ABC IT
FOR AUTOMATION

User Manual

ABC-CPU Systems

Quantity framework

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Contents

Quantity framework

1.1

1.2 ABC-CPU Hardware

1.2.1 ABC X-CPU-2 CPU945

Function blocks	**FBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Program blocks	**PBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Step sequence blocks	**SBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Organization blocks	**OBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended function blocks	**FXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended data blocks	**DXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte
Timers	**T**
Number	256
Permissible number	0 to 255
Counters	**Z**
Number	256
Permissible number	0 to 255
M markers	**M**
Number	256 * 8 Bit
Permissible number	0.0 to 255.7
S markers	**S**
Number	4096 * 8 Bit
Permissible number	0.0 to 4095.7
Process image for inputs	**E**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7
Process image for outputs	**A**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7
P Peripheral data	**P**
Number	256 Byte
Permissible number	0..255
Q Peripheral data	**Q**
Number	256 Byte
Permissible number	0..255
Work memory	**RAM, battery-backed**
Number	704 Kbyte

1.2.2 ABC X-CPU-2 CPU948

Function blocks	**FBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Program blocks	**PBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Step sequence blocks	**SBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Organization blocks	**OBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended function blocks	**FXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended data blocks	**DXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Timers	**T**
Number	256
Permissible number	0 to 255

Counters	**Z**
Number	256
Permissible number	0 to 255
M markers	**M**
Number	256 * 8 Bit
Permissible number	0.0 to 255.7
S markers	**S**
Number	4096 * 8 Bit
Permissible number	0.0 to 4095.7
Process image for inputs	**E**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7
Process image for outputs	**A**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7
P Peripheral data	**P**
Number	256 Byte
Permissible number	0..255
Q Peripheral data	**Q**
Number	256 Byte
Permissible number	0..255
Work memory	**RAM, battery-backed**
Number	1664 KByte

1.2.3 ABC X-CPU-2 CPU416

Function blocks	**FBs**
Number	65535
Permissible number	0 to 65534
Maximum size	2 Byte to 64KByte

Functions	**FCs**
Number	65535
Permissible number	0 to 65534
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	65535
Permissible number	0 to 65534
Maximum size	2 Byte to 64KByte

Timers	**T**
Number	2048
Permissible number	0 to 2047

Counters	**Z**
Number	2048
Permissible number	0 to 2047

Markers	**M**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Process image for inputs	**E**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Process image for outputs	**A**
Number	16384 *8 Bit
Permissible number	0.0 to 16383.7

Local data per OB	**L**
Number	16384 Byte

Work memory	**RAM, battery-backed**
Number	16 MByte
Load memory	**RAM, battery-backed**
Number	20 MByte
Comm. jobs	**Objects**
Number	10.000

1.2.4 ABC X-CPU-2 CPU416/945

1.2.4.1 X7-CPU945

Function blocks	**FBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Programming blocks	**PBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Step sequence blocks	**SBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Organization blocks	**OBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended function blocks	**FXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended data blocks	**DXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Timers	**T**
Number	256
Permissible number	0 to 255

Counters	**Z**
Number	256
Permissible number	0 to 255

M markers	**M**
Number	256 * 8 Bit
Permissible number	0.0 to 255.7

S markers	**S**
Number	4096 * 8 Bit
Permissible number	0.0 to 4095.7

Process image for inputs	**E**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7

Process image for outputs	**A**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7

P Peripheral data	**P**
Number	256 Byte
Permissible number	0..255

Q Peripheral data	**Q**
Number	256 Byte
Permissible number	0..255

Work memory	**RAM, battery-backed**
Number	704 KByte

1.2.4.2 X7-CPU416

Function blocks	**FBs**
Number	32768
Permissible number	0 to 32767
Maximum size	2 Byte to 64KByte

Functions	**FCs**
Number	32768
Permissible number	0 to 32767
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	32768
Permissible number	0 to 32767
Maximum size	2 Byte to 64KByte

Timers	**T**
Number	2048
Permissible number	0 to 2047

Counters	**Z**
Number	2048
Permissible number	0 to 2047

Markers	**M**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Process image for inputs	**E**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Process image for outputs	**A**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Local data per OB	**L**
Number	16384 Byte

Work memory	**RAM, battery-backed**
Number	16 MByte
Load memory	**RAM, battery-backed**
Number	20 MByte
Comm. jobs	**Objects**
Number	10.000

1.2.5 ABC X-CPU-2 CPU416/948

1.2.5.1 X7-CPU948

Function blocks	**FBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Program blocks	**PBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Step sequence blocks	**SBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Organization blocks	**OBs**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended function blocks	**FXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Extended data blocks	**DXen**
Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

Timers	**T**

Number	256
Permissible number	0 to 255

Counters	**Z**
Number	256
Permissible number	0 to 255

M markers	**M**
Number	256 * 8 Bit
Permissible number	0.0 to 255.7

S markers	**S**
Number	4096 * 8 Bit
Permissible number	0.0 to 4095.7

Process image for inputs	**E**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7

Process image for outputs	**A**
Number	128 * 8 Bit
Permissible number	0.0 to 127.7

P Peripheral data	**P**
Number	256 Byte
Permissible number	0..255

Q Peripheral data	**Q**
Number	256 Byte
Permissible number	0..255

Work memory	**RAM, battery-backed**
Number	1664 KByte

1.2.5.2 X7-CPU416

Function blocks	**FBs**
Number	32768
Permissible number	0 to 32767
Maximum size	2 Byte to 64KByte

Functions	**FCs**
Number	32768
Permissible number	0 to 32767
Maximum size	2 Byte to 64KByte

Data blocks	**DBs**
Number	32768
Permissible number	0 to 32767
Maximum size	2 Byte to 64KByte

Timers	**T**
Number	2048
Permissible number	0 to 2047

Counters	**Z**
Number	2048
Permissible number	0 to 2047

Markers	**M**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Process image for inputs	**E**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Process image for outputs	**A**
Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

Local data per OB	**L**
Number	16384 Byte

Work memory	**RAM, battery-backed**
Number	16 MByte
Load memory	**RAM, battery-backed**
Number	20 MByte
Comm. jobs	**Objects**
Number	10.000