6. Communication Link № Ţ
   “Half duplex” “Full duplex” Â
7. ъ“Auto Negotiation” ˇ
   ↕ ˽ ˇ Ţ D
   ي ˇ D Â
8. Ⓟ “Device” ٦ Â
9. ي“Device name” Ţ ˇ ˜ HMI
   Ɋ Â
   Ɋ Ʊ ɣ Й ɒ
   Ɋ ٦ ɣ ą “a” ⌡ “z” “0”
   ⌡ “9” ‘ “-” ˇ “.”

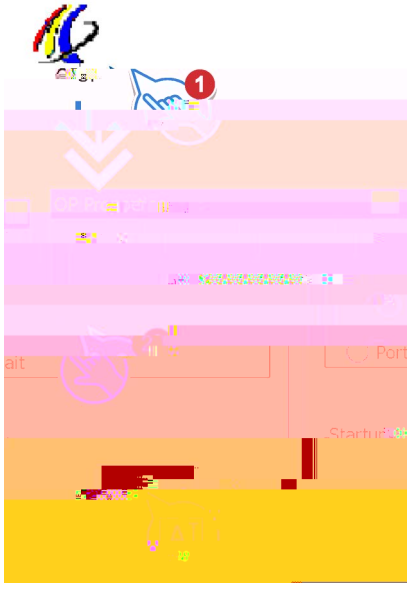
5.6 Ъ ˇ Ѣ

Ъˆ Ъ Ъ˜

Ъ ⇔ ҕ Â D ⌠ HMI ˇ Ψ
Ъ Â

HMI ⁛ ؠ í Ь Ƣ Ъ ˇ Ь Ъ Ą к ᵥ Â ` ↕ˇ
ṗ ٦ Ψ Â

1. Й“OP” “OP Properties”
Â

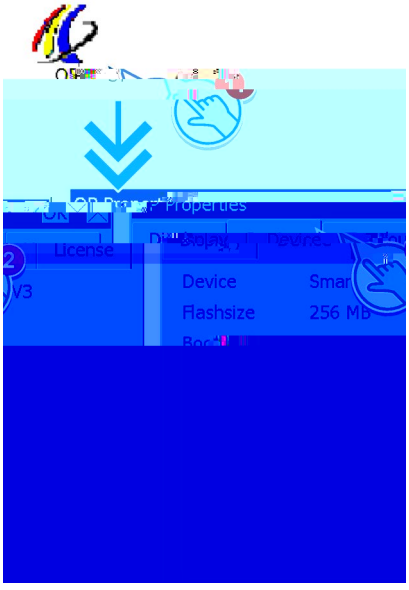


2. Ъ˙
   – “0° (Landscape)” ч Ъ
   – “90° (Portrait)” ч Ъ

3. Startup delay № “Delay time” Â ґ ч ٦ β ˇ
ҕ ҍ Loader Ŧ ˇ Ь
ѫ ҕ Â ұ
ىشم 0 ... 60 Â

5.7 HMI Ḥ

1. Й“OP”ˇ “OP Properties”
Â



2. Ⓟ “Device” ㄱ Â

“Device” ㄱ ɢ HMI
Ḥ Â خي “ ”
ˇ ˈ Ḥ Â

– “Device” HMI Ɋ
– “Flashsize”
– “Bootloader”

– “Bootl. Re. Date”
ὗ
– “Image” ˇE ˇE
Â

5.8 ‰

1. Й“OP” “OP Properties”
Â

2. ℸ𝒟ρ“Recalibrate” Â

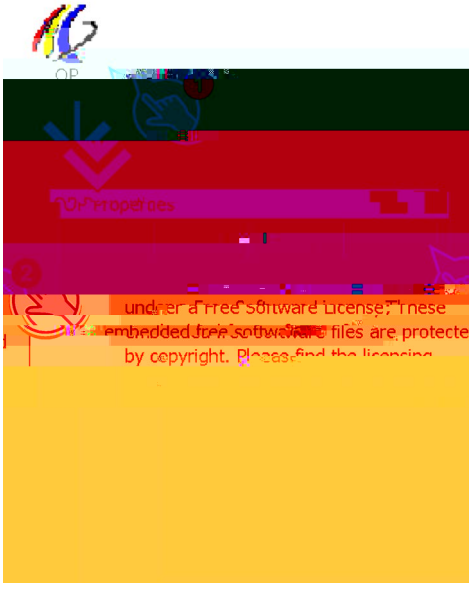
3. Ţ ℸ Â

4. ɷ ˵ ℸ Â
ɯ ṗ ‰ ℸ
˘ ↕ ꞌP Ⱡ˵ ‰ Â
ɯ ṗ
‰ ℸ ˘ ↕ ‰ Â

5.9 HMI ╕ Ḥ

1. Й“OP” “OP Properties”
Â

2. Ⓟ “License” ┤Â
“License” ┤ ɢ HMI
ɒ ╕ Ḥ Â

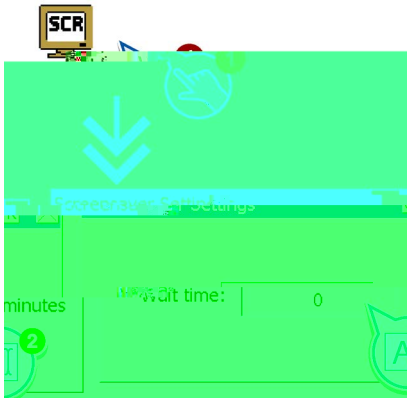


5.10 Ḡ

ṗ ˘ ╕ ﻲ Ţ Й ˝E^ ˝E˜ Â
w̃ Ƶ˘ “ ˝E” Ψ ﻪ Â Ƨ ṗ ﻲ Ţ ˘
Â
Ḡ ɢ ₹ Â
ą Ḡ Â

1. Й“Screensaver”
“Screensaver Settings” Â

2. ﻲ“Wait time” Й ˜ Ḡ
╠ № Â
ɢ ƀ Â
╕ ﻳ ˜ : ɢ 5 ˅ 360 № ɳ
ẏ Â ˜ “0” Ḡ
Â



5.11

Ḡ ┐ ɣ Ⱡ Ţ Â

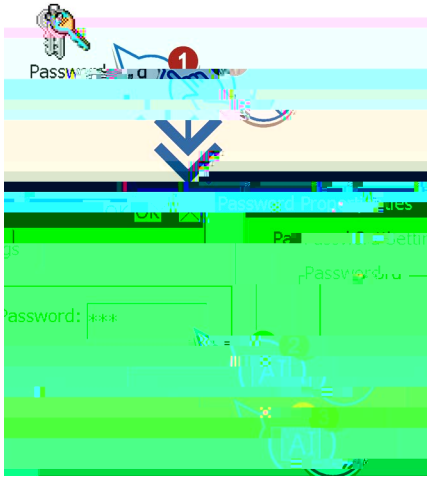
Þ . ɋ Â
Ⱡ Ţ ˘ ↕ ѽ Þ ˘ ʜ Ⱪ ي Ⱡ Ţ Â ي
Þ ˘ HMI Â

Ḡ

1. Й“Password”˝
   “Password Properties” Â

2. ي“Password” Ţ ˜
   Â Â
   Â

3. ي“Confirm Password” Ţ
   Â

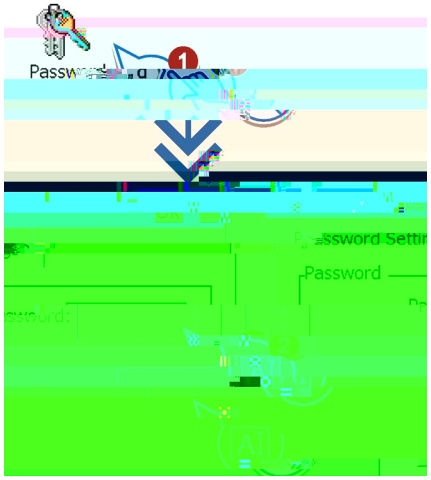


Ḡ

1. Й“Password”˝
   “Password Properties” Â

2. – “Password” Ţ ˜
   ṗ Â

3. – “Confirm Password”
   Ţ ˜ ṗ Â

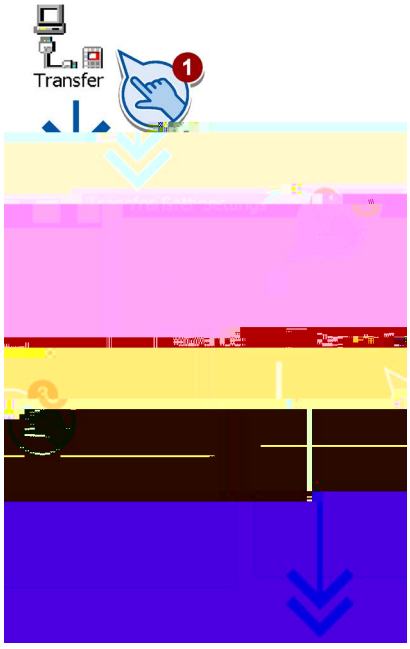


5.12 Ł D

Ł w ɷ D ⌠ HMI Â

D Ƶ ˇ ɳ ɣ Ḡ HMI ˇ ɣ ɷ̃ Ţ
ŭ HMI ˝E Â

1. Й“Transfer” “Transfer Settings” Â



2. “Enable transfer” Â

3. Ł ⎵ D ˇ ɳ “Remote Control” Â

⎵ D Ƶ ɳ ؿ
Ţ ɾ PC D Â ؿ ’
Й ˇ ؿ Ψ ˜ ғ Ψ D
Â
ؿ D Ƶ Ψ Ł⎵ Â

ˇ ɳ ą “Advanced” ɣ Â

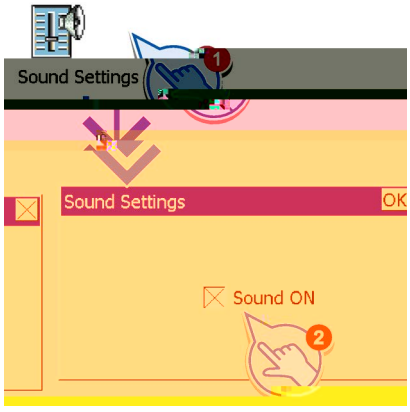
ɣ ĭ (39)

5.13 Ḥ⎵

1. Й“Sound Settings” “Sound Settings” Â

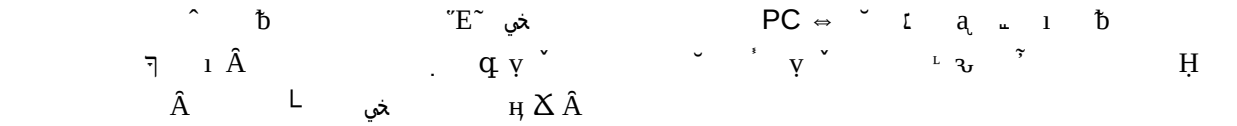
2. “Sound” ч “ON” Â

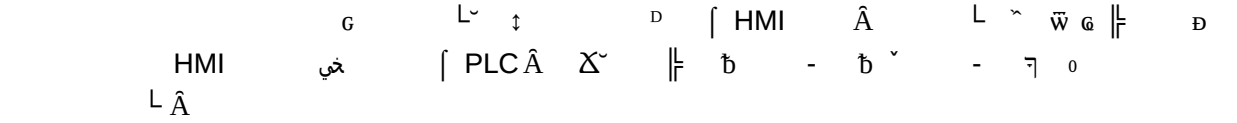
“Sound” ч “ON” Ƶ ˇ
ѫ Ψ ⌠ ĭ Â



6

6.1





6.2 Þ

Þ

HMI ĺ ŕ Й Þ ˙ A7 9Œ Ą5 P

6.3 D

1. ي PC ˘ ɪ WinCC flexible Smart “ > D ”(Project > Transfer) ٦ Ţ
“ D ”(Transfer settings) و ɒ Â
“ D ”(Select devices for transfer) Â
2. ي ʊ ٦ HMI Â
3. HMI ˇ PC ɥ ɛ ﻫ Â
ĭ Â
4. ي ʎ ʊ ٦ D ĭ Â
5. “ D ”(Transfer)˘ ي WinCC flexible Smart Ţ Ł D Â
PC Ψ ь HMI Â Ψ D ⌠ HMI Â ь ٦
Ţ ˘ PC Ψ Â

˅ D Ƶ˘ ٨ ٦ ي HMI ⁚ ą Â D Ψ ˽ Ł Â

6.4.3 ˽ Ł D

:

˽ D Ƶ˘ ˇ ي PC Ł D ˘ HMI Ψ ي ˽ Ⓟ ч “Transfer” Â

ɢ ь HMI D ˘ ﻧ ي ≠ Ƕ ˽ D Â

ي HMI ⁚ ˽ D ғ ي PC Ł D Ƶ˘ ╠ ي ˽ Å Â HMI Ƶ ˽ Ⓟ ⌠ “ D ” Â
ي Ƶ˘ ˽ D ˘ ɣ Ḡ HMI ь Ψ ي Ţ Ⓟ ⌠ D Â D ٦ ŭ ƀ Â
٦ ɣ ي L Ţ ˘ L D ˘ ɪ ᾇ ќ Â

- ي WinCC flexible Smart Ţ Â
- Â
- HMI ɣ ∫ PC Â
- ي HMI Ţ № ɣ ǐ Â
- ي Ł Ţ Ł ˍ D Â

1. ي PC ˘ ɪ WinCC flexible Smart “ > D ”(Project > Transfer) ˥ Ţ “ D ”(Transfer settings) و Ɓ Â
   “ D ”(Select devices for transfer) Â
2. ي ơ ˥ HMI Â
3. HMI ˇ PC ɳ ε ڜ Â
   ǐ Â
4. ي ˬ ơ ˥ D ǐ Â
5. ي WinCC flexible Ţ “ D ”(Transfer)˘ Ł D Â

PC Ψ ƀ HMI Â HMI ˀ ╠ ˇ ˍ ℗ ∫ “ D ” Â
Ψ D ∫ HMI Â ƀ ˥ Ţ ˇ PC Ψ Â
ˊ D Ƶ˘ ˥ ˥ ي HMI ą Â D Ψ ˍ Ł Â

6.4.4

:

˥ ɣ ɣ Й

- ي PC
  ˥ ي PC ą o ڡ Â ˀ Ң ˇ ǐ
  WinCC flexible Smart ي ˆ Â
- ي HMI
  ع HMI ˇ PLC ي ƀ Ң Â
- ي HMI ي
  ي ع HMI ƀ PLC ي . ε Ң Â

6.5 м Ь

6.5.1

м Ь

ㄱ ą PC USB Ũ м ˇ HMI ṗ Ţ ㄱ Й ‘

- Ь HMI ˝E
- ↓
-

ㄱ ą ㄱ Й ĩ ң w̃ м ˇ ‘

- ProSave
- USB Ũ ˘ ĭ “ ќ ˇ ˊ (37)”

Ң

ɢ HMI Ţ ъ ъ˘ ↕ ㄱ Ψ Ł ң ╠ ъ
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ٰI ‖

خي Ţ˘ HMI Ŧ ˘ ʟ خي ٰI ‖ ˘ ↕ ъ
Â

ᴅ ₃ № ˘ щ ˇ ᴅ Â Â ˜ Ţ ᴅ Â

6.5.2 a Proce

6.6 Þ

6.6.1

ي D HMI ٦ Ψ Ў ٰI ‖ Â ɢ Ð Ь
HMI ٦ HMI ˝E Ь Ƨ Â ي Ь Ƨ ˇ D Ψ Ţ
Â ي PG Ψ ŵ ˇ ي ٰI ‖ Â

ą ٦ ң ‘

- ą Ð ⇔ ˇ ↕ HMI ˝E Â
- Ь Ð HMI ˇ D ŵ ɢ HMI ˝E ٦ Â

ʞ

ي Þ ˇ HMI ^ ɒ ˇ ˇ ٦ ~ – Â

‰

ң Ƶ˘ ٦ ‰ Â

6.6.2 Ч Ғ ɻ

ي ProSave Ţ˘ ٦ ƴ ي Ь Ч Ғ ɻ ’ Й Þ Â

- Ь Ч Ғ ɻ ’ Й Þ ‘
  ѽ˘ HMI Ⓟ Ч “ D ” ي ’ Й ą ˽ D ˊ Â Ƶ
  ProSave Ŀ Þ Â
- Ч Ғ ɻ ’ Й Þ

ƴ ĭ

Ч Ғ ɻ ˇ ƴ ĭ ѫ Ψ β Â˘ ƴ ĭ ң Ƶ˘
Ŀ D Þ Â

7

7.1

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HMI Â Â Â

Â Â Â

ف

PLC ف Â

HMI Â ف Â

جس

HMI جس Â

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1. HMI Â
2. ض ضغ Â ض ضغ HMI Â
3. HMI Â Â

7.2 نجـ

نجـ

HMI نجـ Â Â

HMI Â

8

8.1 й ˅

HMI Ƶ ⁚⁚ ₮ ҍ Ḥ Â

CE

HMI ЂѴЙ ↓ EC ɒ ŭ ƀ ŋ ˀ ˇ ˙E
e ɢ ϥ └ ᏸ ₩ ‰ (EN)˙

- 2004/108/EC“ ˙I ˮ EMC ɒ ˜

EC ₩

EC ₩ ϥ ɣ Й شحشم ˀ ˈ

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

8.3.2 Ð

Й ↓ Н г Ъ Т Â

HMI г ф0 ф Т Ъ Â

ф Й ў └ Ð Й IEC 60721 3M3

Ð ф	Н ш
Ю IEC 60068-2-6	5 ... 8.4 Hz Z 3.5 mm 8.4 ... 200 Hz 1 g
Ю IEC 60068-2-27	150 m/s 11 ms г 3

8.4 Ð

8.4.1 Ð

Й ↓ Н г .

ф Й ў └ Ð Й IEC 60721-3- 2K2

Ð ф	Н ш
	-20 ... +60 °C
	1080 ... 660 hPa г 1000 m 3500 m
	10 ... 90% 0
	SO2 < 0.5 ppm < 60% 0 H_2S < 0.1 ppm < 60% 0

Ð HMI ф г ▲ ш Н Х ф ь р Т
0 0 Â
HMI ф ╠ Â Ь ч ъ ą HMI ь ь ф ў
Й Â ъ ф Ь HMI ╠ 4 ь
ŋ¹ Â

8.4.2 Ð

Й ↓ Ң ɢ ƀ Ţ Â

HMI ɢ ڃ ۋ0 ف Ţ ƀ Â

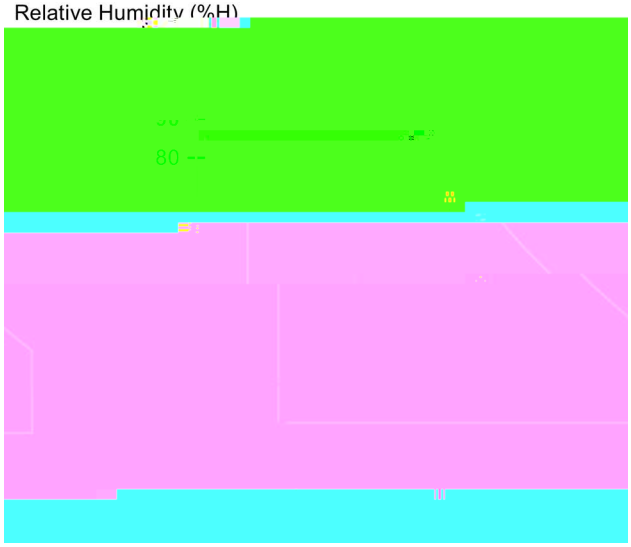
ڃ ץ Й ŭ └ Ð Й IEC 60721-3-3ˇ 3K3 ‘

Ð ڃ		‟Ң ش
˘ Ծ	Ծ	0 ... 50 °C
	ẁ ˘ ẁ 35°	0 ... 40 °C
˘ Ծ	Ծ	0 ... 40 °C
	ẁ ˘ ẁ 35°	0 ... 35 °C
┘	1080 ... 795 hPa˜ ɢ 1000 m ⌈ 2000 m	
	10 ... 90%˜ 0	
	SO2ˈ < 0.5 ppmˈ < 60%˜ 0 H_2Sˈ < 0.1 ppmˈ < 60%˜ 0	

8.4.3 Ŗ ط

Й ط ג ɢ IEC 60721-3-3 3K3 ƀ ˘ ش Â

Ң ɢ Ծ ғ ẁ Â



8.5 Ḡ ≠

8.5.1

Ƕ EN 61131-2 Â

ť شم ⅃ U_e	⅃
< 50 V	500 V AC

8.5.2 ˅

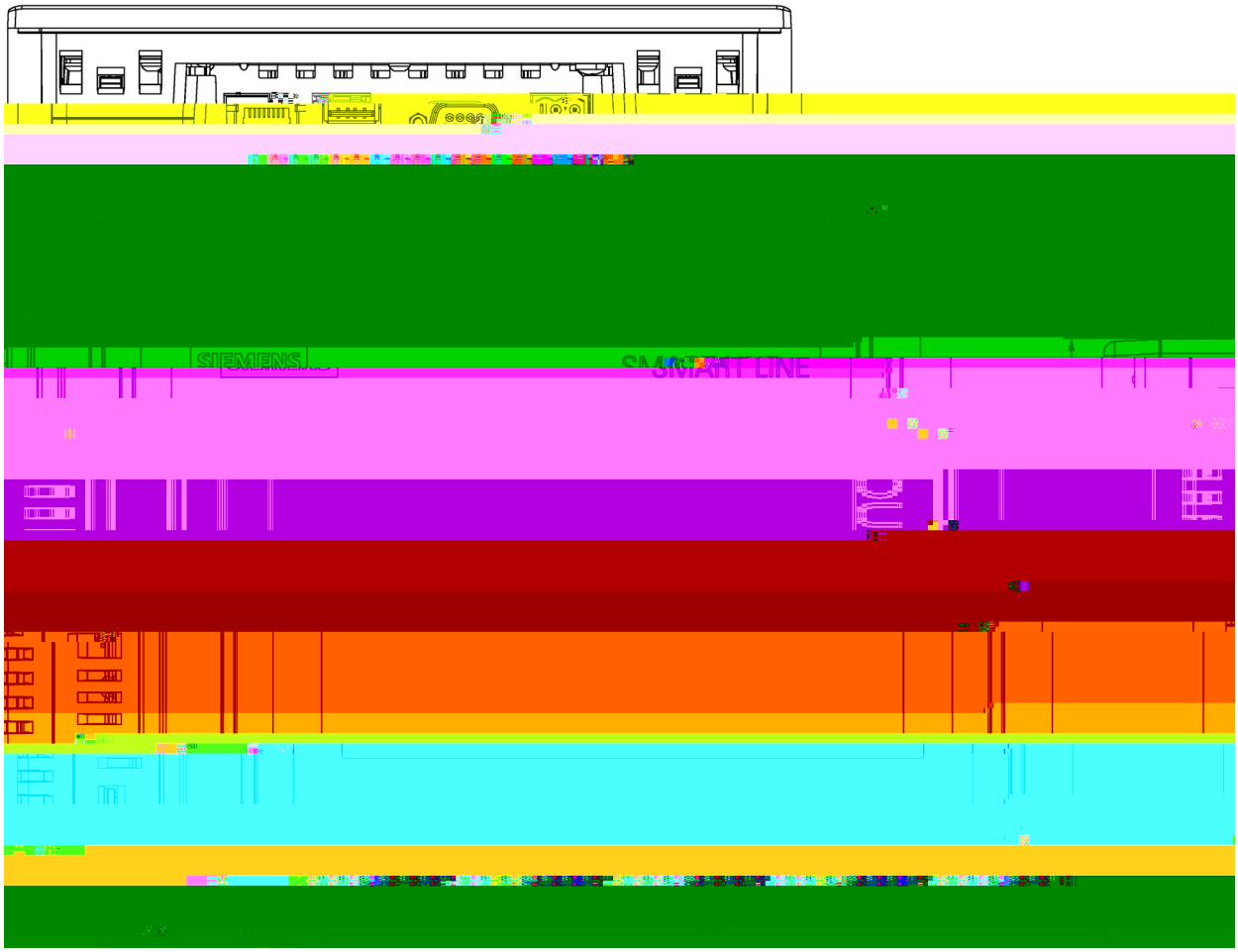
Ƕ EN 60529 Â

ʊ	
╠	IP65˝ Ⱪ
	IP20˝ ą ‰ Ḡ Â Ь Â

˅ خي ضي Ь Ḡ ╠ Â
“‰ (18)” Ţ ˜ Ḥ Â

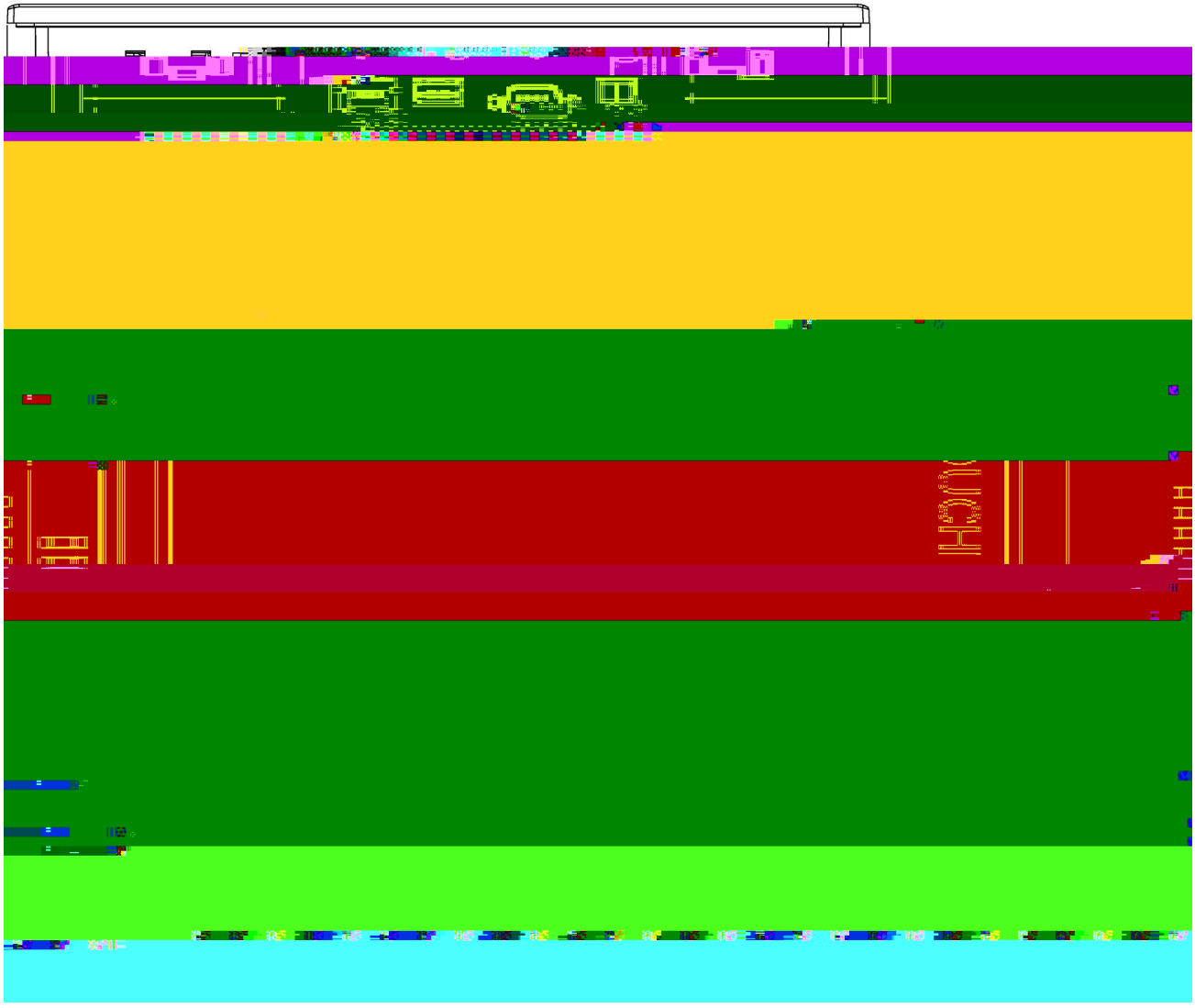
8.6 طي

8.6.1 Smart 700 IE V3 طي



تحة ٢ ч ٦ β

8.6.2 Smart 1000 IE V3 طي



تحة ٢ ч ٦ β

8.7

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

	Smart 700 IE V3	Smart 1000 IE V3
نجس	LCD TFT	

ا

J

	Smart 700 IE V3	Smart 1000 IE V3
J	+24 V DC	
˜H J شم	19.2 ⌠ 28.8 V (–20%, +20%)	
˜H J	35 V (500 ms)	
H ⓒ J	50 s	

t

LED ң ң

ң ғ LED ат ˘ ↕ Â

ат ┐ ḍ

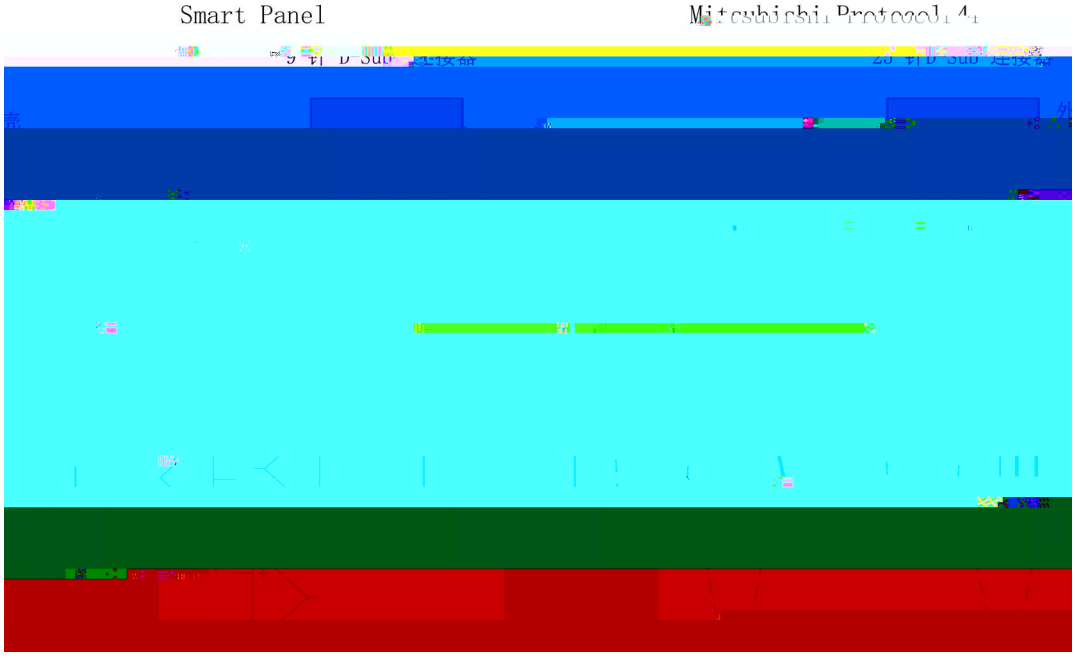
PLC ج ا ط

PLC Ұ ˛ ⌠ Smart Panel ˘ ґ Й Â

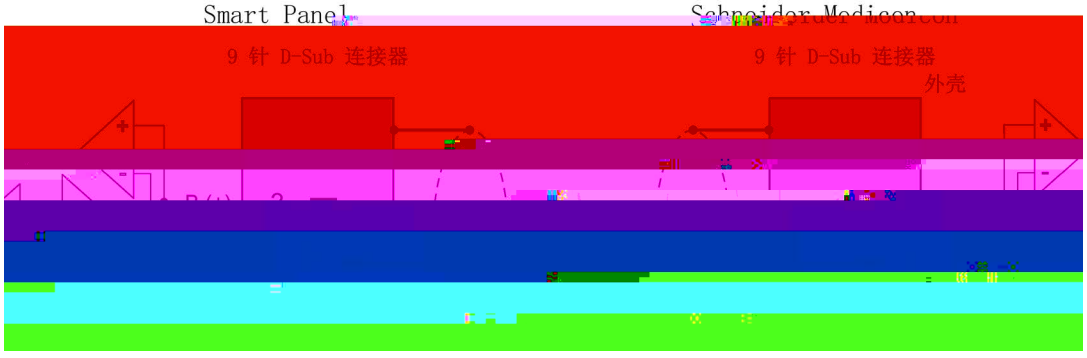
S7-200 ج

Mitsubishi FX ج

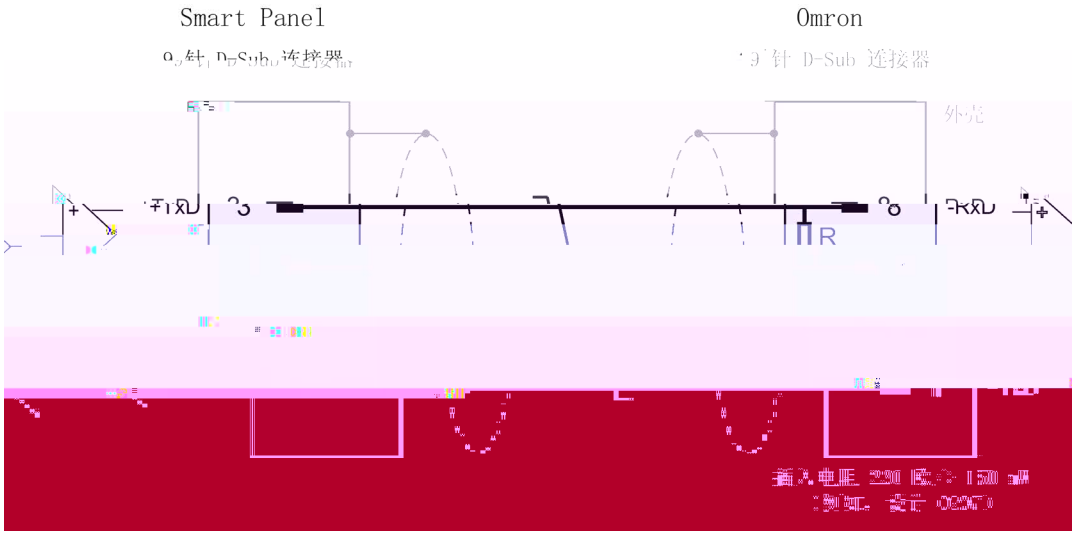
Mitsubishi Protocol 4



Schneider Modicon



Omron ☙



8.10 WinCC flexible Smart

Й Ŧ ъ ך ⌠ Smart Panel Ţ Â Й T ` .
HMI

ỵ Ь ך ˆ Â Ḡ ⌠ ŋ L ˘ Ø .
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ъ L˘ Ũ ђ L Â

1 à ỵ ˇ ↓

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L ỵ	˜/ Ŧ	
	˜/ Ŧ	
ɢ Ţ ˝Ḥ		100
↓		200
↓		100

	ĭ	
	≠	32
		400
		20
		80 ɢ
	Ţ 1	8 ɢ
		˛ ˘
	№≠	
	Ƣ ɢ ˆ ˜	16 ɢ
‖ ˥	‖ ˥	256 ɢ
	Ƣ Ʉ Ð	64 ɢ
	– // ˤ	

		150
	ɢ Ţ	100
	ɢ Ţ 1	100
ɢ Ţ	1	5
	ظِ	10
	ظِ	8
	ظِ	1
	ظِ	20
	ɢ1 ˆ ˝Ḥ ~ 2	100

1 . ظِ à ـ à ـ à ŏ“ ɒ ”(Controls) ٦ Â

2 . . ɋ خِ Ţ ˝Ḥ Â

ʾ ẏ ч ẏ˘ Ь ђ ʻP ƴ9 ˙ ą ʾ ẏ Â

		10
	ɢ ˝Ḥ 1	50
	ɢ	100
	ˆ ƴ KB ч ٦ β ~	32
	ṗ Ţ ч Ḡ Ũ	128 KB
1 Ţ ą ɢ ˝Ḥ №≠ ђ w̄ ɢ ˝Ḥ Â		

		2
	ɢ 1	5
	1	10,000
	№	400
	Ċ	1 s

1 № ɢ “№ ” Â Ь ĕ ƴ Ţ

ĕ Â

		25

		100
		200
		50

		50
		50
		32

		320
	I/O	

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		5

		8 MB

B

CPU	Ţ ٦ ˝Ḥ
CTS	ὗ
DC	
DHCP	₶ Ꮒ ٧
DP	№ I/O
DSR	
DTR	
IO	~ ˇ ₹
ESD	
EMC	`I
EN	‰
GND	ﷺ
HMI	₸
IEC	ﻁ ᵇ Ψ
IP	Internet ٧
LED	ὗ ὢ Ꮒ
MPI	ˀ
MTBF	ﷺ
n. c.	
OP	ƀ
PC	₲
PPI	ˀ

“ ”

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

٧ ـ و

ـ ⁞ ⌠ Δ ẏ 50% ⌟ Â ẏ Ɒ ═ ɢ Â

1

1 ɢ Ɒ ˇ Ω ˜ ẏ Ɥ Ũ ٦ Â ˢ 1 ٦ ɪ PLC ą HMI
Â 1 ` ƀ PLC ε ٦ № 1 ^ 1 ˜ ˇ ṗ 1 Â

ƀ ″Ḥ

ƀ ″Ḥ ɢ ˜ ẏ ˇ ǔ Ᵽ Ð Â ᴰ ˇ w̄ ƀ ″Ḥ Â

D

٦ ɪ PC ᴰ ⌠ HMI Â

Ðˇ ᴰ Â ɢ خي HMI ⁘ ˜ ˇ ẏ Â

ـ I/O

ـ I/O ɢ ˜ ˇ Ŧ ẏ Â Ţ ɋ ٦ ᴸ ˜ ↓ Â

٦ 1

ˇ ظ ″Ḥ ٦ 1 Â ą ƀ ᵇ ٦ ٢
˜ ˇ Ŧ Ţ ᵗ Â

ﻫ 1 ĦU Â ٦ خي Ð Ţ خي HMI ⁘ ч
№ ˇ ч Â ą ٦ Ḡ №
Ƣ ᴰ ⌠ PLC Â

w̄ EEPROM Ũ ڜˇ ƀ ـ Ũ : ɮ خي h ⁘
Ũ ﷺ Â

˘ ą HMI ƀ ˇ ƹ à̇ Ţ à à ƴ ŭ Â

Ƕ ƀ

˜ Ƕ ƀ ŋ ŭ̊ ƕ ₱ Â ŋ ƴ Ƕ ƀ Â ŋ ƴ ƙ № Ƕ ƀ “ Ƙ” ˇ “ ” Â

№ “ ” ≠ Â ʟ HMI ˇ PLC ṗ Â

ą ƀ Â . ɋ ɞ ˜ ƻ à ƴ ŭ Â Ḡ ﻲ ƀ Ţ Â

PC ˇ HMI ﻲ ŋ ƕ ﻲ Â ɢ ŋ ﻲ HMI ˘ PC ĺ Â PC Ƶ ŋ ƀ Ɋ HMI Â ᵖ ˇ ﻲ HMI ˇ ᴰ Ғ ƙ HMI ŋ Â

Ƙ

Ƙ ʟ ṗ Ƙ Â ᴅ ˇ Ƙ ˇ ŋ ƴ ɋ ﻲ ŭ ˜ Ƙ Â

ﻲ Ţ Ḡ ʔ ˇ ɢ ˜ ˇ ₹ ỵ Â

ɢ Ⱡ ƀ ˇ ғ ﻲ HMI Ⱪ Ⱡ Â

PC

PC ą ⇔ ą PC Â

ƀ ɢ ⇔ ƴ ɪ Â WinCC flexible Smart ₩ ɞ ᴅ Â

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