

# Product data sheet

Specifications



## Unity processor Modicon Quantum - 548 kB - 66 MHz

140CPU31110

! Discontinued on: 31 December 2018

! To be end-of-service on: 31 December 2026

! Discontinued - Service only

### Main

Range of product	Modicon Quantum automation platform
Product or component type	Unity processor

### Complementary

Clock frequency	66 MHz
Number of slots	16 4 10 2 6
Number of racks	2 - local rack(s)
Number of distributed I/O station	63 station(s) - 1 rack(s) - 3 Modbus Plus network(s)
Number of remote I/O station	31 - 2 rack(s) per S908 remote I/O 0 - 0 rack(s) per ethernet remote I/O
Discrete I/O number	Unlimited (27 slots max) - local 31744 inputs, 31744 outputs - remote 8000 inputs, 8000 outputs - distributed - per network Modbus Plus
Analogue I/O number	Unlimited (27 slots max) - local 500 inputs, 500 outputs - distributed - per network Modbus Plus 1984 inputs, 1984 outputs - S908 remote I/O
Application specific I/O	High-speed interrupt inputs Counter Accurate time stamping Serial link
Number of optional modules	2 (Ethernet, Modbus, Modbus Plus, Profibus DP, Sy/Max)
Maximum number of connections	1 USB 2 AS-Interface - distributed 2 Ethernet TCP/IP - local 2 Modbus Plus - local 2 Modbus (RS232/485 Modbus/ASCII) 2 Profibus DP - local 4 AS-Interface - remote
Integrated connection type	1 Modbus Plus with 2 Modbus with
Checks	Process control
Memory description	Internal RAM 548 kB
Switch function	Slide switch communication port : ASCII/RTU/Memory Slide switch memory port/off
Application structure	1 cyclic/periodic master task -

1 periodic fast task -  
16 timer interrupt tasks -  
64 I/O interrupt tasks -  
64 interrupt tasks -  
No auxiliary task -

<b>Execution time per instruction</b>	0.1...0.27 $\mu$ s floating points 0.1...0.27 $\mu$ s on fixed-point arithmetic 0.12...0.585 $\mu$ s Boolean 0.12...0.585 $\mu$ s on word
<b>Number of instructions per ms</b>	1.86 Kinst/ms 100 % Boolean 2.49 Kinst/ms 65 % Boolean and 35 % numerical
<b>System overhead</b>	0.2 ms for fast task 1 ms for master task
<b>Bus current requirement</b>	1800 mA
<b>Local signalling</b>	1 LED (green) for communications are active on the Modbus Plus port (Modbus Plus) 1 LED (green) for communications are active on the Modbus port (Modbus) 1 LED (green) for CPU has been started and is solving logic (RUN) 1 LED (green) for CPU has passed the power-up diagnostic tests (READY) 1 LED (orange) for write-protected memory (memory port) 1 LED (red) for battery needs replacing or is not present (BAT LOW) 1 LED (red) for communications error on the Modbus Plus port (ERROR A)
<b>Electrical connection</b>	1 female connector, connector type: SUB-D 9 for connecting to the Modbus Plus network 2 female connectors, connector type: SUB-D 9 for connecting to the Modbus bus

## Environment

<b>Product certifications</b>	CSA CE UL
<b>Standards</b>	HazLoc

## Packing Units

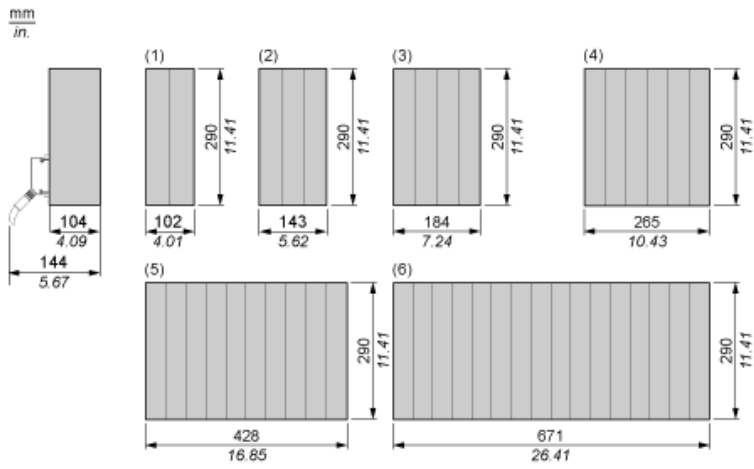
<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Weight</b>	720.0 g
<b>Package 1 Height</b>	5 cm
<b>Package 1 width</b>	17 cm
<b>Package 1 Length</b>	31 cm
<b>Unit Type of Package 2</b>	S03
<b>Number of Units in Package 2</b>	7
<b>Package 2 Weight</b>	5.97 kg
<b>Package 2 Height</b>	30 cm
<b>Package 2 width</b>	30 cm
<b>Package 2 Length</b>	40 cm

## Contractual warranty

<b>Warranty</b>	18 months
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**Racks for Modules Mounting**

**Dimensions of Modules and Racks**



- (1) 2 slots
- (2) 3 slots
- (3) 4 slots
- (4) 6 slots
- (5) 10 slots
- (6) 16 slots

**Recommended replacement(s)**

140CPU31110 is replaced by:

1x



Processor module, Modicon M580, Level 1, Distributed  
BMEP581020