The essential guide for Industrial Automation

2012

Schneider Electric™

The Challenge...

In today's competitive industrial environment, control systems are utilized for many types of applications. To harness these control systems to meet your requirements, Schneider Electric manufactures a comprehensive family of automation products. These high performance, efficient and environmentally-friendly products are designed to reduce your energy costs, and to increase the productivity of your personnel and equipment.

The Essentials...

Modicon™ Programmable Automation Controllers (PACs)

From the simplest machine to the smartest industrial process, Modicon™ automation platforms increase performance, improve quality and drive profitability for your installations. Conforming to international standards and simple to configure, Modicon™ automation platforms integrate seamlessly into any control system.

Modicon™ Distributed I/O

The compact dimensions and pre-wired systems of Modicon™ I/O components allow you to reduce installation time, minimize costs and simplify maintenance.

Robust Software Solutions...

For configuration, programming, debugging and operation... for supervisory control, data acquisition and information management... Schneider Electric's robust, flexible software solutions optimize the performance and increase the efficiency of Modicon™ automation platforms.

Unity™ Pro

Vijeo™ Citect™

Vijeo™ Historian™

Concept™

ProWORX™ 32

PL7™

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Modicon™ Quantum™
Programmable Automation Controller
Processors running Unity™ Pro software

Type of processor		Simple applications	Simple and medium complexity applications
Max. number of discrete I/O (1)	Local	Unlimited (27 slots max.)	
	Remote/distributed	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	
Max. number of analog I/O (1)	Local	Unlimited (27 slots max.)	
	Remote/distributed	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
Type of application-specific I/O		Counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface™ sensor/actuator bus	
Communication ports (2)	Integrated Modbus™	2 RS 232/RS 485	2 RS 232
	Modbus Plus	1 integrated, 2 in local rack	1 integrated, 6 in local rack
	Ethernet TCP/IP	2 in local rack	6 in local rack
	Fieldbus	Profibus™ DP: 2 in local rack	Profibus DP: 6 in local rack
Memory capacity	Internal RAM	548 KB	1056 KB
	With PCMCIA extension	–	–
	Data storage	–	–
Reference		**140CPU31110** (4)	**140CPU43412U** (4)

(1) The maximum values for the number of discrete or analog I/O are not cumulative
(2) The numbers of communication modules are not cumulative, 2 or 6 in local rack, depending on model
(3) Processor compatible with Unity Pro software after updating its firmware (via OS-Loader included in Unity™ Pro)
(4) For coated version add "**C**" at the end of the reference: for example, **T140CPU31110** becomes **140CPU31110C**
(5) Suitable for safety related applications up to SIL3







Complex applications				Hot Standby redundant applications		Long distance HSBY CPU
Unlimited (26 slots max.)			Unlimited (13 slots max.)	Unlimited (26 slots max.)	Unlimited (13 slots max.)	Unlimited (26 slots max.)
31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)			31744 inputs and 31744 outputs	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	31744 inputs and 31744 outputs	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)
Unlimited (27 slots max.)			Unlimited (13 slots max.)	Unlimited (27 slots max.)	Unlimited (13 slots max.)	Unlimited (27 slots max.)
1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)			1984 inputs and 1984 outputs	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	1984 inputs and 1984 outputs	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)
Counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus			–		–	–
1 RS 232/485			1 RS 232/485	1 RS 232/485	1 RS 232/485	1 RS 232/485
1 integrated, 6 in local rack			1 integrated	1 integrated, 6 in local rack	1 integrated	1 integrated, 6 in local rack
1 integrated, 6 in local rack			1 integrated, 6 in local rack	6 in local rack	1 integrated, 6 in local rack	6 in local rack
Profibus DP: 6 in local rack			–	Profibus DP: 6 in local rack	–	Profibus DP: 6 in local rack
768 KB	1024 KB	3072 KB	1024 KB	1024 KB	1024 MB	3072 KB
7 MB	7 MB	7 MB	7 MB	7 MB	7 MB	7 MB
8 MB	8 MB	8 MB	–	8 MB	–	8 MB
140CPU65150 (4)	**140CPU65160** (4)	**140CPU65260** (4)	**140CPU65160S** (5)	**140CPU67160** (4)	**140CPU67160S** (5)	**140CPU67261**

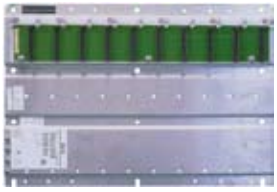
Modicon™ Quantum™
Programmable Automation Controller
Power supply modules / PCMCIA memory extensions

Type of power supply module for			Modicon™ Quantum™				
Input voltage			24 Vdc	48 to 60 Vdc	100 to 150 Vdc	120 to 130 Vac	115/230 Vac
Output current			8 A/3 A (4)	8 A	8 A/3 A	8 A/3 A	11 A
Reference	Type	Stand-alone (1)	**140CPS21100** (5)	**–**	**140CPS51100** (5)	**140CPS11100** (5)	**–**
		Summable	**140CPS21400** (5)	**140CPS41400** (5)	**–**	**–**	**140CPS11420** (5)
		Redundant	**140CPS22400** (5)	**140CPS42400** (5)	**140CPS52400** (5)	**–**	**140CPS12420** (5)

(1) The output current for the stand-alone power supply modules is 3 A

Type of PCMCIA card for Unity™ processors 140CPU65/67		Application		Additional data
Technology		SRAM	Flash EPROM	SRAM
Memory size	512 Kb/512 Kb (3)	**–**	**TSXMCPC512K** (2)	**–**
	1 MB (4)	**TSXMRPC001M** (5)	**TSXMFPP001M**	**–**
	2 MB (4)	**TSXMRPC002M**	**TSXMFPP002M**	**–**
	2 MB/1 MB (3)	**–**	**TSXMCPC002M**	**–**
	3 MB (4)	**TSXMRPC003M** (5)	**–**	**–**
	4 MB	**–**	**TSXMFPP004M**	**TSXMRPF004M**
	7 MB (4)	**TSXMRPC007M** (5)	**–**	**–**
	8 MB	**–**	**–**	**TSXMRPF008M**

(2) These cards have an additional SRAM area for storing data (recipes, production data).
(3) The 1st value corresponds to the size of the application area, the second to the size of the additional data area for storing data (recipes, production data, etc)
(4) By configuration the user can reserve part of the memory space for data storage (recipes, production data, etc)
(5) For coated version add "**C**" at the end of the reference: for example, **TSXMRPC001M** becomes **TSXMRPC001MC**



Type			Racks
		Dimensions WxDxH	
References	2 slots	104x104x290 mm	**140XBP00200** (2)
	3 slots	143x104x290 mm	**140XBP00300** (2)
	4 slots	184x104x290 mm	**140XBP00400** (2)
	6 slots	265x104x290 mm	**140XBP00600** (2)
	10 slots	428x104x290 mm	**140XBP01000** (2)
	16 slots	671x104x290 mm	**140XBP01600** (2)
	Rack extension module		**140XBE10000** (1) (2)

(1) Local extension module, to be placed in main rack and secondary rack.
(2) For coated version add "**C**" at the end of the reference: for example, **140XBP00200** becomes **140XBP00200C**

Type		Cable for extension racks (main and secondary)
References	L = 1 m	**140XCA71703**
	L = 2 m	**140XCA71706**
	L = 3 m	**140XCA71709**

(3) Other accessories: See www.schneider-electric.com

Modicon™ Quantum™
Programmable Automation Controller
Discrete I/O modules


Type of module (5)		**Discrete inputs**					
Connection		By screw terminals 140XTS00200 (to be ordered separately)					
Number of isolated channels		16	4 groups of 8	3 groups of 8	2 groups of 8	6 groups of 16	8 groups of 2
Input voltage	5 Vdc TTL (negative logic)	–	**140DDI15310**	–	–	–	–
	24 Vdc	–	**140DDI35300**(1)(2)	–	–	**140DDI36400**	–
	10 to 60 Vdc	–	**140DDI85300**	–	–	–	**140DDI84100**
	20 to 30 Vdc	–	**140DSI35300**(1)	–	–	–	–
	125 Vdc	–	–	**140DDI67300**	–	–	–
	24 Vac	**140DAI34000**	**140DAI35300**	–	–	–	–
	48 Vac	**140DAI44000**	**140DAI45300**	–	–	–	–
	115 Vac	**140DAI54000**	**140DAI55300**	–	**140DAI54300**	–	–
	230 Vac	**140DAI74000**	**140DAI75300**	–	–	–	–

(1) For negative logic, replace "**00**" at the end of the reference with "**10**", for example, **140DDI35300** becomes **140DDI35310**.
(2) Non-interfering module in safety related application


Type of module (5)		**Discrete outputs** Solid state					
Connection		By screw terminals 140XTS00200 (to be ordered separately)					
Number of protected channels		16	4 groups of 8	4 groups of 4	2 groups of 8	6 groups of 16	2 groups of 6
Output voltage/current	5 Vdc TTL/0.075 A (3)	–	**140DDO15310**	–	–	–	–
	24 Vdc/0.5 A	–	**140DDO35301**(1) **140DDO35300**(2)	–	–	–	–
	10 to 30 Vdc/0.5 A (4)	–	**140DVO85300**	–	–	–	–
	19.2 to 30 Vdc/0.5 A	–	–	–	–	**140DDO36400**	–
	10 to 60 Vdc/2 A	–	–	–	**140DDO84300**	–	–
	24 to 125 Vdc/0.75 A	–	–	–	–	–	**140DDO88500**
	24 to 48 Vac/4 A	–	–	**140DAO84220**	–	–	–
	24 to 115 Vac/4 A	**140DAO84010**	–	–	–	–	–
	24 to 230 Vac/ 4-3 A	**140DAO84000**	**140DAO85300**	–	–	–	–
	100 to 230 Vac/4-3 A	–	–	**140DAO84210**	–	–	–

(1) For negative logic, replace "**01**" at the end of the reference with "**10**", for example, **140DDO35301** becomes **140DDO35310**.
(2) Non-interfering module in safety related application
(3) Negative logic
(4) Controlled outputs


Type of module (5)	**Discrete I/O** Solid state			**Discrete outputs** Relay	
Connection	By screw terminals 140XTS00200 (to be ordered separately)				–
Number of I/O	2 groups of 8/2 groups of 4		1 group of 4/ 4 isolated	–/16 NO	–/8 NO/NC
Input voltage	24 Vdc	115 Vac	125 Vdc	–	–
Output voltage/current	24 Vdc / 4 A	115 Vac / 8 A	24 to 125 Vdc / 16 A	2 A	5 A
Reference	**140DDM39000**	**140DAM59000**	**140DDM69000**	**140DRA84000**	**140DRC83000**

(5) For coated version add "**C**" at the end of the reference: for example, **140DDI15310** becomes **140DDI15310 C**
Connection accessories: See www.schneider-electric.com

Type of module (4)	**Analog inputs**				
Connection	By screw terminals 140XTS00200 (to be ordered separately)				
Number of channels	8	16	8		
Input signal	4 to 20 mA 1 to 5 V	0 to 25/20 mA 4 to 20 mA	(1)	Thermal probe Pt, Ni	Thermocouple (2)
Resolution	12 bits	0 to 25000 points	16 bits	12 bits + sign	16 bits
Reference	**140ACI03000**	**140ACI04000** (3)	**140AVI03000**	**140ARI03010**	**140ATI03000**

(1) 0 to 25 mA, ± 20 mA, 4 to 20 mA, 0 to 10 V, ± 10 V, 0 to 5 V, ± 5 V, 1 to 5 V.
(2) Type B, E, J, K, R, S, T, mV
(3) Non-interfering module in safety related application

Type of module (4)	**Analog output**		
Connection	By screw terminals 140XTS00200 (to be ordered separately)		
Number of channels	4	8	4
Input signal	4 to 20 mA	0 to 25/20 mA 4 to 20 mA	0 to 10 V, ± 10 V 0 to 5 V, ± 5 V
Resolution	12 bits	0 to 25000 points	12 bits
Reference	**140ACO02000** (3)	**140ACO13000**	**140AVO02000**

(3) Non-interfering module in safety related application

Type of module (4)	**Analog I/O**
Connection	By screw terminals 140XTS00200 (to be ordered separately)
Number of inputs	4
Number of outputs	2
Input signal	0 to 20 mA, ± 20 mA, 4 to 20 mA, 0 to 10 V, ± 10 V, 0 to 5 V, ± 5 V, 1 to 5 V.
Resolution	Inputs 16 bits, outputs 12 bits
Reference	**140AMM09000**

(4) For coated version add "**C**" at the end of the reference: for example, 140ACI03000 becomes 140ACI03000C
Connection accessories: See www.schneider-electric.com



Type of module	High-speed counter		High-speed inputs with interrupt	Time-stamp system
Type of inputs for	Incremental encoders		Discrete 24 Vdc (2)	Discrete 24 to 125 Vdc
Counting frequency	100 kHz	500 kHz	–	–
Number of channels	5	2	16	32
Reference	**140EHC10500**	**140EHC20200**	**140HLI34000**	**140ERT85410** (4)

(2) 3 operating modes: Interrupt, latch, high-speed inputs, on rising or falling edge.



Type of modules	Analog	Discrete	
Connection	Screw terminal		
Number of inputs	8 analog inputs	16 discrete inputs	–
Number of outputs	–	–	16 discrete outputs
Input signal	4 to 20mA	24Vdc	–
Output voltage	–	–	24Vdc
Resolution	16 bits	–	–
Certification	Suitable for safety related application up to SIL2 and SIL3, UL, CE, CSA, Haz-loc		
Reference	**140SAI94000S**	**140SDI95300S**	**140SDO95300S**

Connection accessories: See www.schneider-electric.com

Modicon™ Quantum™
Programmable Automation Controller
Communication modules




Type of module		Ethernet TCP/IP network				
Speed		10/100 Mb/s				
Protocol		**Modbus™ TCP**	**Modbus TCP**	**Modbus TCP**	**Modbus TCP**	**EtherNet/IP & Modbus TCP**
Transparent Ready™	Class	B30	B30	C30	D10	B30
	Global Data	Yes	Yes	Yes	–	–
	I/O Scanning	Yes	Yes	Yes	–	Yes
	FDR server	Yes	Yes	Yes	–	Yes
	SNMP protocol	Yes	Yes	Yes	Yes	Yes
	QoS (1)	–	–	–	–	Yes
Web server	Standard services	Yes	Yes	Yes	Yes	_
	FactoryCast™ services	–	–	Yes	Yes	_
	FactoryCast HMI services	–	–	–	Yes	_
Reference		**140CPU651*** (2)	**140NOE77101**	**140NOE77111**	**140NWM10000**	**140NOC77101**

(1) QoS: Quality of Service
(2) 140 CPU 651 50, 140 CPU 651 60, 140 CPU 652 60, 140 CPU 671 60

PROFIBUS™ DPV1 is available for Modicon™ Quantum™ Please refer to page 24



Type of module	Modbus™ Plus network	AS-Interface™ cabling system	Fieldbus INTERBUS™	Profibus DP Master V1 (1)	Modnet fieldbus
Name and description	Integrated link	In-rack	In-rack	In-rack	In-rack
Speed	1 Mb/s	167 Kb/s	0,5 Mb/s	to 12 Mb/s	375 Kb/s
Reference	**140CPU***	**140EIA92100**	**140NOA62200**	**PTQPDPMV1**	**140NOG11100**

(1) from your partner Prosoft, www.prosoft-technology.com
*** 140 CPU 311 10, 140 CPU 434 12U, 140 CPU 651 50, 140 CPU 651 60, 140 CPU 652 60, 140 CPU 671 60**


Type of module	Serial link Modbus	ASCII
Name and description	Integrated link	In-rack
Speed	19.2 Kb/s	19.2 Kb/s
Reference	**140CPU*** (1)	**140ESI06210**

(1) RS 232/RS 485 on 140CPU651●● and 140CPU67160 processors and RS 232 on 140CPU31110, 140CPU43412A, 140CPU53414A processors.
*** 140 CPU 311 10, 140 CPU 434 12U, 140 CPU 651 50, 140 CPU 651 60, 140 CPU 652 60, 140 CPU 671 60**

To operate in a corrosive environment, Modicon™ Quantum™ modules can be ordered with a conformal coating applied to product components. Conformal coating will extend product life and enhance its environmental performance capabilities.
To order conformal coating append a C to the standard catalog number. For example, 140CPS 11420 > 140CPS 114 20C

Connection accessories: See www.schneider-electric.com

Modicon™ Premium™

Programmable Automation Controller

Processors running Unity™ Pro software / Processors running PL7™ software



Type of processor		TSX 5710 4 racks max.	TSX 5720 16 racks max.	TSX 5730 16 racks max.
Number of I/O in racks	Discrete	512	1024	1024
	Analog	24	80	128
Integrated process control		No / Yes	30 loops / Yes	45 loops / Yes
Application-specific channels	(counter, position control, weighing)	8	24	32
Bus	AS-Interface™ cabling system	2	4	8
	CANopen™ machine bus	1	1	1
	InterBus™, Profibus™ DP fieldbus	–	1	3
Networks (Ethernet, Modbus™ Plus, Fipway™)		1	2	3
Memory capacity	Without PCMCIA extension	96 Kb data/prog.	160/192 Kb data/prog. (1)	192/208 Kb data/prog. (1)
	With PCMCIA extension	96 Kb data/224 Kb prog.	160/192 Kb data (1)/768 Kb prog.	192/208 Kb data (1)/1.75 MB prog.
Execution time for one instruction without ext. PCMCIA	Boolean	0.19 µs	0.19 µs	0.12 µs
	On word or arithmetic	0.25 µs	0.25 µs	0.17 µs
Reference	Without integrated port	**TSXP57104M** (4)	**TSXP57204M** (4)	**TSXP57304M** (4)
	Integrated Ethernet	**TSXP571634M** (2) (4)	**TSXP572634M** (4)	**TSXP573634M** (4)
	Integrated CANopen	**–**	**–**	**–**
	Integrated Fipio™	**TSXP57154M** (4)	**TSXP57254M** (4)	**TSXP57354M** (4)



Type of processor		TSX 5710 4 racks max.	TSX 5720 16 racks max.	TSX 5730 16 racks max.
Number of I/O in racks	Discrete	512	1024	1024
	Analog	24	80	128
Integrated process control		No	30 loops	45 loops
Application-specific channels	(counter, position control, weighing)	8	24	32
Bus	AS-Interface cabling system	2	4	8
	CANopen machine bus	1 (with TSXP57103M)	1	1
	InterBus, Profibus DP fieldbus	–	1	2
Networks (Ethernet, Modbus Plus, Fipway)		1	1	3
Memory capacity	Without PCMCIA extension	32 K words data/prog.	48 K words data/prog. (3)	64/80 K words data/prog. (3)
	With PCMCIA extension	32 K words data/ 64 K words prog.	32 K words data (3)/ 160 K words prog.	80/96 K words data (3)/ 384 K words prog.
Execution time for one instruction without ext. PCMCIA	Boolean	0.19 µs	0.19 µs	0.12 µs
	On word or arithmetic	0.25 µs	0.25 µs	0.17 µs
Reference	Without integrated port	**TSXP57103M** (4)	**TSXP57203M** (4)	**TSXP57303AM** (4)
	Integrated Ethernet	**–**	**TSXP572623M** (4)	**TSXP573623AM** (4)
	Integrated Fipio	**TSXP57153M** (4)	**TSXP57253M** (4)	**TSXP57353AM** (4)
	Integrated Ethernet and Fipio	**–**	**TSXP572823M** (4)	**–**

(1) The second value corresponds to the integrated memory capacity when the processor is equipped with a Fipio manager integrated link
(2) Processor with double format
(3) The second value corresponds to the processor with integrated Fipio bus manager link.
(4) For coated version add "**C**" at the end of the reference: for example, **TSXP571634M** becomes **TSXP571634MC**

HotStandBy option





TSX 5740 16 racks max.	**TSX 5750** 16 racks max.	**TSX 5760** 16 racks	**TSXH5724M** 16 racks	**TSXH5744M** 16 racks
2048	2048	2048	512	512
256	512	512	80	128
60 loops / Yes	90 loops / Yes	90 loops / Yes	30 loops / Yes	60 loops / Yes
64	64	64	16 (serial communication)	16 (serial communication)
8	8	8	0	0
1	1	1	0	0
4	5	5	0	0
4	4	4	2	4
320 Kb data/prog.	1024 Kb data/prog.	2048 Kb data/prog.	192 Kb	440 Kb
440 Kb data/2 MB prog.	1024 Kb data/7 MB prog.	2048 Kb data/7 MB prog.	192 Kb data/768 Kb prog.	440 Ko data/2 MB prog.
0.06 µs	0.037 µs	0.037 µs	0.039 µs	0.039 µs
0.07 µs	0.045 µs	0.045 µs	0.054 µs	0.054 µs
–	–	–	**TSXH5724M** (4)	**TSXH5744M** (4)
TSXP574634M (4)	**TSXP575634M** (4)	**TSXP576634M** (4)		
–	–	–		
TSXP57454M (4)	**TSXP57554M** (4)	–		

Modicon™ Premium™

Programmable Automation Controller

Memory extensions for Unity™ Pro processors / Memory extensions for PL7™ processors

Type of PCMCIA card		Application		Additional data
Technology		SRAM	Flash EPROM only	SRAM
Memory size	96 Kb	–	**TSXMFPB096K** (3)	–
	128 Kb	**TSXMRPP128K**	**TSXMFPP128K**	–
	224 Kb	**TSXMRPP224K / TSXMCPC224K**	**TSXMFPP224K**	–
	384 Kb	**TSXMRPP384K**	**TSXMFPP384K**	–
	448 Kb	**TSXMRPC448K** (1)	–	–
	512 Kb	–	**TSXMCPC512K** (2) / **TSXMFPP512K**	–
	768 Kb	**TSXMRPC768K** (1)	–	–
	1 MB	**TSXMRPC001M** (1) (6)	**TSXMFPP001M**	–
	1.7 MB	**TSXMRPC01M7**	–	–
	2 MB	**TSXMRPC002M** (1)	**TSXMCPC002M** (2) / **TSXMFPPC002M**	–
	3 MB	**TSXMRPC003M** (1) (6)	–	–
	4 MB	–	**TSXMFPP004M**	**TSXMRPF004M**
	7 MB	**TSXMRPC007M** (1) (6)	–	–
	8 MB	–	–	**TSXMRPF008M**

(1) By configuration, the user can reserve part of the memory space for data storage (recipes, production data) on request.
(2) These cards have an additional SRAM area for storing data (recipes, production data).
(3) Backup cartridge of the program when this one reside entirely in PAC internal memory.

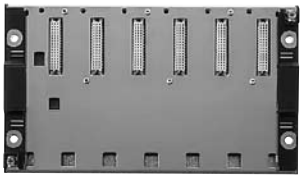
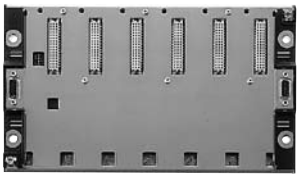
Type of PCMCIA card		Application		Additional data
Technology		SRAM	Flash EPROM only	SRAM
Memory size (4)	32 K words	**TSXMRPP128K**	**TSXMFPP128K**	–
	64 K words	**TSXMRPP224K**	**TSXMFPP224K**	–
	64 K words/128 K words	**TSXMRPP384K**	**TSXMCPC224K**	–
	96 K words	–	**TSXMFPB096K**	–
	128 K words	**TSXMRPC448K**	**TSXMFPP384K**	–
	128 K words/128 K words	**TSXMRPC768K** (5)	–	–
	256 K words	**TSXMRPC001M** (6)	–	–
	256 K words/640 K words	**TSXMRPC01M7** (5)	–	–
	384 K words/640 K words	**TSXMRPC002M**	–	–
	512 K words	**TSXMRPC003M** (5) (6)	–	–
	992 K words/640 K words	**TSXMRPC007M** (6)	–	–
	2048 K words	–	–	**TSXMRPF004M**

(4) The 1st value corresponds to the size of the application area, the second to the size of the additional data area for storing data (recipes, production data, etc).
(5) These cards have an additional SRAM area for storing application object symbols.
(6) For coated version add "**C**" at the end of the reference: for example, **TSXMRPC001M** becomes **TSXMRPC001MC**

Modicon™ Premium™
Programmable Automation Controller
Power supply modules / Racks / Connection accessories




Type of power supply module for	Premium				
Input voltage	24 Vdc		100 to 240 Vac	100 to 120/200 to 240 Vac	
Output voltage	5 Vdc/24 Vdc				
Total useful power	26 W	50 W	26 W	50 W	77 W
Format	Standard	Double	Standard	Double	Double
Reference	**TSXPSY1610M** (2)	**TSXPSY3610M** (2)	**TSXPSY2600M** (2)	**TSXPSY5500M** (2)	**TSXPSY8500M** (2)

Type of rack			Non extendable	Extendable
For configuration			Mono-rack	Multi-rack (16 max.)
		Dimensions WxDxP		
Reference	4 positions	188 x 160 x 151.5 mm (1)	–	**TSXRKY4EX** (2)
	6 positions	261.6 x 160 x 151.5 mm (1)	**TSXRKY6** (2)	**TSXRKY6EX** (2)
	8 positions	335.3 x 160 x 151.5 mm (1)	**TSXRKY8** (2)	**TSXRKY8EX** (2)
	12 positions	482.6 x 160 x 151.5 mm (1)	**TSXRKY12** (2)	**TSXRKY12EX** (2)

(1) Height of I/O modules : 151,5 mm with HE 10 or SUB-D connectors, 165 mm with screw terminals
(2) For coated version add "**C**" at the end of the reference: for example, **TSXPSY1610M** becomes **TSXPSY1610MC**

Type		Bus X daisy chaining cable for extendable racks	Line terminators and accessories
		–	Set of 2
Reference		–	**TSXTLYEX**
		–	**TSXTVSY100** (2 Bus X Transcient voltage suppressor)
	L = 1 m	**TSXCBY010K**	–
	L = 3 m	**TSXCBY030K**	–
	L = 5 m	**TSXCBY050K**	–
	L = 12 m	**TSXCBY120K**	–
	L = 18 m	**TSXCBY180K**	–
	L = 28 m	**TSXCBY280KT**	–
	L = 38 m	**TSXCBY380KT**	–
	L = 50 m	**TSXCBY500KT**	–
	L = 72 m	**TSXCBY720KT**	–
	L = 100 m	**TSXCBY1000KT**	–


Type of module		Discrete inputs				
Connection		By screw terminals TSXBLY01 (1)		By HE 10 connector (2) high density		
Number of isolated channels		8	16	16 (3)	32	64
Input voltage	24 Vdc	**TSXDEY08D2** (5)	**TSXDEY16D2** (5)	**TSXDEY16FK** (5)	**TSXDEY32D2K** (5)	**TSXDEY64D2K** (5)
	48 Vdc	–	**TSXDEY16D3** (5)	–	**TSXDEY32D3K** (5)	–
	24 Vac	–	**TSXDEY16A2** (4) (5)	–	–	–
	48 Vac	–	**TSXDEY16A3** (5)	–	–	–
	100 to 120 Vac	–	**TSXDEY16A4** (5)	–	–	–
	200 to 240 Vac	–	**TSXDEY16A5** (5)	–	–	–

(1) Terminal block to be ordered separately
(2) For use with Modicon™ ABE7 wiring system
(3) Module with high-speed isolated inputs (filtering from 0.1 to 7.5 ms) able to activate the event-triggered task
(4) Module also compatible with 24 Vdc negative logic




Type of module		Discrete outputs Solid state				Relay			Triac
Connection		By screw terminals TSXBLY01 (1)		By HE10 conn. (2)		By screw terminals TSXBLY01 (1)			
Number of protected channels		8	16	32	64	8	16	8	16
Output voltage/ current	24 Vdc/0.5 A	**TSXDSY08T2** (5)	**TSXDSY16T2** (5)	–	–	–	–	–	–
	24 Vdc/2 A	**TSXDSY08T22** (5)	–	–	–	–	–	–	–
	24 Vdc/0.1 A	–	–	**TSXDSY32T2K** (5)	**TSXDSY64T2K** (5)	–	–	–	–
	48 Vdc/1 A	**TSXDSY08T31** (5)	–	–	–	–	–	–	–
	48 Vdc/0.25 A	–	**TSXDSY16T3** (5)	–	–	–	–	–	–
	24 to 48 Vdc - 24 to 240 Vac/5 A Th.c	–	–	–	–	**TSXDSY08R5A** (5)	–	–	–
	24 to 120 Vac/5 A Th.c	–	–	–	–	**TSXDSY08R4D** (5)	–	–	–
	24 to 120 Vac/1 A	–	–	–	–	–	–	–	**TSXDSY16S4** (5)
	48 to 240 Vac/1 A	–	–	–	–	–	–	–	**TSXDSY16S5**
	48 to 240 VA /2 A	–	–	–	–	–	–	**TSXDSY08S5**	–
	24 Vdc-24 to 240 Vac/3A	–	–	–	–	**TSXDSY08R5** (5)	**TSXDSY16R5** (5)	–	–

(1) Terminal block to be ordered separately
(2) For use with Modicon ABE7 wiring system


Type of module		Discrete I/O	
Connection		By HE 10 connector (2) high density	
Number of inputs		16 high-speed	
Number of protected outputs		12 solid state	12 reflex or timed
Output voltage/current	24 Vdc/0.5 A	**TSXDMY28FK** (5)	**TSXDMY28RFK** (5)

(2) For use with Modicon ABE7 wiring system
(5) For coated version add "**C**" at the end of the reference: for example, **TSXDEY08D2** becomes **TSXDEY08D2C**
Connection accessories: See www.schneider-electric.com

Modicon™ Premium™
Programmable Automation Controller
Analog I/O modules

Type of module		Analog input High level with common point			High level isolated	Low level isolated	
Connection		By 25-way SUB-D connector					By terminal block (1)
Number of channels		4 high-speed	8	16	8	16	4
Resolution		16 bits	12 bits		16 bits	16 bits	16 bits
Isolation	Between channels	Common point	Common point	Common point	± 200 Vdc	± 100 Vdc	± 2830 Vrms
	Between channels and ground	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1780 Vrms
Reference	High level input (2)	**TSXAEY420** (7)	**TSXAEY800** (7)	**TSYAEY1600** (7)	**TSXAEY810** (7)	–	–
	Multi-range	–	–	–	–	**TSXAEY1614** (3)(7)	**TSXAEY414** (4) (7)

(1) Screw terminals TSXBLY01 to be ordered separately
(2) ± 10 V, 0 to 10 V, 0 to 5 V, 1 to 5 V, 0 to 20 mA, 4 to 20 mA
(3) ± 63 mV thermocouple (B, E, J, K, L, N, R, S, T, U)
(4) ± 10 V, ± 5 V, 0 to 10 V, 0 to 5 V, 1 to 5 V, 0 to 20 mA, 4 to 20 mA, -13 to +63 mV, 0 to 400 W, 0 to 3850 W, thermal probe, thermocouple

Type of module		Analog output Isolated	With common point
Connection		By screw terminals TSXBLY01 (5)	By 25-way SUB-D connector
Number of channels		4	8
Resolution		11 bits + sign	13 bits + sign
Isolation	Between channels	~ 1500 Vrms	Common point
	Between channels and ground	~ 1500 Vrms	~ 1000 Vrms
Reference	Input signal (6)	**TSXASY410** (7)	**TSXASY800** (7)

(5) Terminal block to be ordered separately
(6) ± 10 V, 0 to 10 V, 0 to 20 mA, 4 to 20 mA.
(7) For coated version add "**C**" at the end of the reference: for example, **TSXAEY420** becomes **TSXAEY420C**

Connection accessories: See www.schneider-electric.com

Modicon™ Premium™

Programmable Automation Controller

Counter modules / Motion control modules / Weighing modules

Type of module	Counter		Counter/measurement	Electronic cam
Type of inputs for	Sensors (2)		Sensors (2)	Incremental encoders (3)
	Incremental encoders (3)		Encoders (3)(4)	Absolute encoders (5)
Counting	40 kHz		500 kHz/200 kHz (5)	
Cycle time module	5 ms	10 ms	1 ms	–
Number of channels	2	4	2	128 cams
Number of axes	–	–	–	1
Reference	**TSXCTY2A** (1)	**TSXCTY4A** (1)	**TSXCTY2C** (1)	**TSXCCY1128** (1)

(1) For coated version add "**C**" at the end of the reference: for example, **TSXCTY2A** becomes **TSXCTY2AC**
(2) For 2/3-wire PNP/NPN 24 Vdc sensors
(3) For 5 Vdc RS422, 10 to 30 Vdc Totem Pole incremental encoders
(4) For SSI serial or parallel output absolute encoders
(5) For RS485 serial or parallel output absolute encoders

Module type		For translators (amplifier for stepper motor)		For analog control servomotors (for asynchronous and brushless motors)				
Control outputs		RS 422		+/- 10 V				
Compatible with drives		Lexium 05, Twin Line		Lexium 05 / 15 LP, MP and HP, Twin Line, Lexium 32				
Functions	Linear axes	–		Limited		Limited or infinite		Limited or infinite(6)
	Slave axes	–		With static ratio		With dynamic ratio		–
Frequency for each axis		187 kHz		500 kHz with incremental encoder, 200 kHz with absolute encoder (7)				
Number of axes		1	2	2	4	2	4	3
Reference		**TSXCFY11** (1)	**TSXCFY21** (1)	**TSXCAY21** (1)	**TSXCAY41** (1)	**TSXCAY22** (1)	**TSXCAY42** (1)	**TSXCAY33** (1)

(6) With linear interpolation on 2 or 3 axes
(7) SSI serial or with parallel outputs

Module type	Servomotors with SERCOS® digital ring (for brushless motors)		
Control outputs	SERCOS® network ring		
Compatible with ranges	Lexium™ 15 LP, MP, HP and Lexium 32 modular drive		
Functions	Linear or infinite independent axes, slave axes with cam profile or ratio		
Processing	4 sets of axes with linear interpolation from 2 to 8 axes	4 sets of axes with linear and circular interpolation from 2 to 3 axes (8)	4 sets of axes with linear interpolation from 2 to 8 axes
Frequency for each axis	4 MB SERCOS® network ring		
Number of axes	8 (9)	8 (9)	16 (10)
Reference	**TSXCSY84**	**TSXCSY85**	**TSXCSY164**

(8) Supplied with TJE trajectory editor: linear trajectories with links between segments according to polynomial or circular interpolation and circular trajectories.
(9) 8 real axes, 4 imaginary axes and 4 remote axes
(10) 16 axes (real axes, imaginary and remote axes)

Type of module		ISP Plus supplied uncalibrated	supplied calibrated and offer
Load cell inputs / outputs		50 measurements (for 1 to 8 load cells) / 2 discrete and 1 RS 485 for display unit	
Reference	Without display unit	**TSXISPY101** (1)	**Please contact your Schneider Electric agency**
	With display unit TSXXBTN410	**TSXISPY121**	**Please contact your Schneider Electric agency**

Connection accessories: See www.schneider-electric.com

Modicon™ Premium™
Programmable Automation Controller
Communication modules



Type of module		Ethernet network communication					
Speed		10 Mb/s	10/100 Mb/s				
Standard services		Ethway, Modbus™ TCP (Uni-TE™, Modbus)	Modbus TCP (Uni-TE, Modbus)				EtherNet/IP & Modbus TCP
Transparent Ready	Class	C10	B30	B30	C30	D10	B30
	Global Data	–	Yes	Yes	Yes	–	–
	I/O Scanning	–	Yes	Yes	Yes	–	Yes
	QoS (3)						Yes
	TCP Open	Yes	–	–	Yes	–	–
Web server	Standard services	Yes	Yes	Yes	Yes	Yes	Yes
	FactoryCast™ services	Yes	–	–	Yes	–	–
	FactoryCast HMI services	–	–	–	–	Yes	–
Reference		**TSXETY110WS** (4)	**TSXP57** (1)	**TSXETY4103** (4)	**TSXETY5103** (4)	**TSXWMY100** (4)	**TSXETC101** (2)

(1) References: see pages 14 and 15, Premium processors with integrated Ethernet TCP/IP port
(2) Seamless integration of Modbus and EtherNet/IP environments. Full integration in Unity (FDT/DTM technology). Available Unity V5
(3) QoS: Quality of Service

Profibus™ DPV1 is available for Modicon™ Premium™ Please refer to page 24





Type of module	AS-Interface™ cabling system	CANopen™ machine bus	Fipio™ manager fieldbus	InterBus™ fieldbus	Profibus™ DP V0 fieldbus
Name and description	In-rack	PCMCIA	Integrated port	In-rack	In-rack
Speed	167 Kb/s	20 K to 1 Mb/s	1 Mb/s	0.5 Mb/s	9.6 K to 12 Mb/s
Reference	**TSXSAY1000** (4)	**TSXCPP110** (4)	**TSXP57** (2)	**TSXIBY100** (4)	**TSXPBY100**

(2) References: see pages 14 and 15, Premium processors with integrated Fipio port





Type of module			Serial links Uni-Telway™			Modbus™		ASCII
Name and description			Integrated port	In-rack	PCMCIA	In-rack	PCMCIA	PCMCIA
Speed			19.2 Kb/s	19.2 Kb/s	1.2 to 19.2 Kb/s	19.2 Kb/s	1.2 to 19.2 Kb/s	1.2 to 19.2 Kb/s
Reference	With interface	RS 485	**TSXP57** (1)	**TSXSCY21601** (3) (4)	**TSXSCP114** (4)	**TSXSCY11601** (4)	**TSXSCP114** (4)	**TSXSCP114** (4)
		RS 232D	–	–	**TSXSCP111** (4)	–	**TSXSCP111** (4)	**TSXSCP111** (4)
		20mA CL	–	–	**TSXSCP112** (4)	–	**TSXSCP112** (4)	**TSXSCP112** (4)

(3) Also designed for Modbus serial (channel 0).

Type of module	Other networks Modbus Plus	Fipway	Fipio (agent function)
Name and description	PCMCIA card	PCMCIA card	PCMCIA card
Speed	1 Mb/s	1 Mb/s	1 Mb/s
Reference	**TSXMBP100** (4)	**TSXFPP20** (4)	**TSXFPP10** (4)

(4) For coated version add "**C**" at the end of the reference: for example, **TSXETY110WS** becomes **TSXETY110WSC**
Connection accessories: See www.schneider-electric.com

Modicon™ M340™
Programmable automation controller
Processor modules




Type of processor			Standard		High-performance		
		Number of racks	2 (4, 6, 8 or 12 slots)		4 (4, 6, 8 or 12 slots)		
Maximum configuration			Maximum 24 slots for processor and modules (excluding power supply module)		Maximum 48 slots for processor and modules (excluding power supply module)		
Functions	Max. no. (1)	Discrete I/O	512		1024		
		Analog I/O	128		256		
		Control channels	Programmable loops (via CONT-CTL process control EFB library)				
		Counter channels	20		36		
		Motion control	–		Independent axes on CANopen bus (via MFB library)	–	Independent axes on CANopen bus (via MFB library)
	Integrated connections	Ethernet TCP/IP	–			1 RJ45 port, 10/100 Mb/s, with Transparent Ready class B10 standard web server	
		CANopen master bus Integrated port	–		1 (SUB-D9)	–	1 (SUB-D9)
		Serial link	1 RJ45 port, Modbus master/slave RTU/ASCII or character mode (non isolated RS 232C/RS 485), 0.3 to 19.2 Kb/s				–
		USB port	1 port, 12 Mb/s				
	Communication module	Ethernet TCP/IP	1 RJ45 port, 10/100 Mb/s with: - Transparent Ready class B30 standard web server with BMX NOE 0100 module - Transparent Ready class C30 configuration web server with BMX NOE 0110 module				
Internal user RAM	Total capacity		2048 Kb		4096 Kb		
	Program, constants and symbols		1792 Kb		3584 Kb		
	Data		128 Kb		256 Kb		
Execution time for one instruction	Boolean		0.18 µs		0.12 µs		
	On words or mounted point arithmetic	Single-length words	0.38 µs		0.25 µs		
		Double-length words	0.26 µs		0.17 µs		
	On floating points		1.74 µs		1.16 µs		
No. of K instructions executed per ms	100% Boolean		5.4 Kinst/ms		8.1 Kinst/ms		
	65% Boolean and 35% mounted arithmetic		4.2 Kinst/ms		6.4 Kinst/ms		
System overhead	Master task		1.05 ms		0.70 ms		
	Fast task		0.20 ms		0.13 ms		
References			**BMXP341000**	**BMXP342000**	**BMXP3420102**	**BMXP342020**	**BMXP3420302**

(1) Only affects in-rack modules. The remote I/O on the CANopen bus is not included in these maximum numbers.

Modicon™ M340™
Programmable automation controller
Memory cards

Type of card	8 MB memory card	8 MB memory card + 8 MB files	8 MB memory card + 128 MB files
Use	Supplied as standard with each processor. Used for:	As replacement for the memory card supplied as standard with each processor, used for:	
	Backup of program, constants, symbols and data		
	–	File storage, 8 MB	File storage, 128 MB
	Activation of class B10 web server		
Compatibility	BMXP341000/20	BMXP3420	
References	**BMXRMS008MP**	**BMXRMS008MPF**	**BMXRMS0128MFP**

Type of module		Ethernet Network Communication		
Speed		10/100 Mb/s		10/100 Mb/s
Protocols		Modbus™ TCP	TCP/IP (Uni-TE™, Modbus)	EtherNet/IP and Modbus/TCP
Conformity class		Transparent Ready™ class B30		-
Communication service	I/O Scanning service	Yes		Yes
Transparent Ready	FDR service	Yes (client/server)		Yes (client / server)
	SNMP network management service	Yes		Yes (agent)
	Global Data service	Yes		No
	SOAP/XML Web service	No	Server	-
	Bandwidth management	Yes		Yes
	Qos	-		Yes
	RSTP	-		No SOAP
References		**BMXNOE0100**	**BMXNOE0110**	**BMXNOC0401**
Memory card	Use	Provides services conforming to Transparent Ready:		
		Class B	Class C 32 MB available for user web pages	No
References		**BMXRWSB000M**	**BMXRWSFC032M**	

Qos: Quality of Service - RSTP: Rapid Spanning Tree Protocol

Type of module	PROFIBUS™ DP V1	
Designation	PROFIBUS Remote Master (Ethernet Modbus TCP/PROFIBUS DP V1) compatible with Unity PACs and supports the I/O scanning service	
	Standard version 0 to 65°	Hardened version -25 to 70°, varnished
Speed	9.6 Kb to 12 Mb	
Interface	RS485 isolated (Sub-D 9 pin female connector)	
PROFIBUS Services	Master Class 1 and 2, support for 125 slaves, Sync & Freeze, Extended diagnostics. Delivered with communication DTM allowing any FDT tool to access the PROFIBUS slaves from the Ethernet network by way of the PROFIBUS Remote Master	
References	**TCSEGPA23F14F**	**TCSEGPA23F14FK**

Type of module	Serial link (1)	AS-Interface (1)
Number of interfaces	2	1
Speed	115 Kbits/s	–
Profile	–	M4 (AS-i V3)
References	**BMXNOM0200**	**BMXEIA0100**

(1) For BMXNOC0401 (EtherNet/IP), Profibus DP Gateway TSX EGPA23F14F, Modbus Plus Gateway TCS EGDB23F24FA

Type of module		RTU communication
Designation		Communication
Protocols		IEC 60870-5-101, DNP3 (subset level 3), Modbus/TCP, IEC 60870-5-104, DNP3 IP, DNP3 (subset level 3), Multi-protocols master slave
Ports	Ethernet port	10BASE-T/100BASE-TX or PPPoE (PPP Protocol over Ethernet) for ADSL external modem
	Serial port	Non-isolated RS 232/485 (Serial link) or RS232 external modem (Radio, PSTN, GSM, GPRS/3G)
Conformity class		Transparent Ready™ class C30
Transparent Ready communication services	I/O Scanning service	-
	Global Data service	-
	NTP me synchronization	Yes
	FDR service	Yes (client)
	SMTP e-mail notification service	Yes
	SOAP/XML Web service	Server
	SNMP network management service	Yes (agent)
RTU communication services	Master or Slave configuration	Yes, IEC101/104 and DNP3, with Pull through routing of events
	RTU clock synchronization	via RTU protocol or NTP
	Time stamped data and events exchanges	Yes, IEC101/104 and DNP3, polled interogations, Report by exception (RbE), unsolicited responses
	Time stamped events buffering and date stamped events	up to 100000 events, backup of events on power fail (10000)
	Automatic bacfill of time stamped events to Master/SCADA	Yes, on network disconnection/reconnection
	Data logging service	in CSV files in SD card memory (128 MB)
	Email/SMS service	Alarm and report notification
Memory Card	SD card 128 MB	Web server and Data logging CSV files
Reference		**BMXNOR0200H**

Modicon™ M340™

Programmable Automation Controller

Power supply modules / Racks / Rack extensions

Type of module		Power supply modules				
Voltage		24 Vdc isolated	24 to 48 Vdc isolated	100 to 240 Vac		
Nominal input current		1A at 24 Vdc	1.65 A at 24 Vdc 0.83 A at 48 Vdc	0.61 A at 115 Vac 0.31 A at 220 Vdc	1.04 A at 0.52 A	100 to 150 Vdc
Micro-break duration		≤ 1				
Integrated protection		Via internal fuse (not accessible)				
Max. useful power		17W	32 W	20 W	36 W	
Max. dissipated power		8.5 W				
Removable connectors (set of 2)	supplied as standard	**BMXXTSCPS10** (cage clamp)				
	to be ordered separately	**BMXXTSCPS20** (spring-type)				
References		**BMXCPS2010**	**BMXCPS3020**	**BMXCPS2000**	**BMXCPS3500**	**BMXCPS3504** (1)

Designation	Racks			
Type of modules to be installed	BMX CPS power supply, BMX P34 processor, I/O modules and application-specific modules (counter, communication)			
No. of slots	4	6	8	12
References	**BMXXBP0400**	**BMXXBP0600**	**BMXXBP0800**	**BMXXBP1200**

Designation	Rack extension module	Kit for rack extension
	Standard module to interconnect rack	A complete assembly kit for to racks distant from 0.8 m or less
References	**BMXXBE1000**	**BMXXBE2005**

Modicon™ M340™
Programmable Automation Controller
Discrete I/O modules




Type of module			DC input modules					
Number of inputs			16	16	32	64	16	16
Connection			Screw or spring-type 20-way removable terminal block		1 connector 40-way	2 connectors 40-way	Screw or spring-type 20-way removable terminal block	
Nominal input values	Voltage		24 V	48 V	24 V			125 Vdc
	Current		3.5 mA	2.5 mA	1 mA	3 mA		
	Logic		Positive *(sink)*				Negative *(source)*	
Input limit values	At state 1	Voltage	≥11 V	≥34 V	≥11 V	≥15 V	≥14 V	
		Current	> 2 mA (for U ≥11 V)	> 2 mA (for U ≥34 V)	> 2 mA (for U ≥11 V)	> 1 mA (for U ≥5 V)	> 2 mA (for U ≥15 V)	
	At state 0	Voltage	< 5 V	< 10 V	< 5 V			
		Current	≥1.5 mA	≥0.5 mA	≥1.5 mA	≥0.5 mA		
References			**BMXDDI1602**	**BMXDDI1603**	**BMXDDI3202K**	**BMXDDI6402K**	**BMXDAI1602**	**BMXDDI1604** (1)

Type of module			AC input modules			
Number of inputs			16			8
Connection			Screw or spring-type 20-way removable terminal block			
Nominal input values	Voltage		24 Vac	48 AC	100 to 120 Vac	200 to 240 Vac
	Current		3 mA			10.4 mA
	Frequency		50/60 Hz			
Input limit values	At state 1	Voltage	≥15 V	≥34 V	≥74 V	≥159 V
		Current	≥2 mA		≥2.5 mA	≥6 mA
	At state 0	Voltage	≤5 V	≤10 V	≤20 V	≤40 V
		Current	≤1 mA			≤4 mA
References			**BMXDAI1602**	**BMXDAI1603**	**BMXDAI1604**	**BMXDAI0805** (2)




Type of module		DC solid state output modules			
Number of inputs		16	16	32	64
Connection		Screw or spring-type 20-way removable terminal block		One 40-way connector	Two 40-way connectors
Nominal output values	Voltage	24 Vdc			
	Current	0.5 V		0.1 V	
	Logic	Positive *(source)*	Negative *(sink)*	Positive *(source)*	
Output limit values	Voltage (ripple included)	19 to 30 (possible up to 34 V, limited to 1 hour in every 24 hours)			
	Current per channel	0.625 A			0.125 A
	Current per module				
Maximum dissipated power		4	2.26	3.6	6.85
References		**BMXDDO1602**	**BMXDDO1612**	**BMXDDO3202K**	**BMXDDO6402K**

Type of module		Triac output modules
Number of inputs		16
Connection		Screw or spring-type 20-way removable terminal block
Operating voltage	Nominal	100 to 240 Vac
	Limit	85 to 288 Vac
Currents	Maximum	0.6 per channel, 2.4 per common, 4.8 total for 4 commons combined.
	Minimum	25 mA at 100 V a, 25 mA at 240 V a.
Maximum inrush current		≤ 20/cycle
Reference		**BMXDAO1605**

Type of module		Relay output modules		
Number of inputs		8	16	8
Connection		Screw or spring-type 20-way removable terminal block		
Max. operating voltage	DC	10 to 34 Vdc	24 to 125 Vdc (resistive load)	
	AC	10 to 264 Vac	200 to 264 Vac (Cosφ = 1)	100 to 150 Vdc
Response time	Activation	< 10 ms		
	Deactivation	< 8 ms	< 12 ms	
Dissipated power		2.7 W max	3 W	
References		**BMXDRA0805**	**BMXDRA1605**	**BMXDRA0804** (1)

Type of module			24 Vdc mixed I/O modules			
			Inputs	Solid state outputs	Inputs	Solid state outputs
Number of I/O			8	8	16	16
Connection			Screw or spring-type 20-way removable terminal block		One 40-way connector	
Input limit values	At state 1	Voltage	≥11V		≥11V	
		Current	≥3 mA (for U ≥11)		≥2 mA (for U ≥11)	
	At state 0	Voltage	5 V		5 V	
		Current	≤1.5 mA		≤1.5 mA	
	Sensor power supply (ripple included)		19 to 30 V (possible up to 30 V, limited to 1 hour in every 24 hours)			
Output limit values	Voltage (ripple included)		19 to 30 (possible up to 30 V, limited to 1 hour in every 24 hours)			
	Current	per channel	0.625 A		0.125 A	
		per module	5 A		3.2 A	
Maximum dissipated power			3.7 W		4 W	
References			**BMXDDM16022**		**BMXDDM3202K**	

Type of module			Mixed input/relay output modules	
			24 Vdc inputs	24 Vdc or 24 to 240 Vac relay outputs
Number of I/O			8	8
Connection			Screw or spring-type 20-way removable terminal block	
Nominal values	Inputs	Voltage	24 Vdc (positive logic)	
		Current	3.5 mA	
	Outputs	DC voltage		24 Vdc
		DC		2 (resistive load)
		AC voltage		220 Vac, Cosφ = 1
		AC		2 A
Input limit values	At state 1	Voltage	≥11V	
		Current	≥2 mA (for U ≥ 11 V)	
	At state 0	Voltage	5 V	
		Current	≤1.5 mA	
	Sensor power supply (ripple included)		19 to 30 V (possible up to 30 V, limited to 1 hour in every 24 hours)	
Maximum dissipated power			3.1 W	
Reference			**BMXDDM16025**	

Modicon™ M340™

Programmable Automation Controller

Analog I/O modules / Counter and motion control modules

Type of module	Analog input module				
Input type	Isolated high-level inputs	Isolated high-level inputs	Non isolated high-level inputs	Isolated inputs, low-level voltage, resistors, temperature probes, thermocouples	
Number of channels	4	8	8	4	8
Nature of inputs	± 10 V, ± 5 V, 0 to 5 V, 0 to 10 V, 1 to 5 V 0 to 20 mA, 4 to 20 mA, ± 20 mA			±40 mV, ±80 mV, ±160 mV, ±320 mV, ±640 mV, ±1.28 V	
Resolution	0.35 mV/0.92 µA			15 mV + sign	
References	**BMXAMI0410**	**BMXAMI0810** (1)	**BMXAMI0800** (1)	**BMXART0414**	**BMXART0814**

Type of module		Analog output module		
Output type		Isolated high-level outputs		Non isolated high-level outputs
Number of channels		2	4	8
Range	Voltage	± 10 V		–
	Current	0 to 20 mA and 4 to 20 mA		–
Resolution		15 bits + sign		
References		**BMXAMO0210**	**BMXAMO0410** (1)	**BMXAMO0802** (1)

Type of module		Mixed analog I/O module	
Channel type		Non-isolated high-level inputs	Non-isolated high-level outputs
Number of channels		4	2
Ranges		±10 V, 0 to 5 V, 0 to 10 V, 1 to 5 V, 0 to 20 mA, 4 to 20 mA	±10 V, 0 to 20 mA, 4 to 20 mA
Maximum conversion value	Voltage	± 11.25 V	± 11.25 V
	Current	0 to 30	0 to 24 mA
Resolution		14 bits, 12 bits, 13 bits, 12 bits	12 bits, 11 bits
Reference		**BMXAMM0600**	

Type of module	Counter module			Motion Control Module
	32 bits	16 bits	32 bits	
Modularity	2 channels	8 channels	4 channels	4 channels
No. of sensor inputs	6 per channel	2 per channel	3 per channel	4 auxiliary inputs
No. of actuator outputs	2 per channel			2 auxiliary outputs
Module cycle time	1 ms	5 ms		–
Applications	Upcounting, downcounting, measurement, frequency meter, frequency generator, axis following	Upcounting, downcounting, measurement		Frequency generator, Move, set position
References	**BMXEHC0200**	**BMXEHC0800**		**BMXMSP0200**

Type of module	SSI encoder interface
Number of channels	3
Encoder support	8 to 31 bits, 24V
Auxiliary input	2
Reflex output	3
Baud rate	100K to 1MHz
Module cycle time	1 ms
Functions	Capture, compare and event, modulo, reduction, offset
Reference	**BMXEAE0300**

Removable terminal blocks	20-way			28-way	
For use with modules	BMX AMI 0410 - BMX AM0 0210 - BMX AMM 0600 - BMX EHC 0800			BMX MSP 200, BMX AMI 0800 / AMI 0810	
For use with TOR modules	8 and 16 channel modules				
Composition	Cage clamp	Screw clamp	Spring-type	–	–
Type of connection	–	–	–	Spring-type	Screw clamp
References	**BMXFTB2000**	**BMXFTB2010**	**BMXFTB2020**	**BMXFTB2820**	**BMXFTB2800**

Some backplanes, power supplies, communication modules, some specific modules and each analog module are available in a “ruggedized” version. The references of these products end with a “H”.


Type of module	Multibus discrete inputs			
Connection	By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)			
Input voltage	24 Vdc		120 Vac	230 Vac
Number of channels	16 (1 common point)	32 (2 common points)	16 (2 common points)	
Dimensions W x D x H (mm)	125 x 47.5 x 141.5 (with communication modules or processors) 144 x 70 x 141.5 (with M1/M1E processors and optional modules)			
Reference	**170ADI34000**	**170ADI35000**	**170ADI54050**	**170ADI74050**


Type of module		Multibus discrete outputs					
		Solid state		Triac			
Connection		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)					
Output voltage		24 Vdc		120 Vac		230 Vac	
Number of protected channels		16 (2 common pts)	32 (2 common pts)	8 (2 common pts)	16 (2 common pts)	8 (2 common pts)	16 (2 common pts)
Output current	Per channel	0,5 A	0,5 A	2 A	0,5 A	2 A	0,5 A
	Per group of channels	4 A	8 A	4 A	4 A	4 A	4 A
	Per module	8 A	16 A	8 A	8 A	8 A	8 A
Dimensions W x D x H (mm)		125 x 47.5 x 141.5 (with communication modules or processors) 144 x 70 x 141.5 (with M1/M1E processors and optional modules)					
Reference		**170ADO34000**	**170ADO35000**	**170ADO53050**	**170ADO54050**	**170ADO73050**	**170ADO74050**

Type of module		Multibus discrete I/O							
		Solid state					Relay		Triac
Connection		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)							
Number of channels	Inputs	16 (1 common pt)	16 (4 com. pts)	16 (1 com. pt)	10 (1 common pt)				
	Input logic	Positive	Positive (1)	Negative	Positive			–	
	Outputs	16 (1 common pt)	16 (2 common pts)		8/4 (1 com. pt)	12	8 (2 common pts)		8 (1 com. pt)
Input voltage		12 to 48 Vdc	24 Vdc						120 Vac
Output voltage		12 to 48 Vdc	24 Vdc				24 to 230 Vac/20 to 115 Vdc		120 Vac
Output current	Per output	0,5 A	0,5 A		2 A	0,5 A	2 A		0,5 A
	Per group of channels	–	4 A		4 A	4/2 A	8 A		4 A
	Per module	8 A	8 A		8 A	6 A	16 A		4 A
Dimensions W x D x H (mm)		125 x 47.5 x 141.5 (with communication modules or processors) 144 x 70 x 141.5 (with M1/M1E processors and optional modules)							
Reference		**170ADM85010**	**170ADM35010**	**170ADM35015**	**170ADM37010**	**170ADM39010**	**170ADM39030**	**170ARM37030**	**170ADM69051**

(1) For a version with high-speed positive logic, replace "**0**" at the end of the reference with "**1**". For example, **170ADM35010** becomes **170ADM35011**

Connection accessories: See www.schneider-electric.com

Type of module	Multibus analog inputs		
Connection	By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)		
Number of channels	8 isolated	16 with common point	4 isolated
Input signal	± 5 V, ± 10 V, ± 20 mA, 1 to 5 V, 4 to 20 mA	± 5 V, ± 10 V, 4 to 20 mA	Multi-range ± 25 mV, ± 10 mV (1)
Resolution	14 bits + sign, 15 bits unipolar	12 bits + sign	15 bits + sign
Dimensions W x D x H (mm)	125 x 47.5 x 141.5 (with communication modules or processors) 144 x 70 x 141.5 (with M1/M1E processors and optional modules)		
Reference	**170AAI03000**	**170AAI14000**	**170AAI52040**

(1) Temperature probe: Pt 100, Pt 1000, Ni 100, Ni 1000, Thermocouple: B, E, J, K, N, R, S, T.

Type of module		Multibus analog outputs		Analog I/O and multibus discrete I/O			
Connection		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)					
Number of channels	Inputs	–		4 differential + 4 discrete		6 with com pt + 8 discrete (24 Vdc)	
	Outputs	4		2 + 2 discrete (24Vdc)	2 + 2 discrete (12Vdc)	4 with com pt + 8 discrete (24 Vdc)	
Input signal		± 10 V, 0 to 20 mA	± 10 V, 4 to 20 mA	± 5 V, ± 10 V, ± 20 mA, 1 to 5 V, 4 to 20 mA		0 to 10 V	± 10 V
Output signal		–		± 10 V, 4 to 20 mA		0 to 10 V	± 10 V
Resolution		12 bits + sign		12 to 14 bits dep. on signal		14 bits	14 bits
Dimensions W x D x H (mm)		125 x 47.5 x 141.5 (with communication modules or processors) 144 x 70 x 141.5 (with M1/M1E processors and optional modules)					
Reference		**170AAO12000**	**170AAO92100**	**170AMM09000**	**170AMM09001**	**170ANR12090**	**170ANR12091**

Type of module	High-speed counter	Discrete I/O with Modbus™ port
Connection	By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)	
Type of inputs for	Incremental or absolute encoders	RS 485 Modbus port
Operating voltage	24 Vdc	120 Vac
Counting frequency	200 kHz	–
Number of channels	2 independent	–
Number of discrete I/O	2 x 3 inputs/2 x 2 outputs	6 inputs/3 outputs
Dimensions W x D x H (mm)	125 x 47.5 x 141.5 (with communication modules or M1/M1E processors) 144 x 70 x 141.5 (with M1/M1E processors and optional modules)	
Reference	**170AEC92000**	**170ADM54080**




Type of module	Ethernet TCP/IP network		Fipio fieldbus	InterBus (1) fieldbus	Profibus DP fieldbus
Speed	10 Mbps	10/100 Mbps	1 Mbps	0.5 Mbps	9.6 K to 12 Mbps
Manager PAC	–		Premium	-	-
Redundancy	No		No	No	No
Standard services	Modbus TCP/IP		–	–	–
Reference	**170ENT11002**	**170ENT11001**	**170FNT11001**	**170INT11000** (1)	**170DNT11000**

(1) Generation 4, twisted pair medium: **170INT11003,** with optical fiber medium: **170INT12000**



Type of module	Other networks Modbus Plus		DeviceNet
Speed	1 Mbps		0.5 Mbps
Manager PAC	Premium or Quantum	Quantum	–
Redundancy	No	Yes	No
Standard services	–	–	–
Reference	**170PNT11020**	**170PNT16020**	**170LNT71000**



Type of module (2)	Modbus Plus		Asynchronous serial link
Communication ports	1 Modbus Plus	2 redundant Modbus Plus	RJ45
Real-time clock	Integrated, ± 13 sec/day accuracy		
Connection	By 9-way SUB-D connector		
Reference	**172PNN21022**	**172PNN26022**	**172JNN21032**

(2) Include save battery of the M1/M1E processors application and data memories.

Type of accessory	RS 232C communication cable		
Length	1 m	3 m	6 m
Reference	**110XCA28201**	**110XCA28202**	**110XCA28203**

Type of accessory	Power supply module for Momentum processors
Input voltage	120 or 230 Vac (selected by jumper)
Output voltage	24 Vdc
Output current	0.7 A
Dimensions W x D x H (mm)	73 x 44.5 x 146
Reference	**170CPS11100**


Type of processor		M1			
Number of I/O	Discrete	2048 I/O		2048 I/2048 Q	8192 I/O
	Registers	2048 words		4096 words	26048 words
Integrated communication ports	Modbus	1 RS 232C	1 RS 232C + 1 RS 485	1 RS 232C	1 RS 232C + 1 RS 485
	Ethernet TCP/IP	–			
	I/O bus (1)	–		1 I/O port	–
Transparent Ready	Embedded Web server	–			
Memory capacity	RAM	64 Kb		256 Kb	512 Kb
	Flash	256 Kb		256 Kb	512 Kb
	User, 984 LL language (2)	2.4 K		12 K	18 K
	User, IEC language (3)	–		160 K	240 K
	Data	2 K		4 K	24 K
Cycle time		1 ms/K	1 ms/K	0.63 ms/K	1 ms/K
Reference		**171CCS70000**	**171CCS78000**	**171CCS76000**	**171CCC78010**

(1) I/O bus derived from InterBus bus.
(2) ProWORX 32 or Concept programming software.
(3) Concept programming software.


Type of processor		M1	M1E			
Number of I/O	Discrete	8192 I/O				
	Registers	26048 words				
Integrated communication ports	Modbus	1 RS 232C	1 RS 485		–	
	Ethernet TCP/IP	–	1 integrated Ethernet port			
	I/O bus (1)	1 I/O port	–		1 I/O port	
Transparent Ready	Embedded Web server	–	Standard services (class A10)			
Memory capacity	RAM	512 Kb	544 Kb			
	Flash	512 Kb		1 Mb	512 Kb	1 Mb
	User, 984 LL language (2)	18 K				
	User, IEC language (3)	240 K	–	200 K	–	200 K
	Data	24 K				
Cycle time		1 ms/K	0.3 ms/K			
Reference		**171CCC76010**	**171CCC98020**	**171CCC98030**	**171CCC96020**	**171CCC96030**

Type of processor		171 CBB97030
Integrated communication ports	Modbus	1 RS 232/485
	Ethernet TCP/IP	4 integrated Ethernet port
Transparent Ready	Embedded Web server	Standard services (class B)
Memory capacity	RAM	512 Kb
	Flash	1 Mb
	User, 984 LL language (2)	18 K
	User, IEC language (3)	200 K
	Data	24 K
Cycle time		0.25 ms/K
Reference		**171CBB97030**

Connection accessories: See www.schneider-electric.com

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Communication modules / Connection accessories



Type of module NIM		EtherNet		
		Modbus TCP	Modbus TCP, dual port	EtherNet/IP
Baud rate		10 Mbps	10/100 Mbps	10/100 Mbps
Transparent Ready	Class	B20	B15	N/A
	Embedded Web server	Standard services	Standard services	Standard services
	Ethernet services	SNMP agent, FDR, BootP & DHCP client	SNMP agent, RSTP, BootP & DHCP client	SNMP agent, BootP & DHCP client
Max. number of addressable I/O modules		32 per island	32 per island	32 per island
Dimensions W x D x H (mm)		40 x 70 x 128.3	40 x 70 x 128.3	40 x 70 x 128.3
Reference	Standard	**STBNIP2212**	**STBNIP2311**	**STBNIC2212**




Type of module NIM		Machine bus	Fieldbus		
		CANopen™	Fipio™	INTERBUS™	Profibus™ DP
Max. number of addressable I/O modules		32 per island (1) (2)	32 per island (1)	32 per island (1) (2)	32 per island (1) (2)
Baud rate		10 K to 1 Mbps	1 Mbps	0.5 Mbps	9.6 K to 12 Mbps
Dimensions W x D x H (mm)		40 x 70 x 128.3			
Reference	Standard	**STBNCO2212**	**STBNFP2212**	**STBNIB2212**	**STBNDP2212**
	Basic	**STBNCO1010**	**–**	**STBNIB1010**	**STBNDP1010**

(1) On 1 primary segment and 6 expansion segments max.
(2) 12 max on 1 primary segment for basic versions.


Type of module		Other networks		
		Modbus™ Plus	DeviceNet™	
Max. number of addressable I/O modules		32 per island	32 per island	12 per island
Baud rate		1 Mbps	125, 250 or 500 Kbps	125, 250 or 500 Kbps
Dimensions W x D x H (mm)		40 x 70 x 128.3		
Reference	Standard	**STBNMP2212**	**STBNDN2212**	**–**
	Basic	**–**	**–**	**STBNDN1010**

Type of accessory		Removable terminals for	
		24 Vdc power supply	DeviceNet
Use		Communication modules	Network link DeviceNet module
Reference	Screw terminals	**STBXTS1120** (3)	**STBXTS1111**
	Spring terminals	**STBXTS2120** (3)	**STBXTS2111**

(3) To be ordered separately, sold in lots of 10 only for spare parts.(STBXTS●120 are delivered systematically with STBN●●●●●●)

Marking label sheets	**STBXMP6700**
Screwdriver	**STBXTT0220**

Connection accessories: See www.schneider-electric.com

Modicon™ STB

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Power distribution modules / Bus extension modules for standard range / Software and memory card / Connection accessories

Type of module			PDM				Auxiliary Power supply
Connection by removable terminals			Screw STBXTS1130 (2) (3) Spring STBXTS2130 (2) (3)				Screw STBXTS1120 (2) Spring STBXTS2120 (2)
Supply voltage			24 Vdc		115 to 230 Vac		24 Vdc
Maximum current	Inputs (4)		4 A at 30°C, 2.5 A at 60°C	–	5 A at 30°C, 2.5 A at 60°C	–	–
	Outputs (4)		8 A at 30°C, 5 A at 60°C	–	10 A at 30°C, 5 A at 60°C	–	–
	Inputs/Outputs (4)		–	4 A at 30°C, 2.5 A at 60°C	–	4 A at 30°C, 2.5 A at 60°C	–
	Logic internal 5 V		–	–	–	–	1.2 A
Sensor/actuator bus voltage range			19.2 to 30 Vdc		85 to 265 Vac		–
Dimensions W x D x H (mm)			18.4 x 70 x 128.3				
Reference	Module (5)	Standard	**STBPDT3100K**	–	**STBPDT2100K**	–	**STBCPS2111K**
		Basic	**–**	**STBPDT3105K**	**–**	**STBPDT2105K**	
	Base		**STBXBA2200**		**STBXBA2200**		**STBXBA2100**

(1) Process power supplies see chapter 6 “Power supply”
(2) To be ordered separately, sold in lots of 10.
(3) PDM connector keying pin kit STBXMP7810.
(4) PDM fuse kit STBXMP5600.
(5) Kit reference including module, base and terminal

Type of module			“EOS” End of segment	“BOS” Beginning of segment	Extension for CANopen connection devices
Connection by removable terminals			**–** **–**	Screw STBXTS1120 (6) Spring STBXTS2120 (6)	Screw STBXTS1110 (7) Spring STBXTS2110 (7)
Use			For placing at end of segment (except for the last)	For placing at head of each extension segment	For placing at end of last segment
Dimensions W x D x H (mm)			18.4 x 70 x 128.3		
Reference	Module (8)	Standard	**STBXBE1100K**	**STBXBE1300K**	**STBXBE2100K**
	Base		**STBXBA2300K**	**STBXBA2400**	**STBXBA2000**

(6) To be ordered separately, sold in lots of 10.
(7) To be ordered separately, sold in lots of 20.
(8) Kit reference including module, base and terminal

Type		Modicon STB, OTB, FTM, FTB configuration software (PC connection cable supplied)					Removable memory card
Software User Guide		Single station	3 pack	10 pack	Unlimited Site	System Aliance Integrator	–
Memory size		**–**					32 KB
Reference		**STBSPU1000**	**STBSPU1003**	**STBSPU1011**	**STBSPU1130**	**STBSPU1010**	**STBXMP4440**
	Hardware User Guide	**STBSUS8800**					

Type of accessory	Island bus expansion cable				
Length	0.3 m	1 m	4.5 m	10 m	14 m
Reference	**STBXCA1001**	**STBXCA1002**	**STBXCA1003**	**STBXCA1004**	**STBXCA1006**
	Bus termination module or plug		**Programmation connection cable L= 2 m**		
Reference	**STBXMP1100**		**STBXCA4002**		

Connection accessories: See www.schneider-electric.com

Modicon™ STB

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Discrete modules

Type of module			Discrete inputs						
Connection by removable terminals (1)		Screw (2)	STBXTS1100			STBXTS1180	STBXTS1110		
		Spring (2)	STBXTS2100			STBXTS2180	STBXTS2110		
Number of channels			2	4	6	16	2	2 (isolated)	2
Input voltage			24 Vdc				115 Vac		230 Vac
Dim. W x D x H (mm)			13.9 x 70 x 128.3				18.4 x 70 x 128.3		
Reference	Module (6)	Standard	**STBDDI3230K**	**STBDDI3420K**	**STBDDI3610K**	**–**	**STBDAI5230K**	**STBDAI5260K**	**STBDAI7220K**
		Basic	**–**	**STBDDI3425K**	**STBDDI3615K**	**STBDDI3725KS/KC*** **STBDDI3725****	**–**	**–**	**–**
	Base (3)		**STBXBA1000**			**STBXBA3000**	**STBXBA2000**		

Type of module			Discrete solid state outputs						
Connection by removable terminals (1)		Screw (2)	STBXTS1100						STBXTS1180
		Spring (2)	STBXTS2100						STBXTS2100
Number of channels			2		4		6		16
Output voltage			24 Vdc		24 Vdc		24 Vdc		24 Vdc
Output current			0.5 A	2 A	0.25 A	0.5 A	0.25 A	0.5 A	0.5 A
Dim. W x D x H (mm)			13.9 x 70 x 128.3						
Reference	Module (6)	Standard	**STBDDO3200K**	**STBDDO3230K**	**–**	**STBDDO3410K**	**–**	**STBDDO3600K**	**–**
		Basic	**–**	**–**	**STBDDO3415K**	**–**	**STBDDO3605K**	**–**	**STBDDO3705KS/KC*** **STBDDO3705****
	Base (3)		**STBXBA1000**						**STBXBA3000**

Type of module			Discrete outputs Triac		Discrete outputs relay	
Connection by removable terminals (1)		Screw (2)	STBXTS1100			
		Spring (2)	STBXTS2100			
Number of channels			2	2 (isolated)	2 NO/NC and common	2NC+NO
Output voltage			115 to 230 Vac	115 Vac	24 Vdc or 115 to 230 Vac	
Output current			2 A at 30°C, 1 A at 60°C		2 A per contact	7 A per contact
Dim. W x D x H (mm)			18.4 x 70 x 128.3			28.1 x 70 x 128.3
Reference	Module (6)	Standard	**STBDAO8210K**	**STBDAO5260K**	**STBDRC3210K**	**STBDRA3290K**
	Base (3)		**STBXBA2000**			**STBXBA3000**

* KS with base and screw terminals, KC with base and spring terminals
** Without base and terminal
(1) To be ordered separately, sold in lots of 20.
(2) I/O connector keying pin kit STBXMP7800
(3) Module keying pin kit STBXMP7700
(4) if connection on Telefast2 order STBXTS6510 or connection on Telefast Twido order STBXTS5510
(5) if connection on Telefast2 order STBXTS6610 or connection on Telefast Twido order STBXTS5610
(6) Kit reference including module, base and terminal

Connection accessories: See www.schneider-electric.com

Modicon™ STB

IP 20 Distributed I/O, modular system

Analog modules / Application-specific modules

Type of module (1)			Analog inputs*							
Connection by removable terminals			Screw STBXTS1100 (2) / Spring STBXTS2100 (2)							
No. of channels			2				4		8	2
Input signal			- 10 to +10 V	0 to +10 V	0 to 20 mA	4 to 20 mA	4 to 20 / 0 to 20 mA	Selectable	Selectable	Multirange (3)
Resolution			11 bits + sign	10 bits	12 bits	10 bits	15 bits + sign			
Dim. W x D x H (mm)			13.9 x 70 x 128.3				18.4 x 70 x 128.3			13.9 x 70 x 128.3
Reference	Module (8)	Standard	–	–	**STBACI1230K**	–	**STBACI0320K**	**STBAVI0300K**	**STBACI1400K** (5)	**STBART0200K**
			STBAVI1270K	–	–	–	**STBACI8320K** (4)	–	**STBAVI1400K** (6)	–
		Basic	–	**STBAVI1255K**	–	**STBACI1225K**	–	–	–	–
	Base		**STBXBA1000**				**STBXBA2000**			**STBXBA1000**

* For other references, see catalog or visit our website: www.schneider-electric.com

Type of module (1)			Analog outputs							
Connection by removable terminals			Screw STBXTS1100 (2) / Spring STBXTS2100 (2)							
No. of channels			1	2						
Output signal			4 to 20 mA	0 to +10 , - 10 to +10 V	0 to +10 V	-10 V to +10 V	0 to 20 mA	4 to 20 mA	4 to 20 mA	Selectable (6)
Resolution			15 bits + sign	11 bits + sign or 12 bits	10 bits	9 bits + sign	12 bits	10 bits	15 bits + sign	
Dim. W x D x H (mm)			18.4 x 70 x 128.3	13.9 x 70 x 128.3					18.4 x 70 x 128.3	
Reference	Module (8)	Standard	**STBACO0120K**	**STBAVO1250K**	–	–	**STBACO1210K**	–	**STBACO0220K**	**STBAVO0200K**
		Basic	–	–	**STBAVO1255K**	**STBAVO1265K**	–	**STBACO1225K**	–	–
	Base		**STBXBA2000**	**STBXBA1000**					**STBXBA2000**	

Type of module (1)			For motor starters TeSys model U	Counter
Connection by connector			4 RJ45	Spring STBXTS2150 (2)
Number of inputs/outputs			12 I / 8 O	4 I / 2 O
Input voltage			24 Vdc	24 Vdc
Output voltage/current			24 Vdc/0.1 A per channel	24 Vdc/0.5 A
Number of channels			4 starters-controllers	1 counter channel 40 kHz
Dim. W x D x H (mm)			28.1 x 70 x 128.3	
Reference	Module (8)	Standard	**STBEPI2145K**	**STBEHC3020K**
	Base		**STBXBA3000**	
	Connection cables		(7)	–

(1) Grounding kit (conseilled for counter > 40 kHz): STBXSP3000 (connecting support) + STBXSP3010 (1.5 to 6 mm² cables) + STBXSP3020 (5 to 11 mm² cables)
(2) To be ordered separately, sold in lots of 20.
(3) Multirange temperature probe thermocouples B, E, J, K, R, S, T. Thermal probe Pt 100, Pt 1000, Ni 100, Ni 1000, cu 10, ± 80 mV.
(4) 4 HART-tolerant channels
(5) Input signal selectable / channel 0 to 20 mA and 4 to 20 mA
(6) Input signal selectable / channel 1 to 5 Vdc, 0 to 5 Vdc, 0 to 10 Vdc, ± 5 Vdc and ± 10 Vdc
(7) LU9R03 (0,3 m), LU9R10 (1 m), 490NTW00002 (2 m), LU9R30 (3 m), 490NTW00005 (5 m), 490NTW00012 (12 m)
(8) Kit reference including module, base and terminal

Unity™ Pro

Configuration software

For Modicon™ Quantum™, Premium™, and M340™

Unity™ Pro is common programming software for debugging and operation of Modicon M340, Premium, and Quantum programmable controller ranges. Unity Pro takes the recognized usage values of PL7 and Concept software and offers a complete set of new functions for improved productivity and opening to other software.

Five IEC61131-3 languages are supported as standard in Unity Pro with debugging functions, either on the simulator or directly online with the programmable controller. An additional LL984 language editor is available in Unity Pro V7.0 and higher to allow easy migration of Modsoft and Concept applications to Quantum platforms.

With symbolic variables that are independent of memory, structured data and user function blocks – application objects are a direct reflection of the automated process application components. Unity Pro operator screens are user-configured in the application from graphic libraries. Operator accesses are simple and direct. The converters integrated in Unity Pro automatically convert PL7 and Concept IEC 61131-3 standards and applications.

Unity V7.0 fully supports new Quantum Ethernet RIO architectures. It integrates additional possibilities for online changes in RUN mode, as well as improved Search/Replace toll. Debugging and maintenance, as well as design, are greatly simplified and improved.

Software type		**Unity™ Pro Small version 7.0**			
License type version 7.0		Single (1 workstation)	Group (3 workstations)	Team (10 workstations)	Facility (100 workstations)
References	Software pack	**UNYSPUSFUCD70**	**UNYSPUSFGCD70**	**UNYSPUSFTCD70**	–
	Upgrade Legacy Software (1)	**UNYSPUSZUCD70**	**UNYSPUSZGCD70**	**UNYSPUSZTCD70**	–
Software type		**Unity Pro Medium version 7.0**			
License type version 7.0		Single (1 workstation)	Group (3 workstations)	Team (10 workstations)	Facility (100 workstations)
References	Software pack	**UNYSPUMFUCD70**	**UNYSPUMFGCD70**	**UNYSPUMFTCD70**	–
	Upgrade Legacy Software (2)	**UNYSPUMZUCD70**	**UNYSPUMZGCD70**	**UNYSPUMZTCD70**	–
Software type		**Unity Pro Large version 7.0**			
License type version 7.0		Single (1 workstation)	Group (3 workstations)	Team (10 workstations)	Facility (100 workstations)
References	Software pack	**UNYSPULFUCD70**	**UNYSPULFGCD70**	**UNYSPULFTCD70**	**UNYSPULFFCD70**
	Upgrade Legacy Software (3)	**UNYSPULZUCD70**	**UNYSPULZGCD70**	**UNYSPULZTCD70**	**UNYSPULZFCD70**
Software type		**Unity Pro Extra Large version 7.0**			
License type version 7.0		Single (1 workstation)	Group (3 workstations)	Team (10 workstations)	Facility (100 workstations)
References	Software pack	**UNYSPUEFUCD70**	**UNYSPUEFGCD70**	**UNYSPUEFTCD70**	**UNYSPUEFFCD70**
	Upgrade Legacy Software (4)	**UNYSPUEZUCD70**	**UNYSPUEZGCD70**	**UNYSPUEZTCD70**	**UNYSPUEZFCD70**

(1) From Concept S, PL7 Micro, ProWORX NxT Lite and ProWORX 32 Lite
(2) From Concept S/M, PL7 M/J, ProWORX NxT Lite and ProWORX 32 Lite
(3) From Concept S /M, PL7 M/J/P, ProWORX NxT Lite and ProWORX 32 Lite
(4) From Concept, PL7, ProWORX NxT and ProWORX 32

Unity™ Pro application comparison software

Software type		Unity Dif
License type version 7.0		Single (1 workstation), French and English languages (software and documentation)
Reference	Software extension	**UNYSDUZFUCD70**
License type version 7.0		Site license (100 workstations), French and English languages (software and documentation)
Reference	Software extension	**UNYSDUZFFCD70**

EF/EFB function development software in C language

Software type		Unity EFB Toolkit
License type version 3.1		Single (1 workstation), English language (software and documentation)
References	Software pack	**UNYSPUZFUCD31E**
	Renewal	**UNYCSPSPUZBU**

Specific libraries according to the software used

Library type	Control Libraries				
Designation	Predictive Control Library (for Unity Pro and Concept)	Fuzzy Control Library (for Unity Pro)	TeSys Library (for Unity Pro)	HVac Library (for Unity Pro)	Flow Calculation Library (for Unity Pro)
License type	Single License (1 work station)				
Reference	**UNYLPCZAUCD10**	**UNYLFZZAUWB12**	**UNYLTSZAUWB10**	**UNYLHVZAUWB10**	**UNYLAGZAUWB20**

PL7™
Programming software
For Modicon™ Premium™ slot-PACs / Specialist tools

PL7™ is the common programming, debugging and operating software for the TSX Micro and Premium families of PACs. PL7 offers 4 IEC languages: Instruction List (IL), Ladder Diagram (LD), Structured Text (ST) and Sequential Function Chart (SFC). You can use the most suitable language for each function in your application, making use of the multi-tasking structure of the processors. For using application-specific functions, PL7 directly integrates the application-specific screens required for configuration and adjustment – as well as supervisory and diagnostics activities.

Type of software		PL7 Micro for TSX Micro platform			
Type of license version 4.5		Single (1 station)	Single with SyCon V2.8	Group (3 stations)	Open Team (10 stations)
Reference	Software package	TLXCDPL7MP45	TLXCDPL7MPC45	TLXCD3PL7MP45	TLXOTPL7MP45M
	Update (1)	TLXRCDPL7MP45M	TLXRCDPL7MPC45M	TLXRCD3PL7MP45M	–
		PL7 Junior for TSX Micro/Premium coprocessor platforms			
Type of license version 4.5		Single (1 station)	Group (3 stations)		
Reference	Software package	TLXCDPL7JP45	TLXCD3PL7JP45		
	Update (1)	TLXRCDPL7JP45M	TLXRC3DPL7JP45M		
	Upgrade (2)	TLXUCDPL7JP45M	TLXUCD3PL7JP45M		
		PL7 Pro for TSX Micro/Premium coprocessor platforms			
Type of license version 4.5		Single (1 station)	Group (3 stations)	Open Team (10 stations)	Open Site
Reference	Software package	TLXCDPL7PP45	TLXCD3PL7PP45	TLXOTPL7PP45M	TLXOSPL7PP45M
	Update (1)	TLXRCDPL7PP45M	TLXRCD3PL7PP45M	–	–
	Upgrade (2)	TLXUCDPL7PP45M	TLXUCD3PL7PP45M	–	–

(1) From the previous software version.
(2) From lower level, earlier version software.

EF function development software in C language

Type of software	PL7 SDKC for EF function development software in C language
PL7 SDKC software extension	For PL7 Micro/Junior/Pro
Reference	TLXLSDKCPL741M

Development of applications in C language

Type of software	PL7 FUZ for processing process applications using fuzzy logic
PL7 FUZ software extension	For PL7 Micro/Junior/Pro, TSX Micro/Premium
Reference	TLXLPL7FUZ34M

Comparison of PL7 applications

Type of software	PL7 DIF for comparison of applications	
PL7 DIF software extension	For PL7 Pro, TSX Micro/Premium	
Type of license	Single (1 station)	Site (> 10 stations)
Reference	TLXCDPL7DIF42	TLXOSPL7DIF42

Availability of control systems based on Premium platforms

Type of software	Warm Standby redundant
Warm Standby software extension	For PL7 Junior/Pro
Type of license	Single (1 station)
Reference	TLXCDWSBYP40F / E

Concept™ / ProWORX™ 32

Programming software

For Modicon™ Quantum™ and Momentum™

Concept™ is the IEC programming software for the Momentum and Quantum families of PACs. It provides advanced Microsoft Windows based tools that deliver a multi-language development environment for control system programming. It uses familiar, standardized editors, bundled in a single application to create and integrate PAC control, communication and diagnostic logic. Five IEC editors give users the freedom to choose the programming language that fits their application requirements: Function Block Diagram (FBD), Ladder Diagram (LD), Sequential Function Chart (SFC), Structured Text (ST) and Instruction List (IL).

Type of software		Concept for Quantum/Momentum platforms			
Type of license version 2.6		Single (1 station)	Group (3 stations)	10 users (10 stations)	Site
Software references	Concept S	**372SPU47101V26**	**–**	**–**	**–**
	Concept M	**372SPU47201V26**	**–**	**–**	**–**
	Concept XL	**372SPU47401V26**	**372SPU47411V26**	**372SPU47421V26**	**372SPU47431V26**
Update references	Concept S (1)	**372ESS47101**	**–**	**–**	**–**
	Concept M (1)	**372ESS47201**	**–**	**–**	**–**
	Concept XL (1)	**372ESS47401**	**372ESS47403**	**372ESS47410**	**372ESS47400**

(1) From an earlier software version.

EF/EFB function development software in C language

Type of software		Concept EFB Toolkit	
Type of license		Version 2.6	Upgrade version 2.6
Reference	Software package	**332SPU47001V26**	**372ESS47001**

Concept service version limited to application loading

Type of software		Concept Application Loader
Type of license		Version 2.6
Reference	Software package	**372SPU47701V26**

Software for designing and generating batch/process applications

Type of software		Unity UAG (Unity Application Generator)	
Type of license version 3.0		Single (1 station)	Site
Reference	Medium Software package	**UAGSEWMFUCD31**	**UAGSEWMFFCD31**
	Large Software package	**UAGSEWLFUCD31**	**UAGSEWLFFCD31**

ProWORX™ 32 is the flexible, easy-to-use cross-platform 984 ladder logic programming software for the Modicon family of PACs. It gives you the power to program your Modicon controllers online or offline, manage your I/O subsystems, and analyze your plant's activity in real-time, in a familiar Windows environment. ProWORX 32 provides client/server capabilities to organize user-groups and -rights, store projects at a central location and realize office-plant floor bridging. The project emulator provides the ability to test projects prior to running them in the PAC run-time environment, to help ensure that your system runs efficiently.

Type of software		ProWORX for Quantum/Momentum platforms			
Type of license version 2.1		Single (1 station)	Group (3 stations)	Multi-user (10 stations)	Site
Software references	ProWORX 32 Server	**372SPU78001PSEV**	**–**	**–**	**–**
	ProWORX 32 Suite	**372SPU78001PSSV**	**–**	**–**	**–**
	ProWORX 32 Client, Full Dev.	**372SPU78001PDEV**	**372SPU78001PSTH**	**372SPU78001PSTE**	**372SPU78001SITE**
	ProWORX 32 Online	**372SPU78101PONL**	**–**	**–**	**–**
	ProWORX 32 Lite	**372SPU71001PLDV**	**372SPU71001PLTH**	**372SPU71001PLTE**	**–**
Upgrade to ProWORX 32 references (2)		**372SPU78401LPUP**	**372SPU78401LPTH**	**372SPU78401LPTE**	**–**

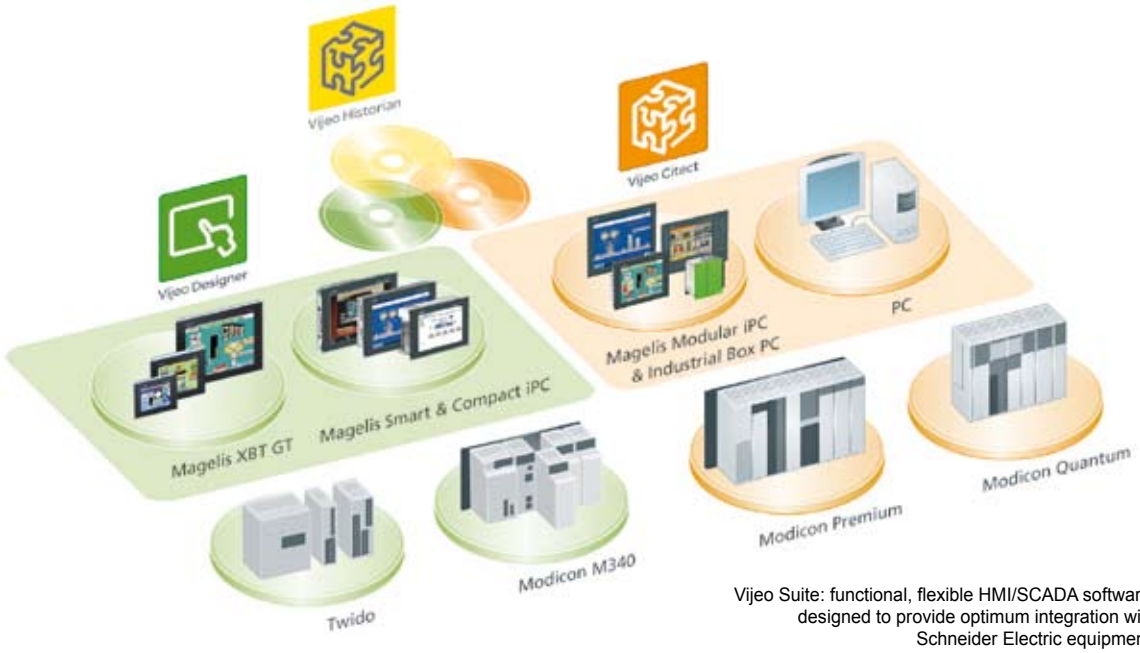
(2) Only possible for customers who are "up-to-date" with CSP (continuing support program)

Vijeo™ Citect™
SCADA software

Vijeo™ Citect™ software is designed for operating and monitoring. With its powerful visualization capabilities and operational features, it delivers actionable insight faster, enabling operators to respond quickly to process disturbances, thereby increasing their effectiveness. Its easy-to-use configuration tools and powerful features enable you to quickly develop and deploy solutions for any size application.

Vijeo Citect

Type	Supervisory control and data acquisition (SCADA) software
Compatibility	Schneider Electric automation platforms and third party devices
Operating system	Windows XP® SP3 (32 bit), Windows® 2003 Server SP2 (32 bit), Windows Vista® SP2 (32 and 64 bit), Windows® Server 2008 SP2 (32 and 64 bit), Windows® 7 (32 and 64 bit), Windows® Server 2008 R2
Versions	The development license (without network connectivity) allows free communication with PACs for 10 minutes at a time.
	Vijeo Citect full server licenses are available in 75 points, 150 points, 500 points, 1500 points, 5000 points, 15,000 points and unlimited points
	Vijeo Citect Lite (without network connectivity) is available in 100 - 1200 points
References	Please contact your local sales representative



Vijeo Suite: functional, flexible HMI/SCADA software, designed to provide optimum integration with Schneider Electric equipment.

Benefits at a glance:

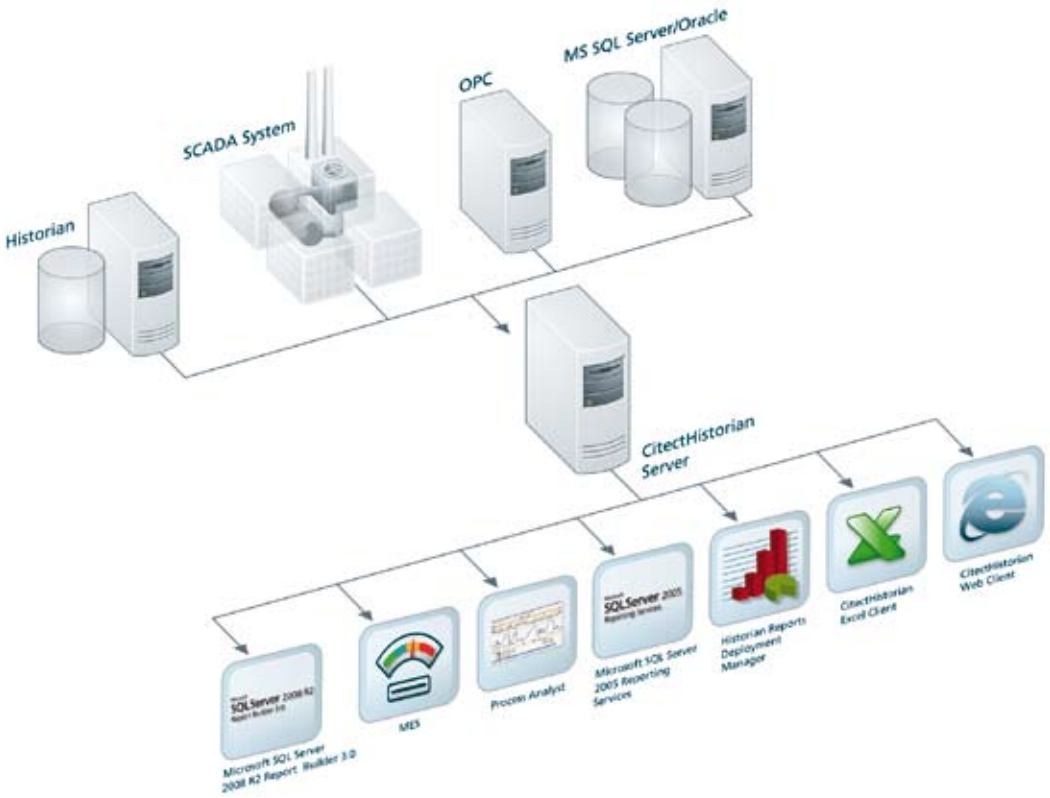
- **Full-redundancy for reliable architecture:** Vijeo Citect's built-in redundancy greatly reduces lost data and downtime.
- **Powerful graphics:** Vijeo Citect lets you develop true color, easy-to-use graphics that provide the operator with an intuitive, consistent user interface.
- **Intuitive Process Analysis tool:** Vijeo Citect Process Analyst is an intuitive process analysis tool that sits directly in the SCADA system, providing a complete overview of your plant and delivering actionable insight to the operators faster, thereby improving their efficiency and productivity.
- **Object-based configuration for rapid development:** Developing your control system is made quick and easy by Vijeo Citect's object-based configuration tools such as page templates, Genies, Super Genies, and SpeedLink.
- **Engineering with ease:** Vijeo Citect offers flexible and targeted system engineering tools to help you be more efficient. It accelerates your control system configuration process, significantly reducing your engineering time and costs and minimizing your project risk.

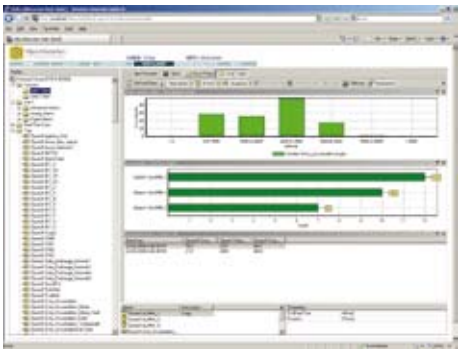
Vijeo™ Historian™
Reporting software

Vijeo™ Historian™ software is designed for the information management. It includes the historian and portal functionalities of the solution, enabling you to accurately store data for long-term reporting. Connecting your production and business systems is possible using active data transfers and simple, easy-to-use reporting.

Vijeo Historian

Type	Historian software
Compatibility	Schneider Electric automation platforms and third party devices
Operating system	Windows XP® SP3 (32 bit), Windows® 2003 Server SP2 (32 bit), Windows Vista® SP2 (32 and 64 bit), Windows® Server 2008 SP2 (32 and 64 bit), Windows® 7 (32 and 64 bit), Windows® Server 2008 R2
References CD-ROM PC	Please contact your local sales representative





Benefits at a glance:

- **Business systems integration:** Vijeo Historian reduces the complexity and cost of bridging the divide between senior management and plant operations through its simple, easy-to-use interface and its active data transfers that push data from the control systems up to the business systems.
- **An open data store:** Vijeo Historian utilizes 100% Microsoft SQL Server 2008 R2 as its embedded historical data store. Its open, industry-standard technology and trusted security integrate effortlessly into your business in a way that lowers your total cost of ownership.
- **Enterprise-wide reporting:** A range of reports can be produced using a convenient built-in historian in the familiar, open Microsoft user interface. Vijeo Historian also comes with a standard set of pre-configured reports, simplifying basic alarm and tag reporting.
- **Alarm management:** Pre-configured alarm reports based on the EEMUA (Engineering Equipment & Materials Users Association) 191 alarm management guidelines.
- **Going 'green' with the energy reports:** Energy reports help you perform a comprehensive energy assessment of your plant to determine how much energy is being consumed and how much could potentially be saved.

http://www.schneider-electric.us/

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