



User Manual

ABC-CPU Systems

Quantity framework

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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

Number

Permissible number

Maximum size

DXen

256

0 to 255

2 Byte to 64KByte

Timers

Number

Permissible number

T

256

0 to 255

Counters

Number

Permissible number

Z

256

0 to 255

M markers

Number

Permissible number

M

256 * 8 Bit

0.0 to 255.7

S markers

Number

Permissible number

S

4096 * 8 Bit

0.0 to 4095.7

Process image for inputs

Number

Permissible number

E

128 * 8 Bit

0.0 to 127.7

Process image for outputs

Number

Permissible number

A

128 * 8 Bit

0.0 to 127.7

P Peripheral data

Number

Permissible number

P

256 Byte

0..255

Q Peripheral data

Number

Permissible number

Q

256 Byte

0..255

Work memory

Number

RAM, battery-backed

704 Kbyte

1.2.2 ABC X-CPU-2 CPU948

Function blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

FBs

Program blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

PBs

Step sequence blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

SBs

Data blocks

Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

DBs

Organization blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

OBs

Extended function blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

FXen

Extended data blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

DXen

Timers

Number	256
Permissible number	0 to 255

T

Counters

Number

Permissible number

Z

256

0 to 255

M markers

Number

Permissible number

M

256 * 8 Bit

0.0 to 255.7

S markers

Number

Permissible number

S

4096 * 8 Bit

0.0 to 4095.7

Process image for inputs

Number

Permissible number

E

128 * 8 Bit

0.0 to 127.7

Process image for outputs

Number

Permissible number

A

128 * 8 Bit

0.0 to 127.7

P Peripheral data

Number

Permissible number

P

256 Byte

0..255

Q Peripheral data

Number

Permissible number

Q

256 Byte

0..255

Work memory

Number

RAM, battery-backed

1664 KByte

1.2.3 ABC X-CPU-2 CPU416

Function blocks

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

FBs

Functions

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

FCs

Data blocks

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

DBs

Timers

Number	2048
Permissible number	0 to 2047

T

Counters

Number	2048
Permissible number	0 to 2047

Z

Markers

Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

M

Process image for inputs

Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

E

Process image for outputs

Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

A

Local data per OB

Number	16384 Byte
--------	------------

L

Work memory

Number

RAM, battery-backed

16 MByte

Load memory

Number

RAM, battery-backed

20 MByte

Comm. jobs

Number

Objects

10.000

1.2.4 ABC X-CPU-2 CPU416/945

1.2.4.1 X7-CPU945

Function blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

FBs

Programming blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

PBs

Step sequence blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

SBs

Data blocks

Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

DBs

Organization blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

OBs

Extended function blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

FXen

Extended data blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

DXen

Timers

Number	256
Permissible number	0 to 255

T

Counters

Number

Permissible number

Z

256

0 to 255

M markers

Number

Permissible number

M

256 * 8 Bit

0.0 to 255.7

S markers

Number

Permissible number

S

4096 * 8 Bit

0.0 to 4095.7

Process image for inputs

Number

Permissible number

E

128 * 8 Bit

0.0 to 127.7

Process image for outputs

Number

Permissible number

A

128 * 8 Bit

0.0 to 127.7

P Peripheral data

Number

Permissible number

P

256 Byte

0..255

Q Peripheral data

Number

Permissible number

Q

256 Byte

0..255

Work memory

Number

RAM, battery-backed

704 KByte

1.2.4.2 X7-CPU416

Function blocks

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

FBs

Functions

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

FCs

Data blocks

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

DBs

Timers

Number	2048
Permissible number	0 to 2047

T

Counters

Number	2048
Permissible number	0 to 2047

Z

Markers

Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

M

Process image for inputs

Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

E

Process image for outputs

Number	16384 * 8 Bit
Permissible number	0.0 to 16383.7

A

Local data per OB

Number	16384 Byte
--------	------------

L

Work memory

Number

RAM, battery-backed

16 MByte

Load memory

Number

RAM, battery-backed

20 MByte

Comm. jobs

Number

Objects

10.000

1.2.5 ABC X-CPU-2 CPU416/948

1.2.5.1 X7-CPU948

Function blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

FBs

Program blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

PBs

Step sequence blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

SBs

Data blocks

Number	255
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

DBs

Organization blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

OBs

Extended function blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

FXen

Extended data blocks

Number	256
Permissible number	0 to 255
Maximum size	2 Byte to 64KByte

DXen

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

Number

Permissible number

Maximum size

FBs

32768

0 to 32767

2 Byte to 64KByte

Functions

Number

Permissible number

Maximum size

FCs

32768

0 to 32767

2 Byte to 64KByte

Data blocks

Number

Permissible number

Maximum size

DBs

32768

0 to 32767

2 Byte to 64KByte

Timers

Number

Permissible number

T

2048

0 to 2047

Counters

Number

Permissible number

Z

2048

0 to 2047

Markers

Number

Permissible number

M

16384 * 8 Bit

0.0 to 16383.7

Process image for inputs

Number

Permissible number

E

16384 * 8 Bit

0.0 to 16383.7

Process image for outputs

Number

Permissible number

A

16384 * 8 Bit

0.0 to 16383.7

Local data per OB

Number

L

16384 Byte

Work memory

Number

RAM, battery-backed

16 MByte

Load memory

Number

RAM, battery-backed

20 MByte

Comm. jobs

Number

Objects

10.000