

## Ingenious solutions for all your automation system applications

Perfect suitability for all your applications thanks to a complete offer... from simple relays to automation platforms.

### Zelio®

Relays and Zelio Logic 2 programmable smart relays



#### Zelio relay range

Zelio Relay plug-in relays, Zelio Control control and measurement relays, Zelio Count counters, ZelioTime timing relays: These ranges offer *compactness* and *simplicity*.

#### Zelio Logic 2 programmable smart relays

Designed for management of simple automation systems comprising 10 to 40 I/O. Compact or modular, Zelio Logic 2 offers *flexibility* and *simplicity*.

### Twido™

Programmable controllers



**Twido**, ideal for simple installations and small machines: standard applications comprising from 10 to up to 256 I/O (max). Compact or modular, Twido offers *flexibility* and *simplicity*.

### Modicon

Automation platforms and distributed I/Os



**Modicon M340**, ideal for complex OEM machine control applications that require small size, powerful capabilities and highly integrated functionality.

- 3 built-in communications ports (Ethernet, Modbus, CANopen)
- High density 64 pt modules in standard widths
- Hot swap modules ease maintenance
- Unity Software family development



**Modicon Premium**, ideal for manufacturing applications. Outstanding *flexibility* for distributed architectures and *integration* of advanced automation system functions.

- New high performance processors
- CANopen machine bus connection, from entry level



**Modicon Quantum**, ideal for process applications. *High level of performance* for process control and architecture availability.

- New high performance processors
- Onboard Ethernet
- Memory expansion option using PCMCIA
- USB connection



**Modicon Momentum M1/M1E**, ideal for distributed architectures. *Compactness* and *flexibility* for control and I/O distribution on Ethernet.

#### The essential guide

A simplified selection guide enabling you to quickly select all the products required to develop an automation system... from a small simple machine to a complex installation.

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## Unity

Taking you into a new world of automation

*At the heart of the Telemecanique offer, Unity is the new generation software and hardware automation platform.*

b **Open**, based on universal Microsoft Visio, VBA and XML software standards, Unity is designed to allow your tools to work together.

b **Smart**, Unity provides a common IEC development environment for Modicon Premium, Atrium and Quantum platforms. With Unity, you can reduce development cycles and improve quality by reusing standard programs.



b **Flexible**, the new range of Modicon Premium, Atrium and Quantum processors offers extended memory capabilities and greater execution performance.

*With Transparent Ready®*

*Schneider Electric has applied market standards to its automation system architectures, making data exchange even easier. Smart and simple to use, the Telemecanique software offer ensures maximum efficiency in terms of application development and maintenance, while its high performance Telemecanique PLCs help to achieve optimum installation availability and productivity. Committed to maximizing your investment over the long-term, Schneider Electric makes it easy for you to develop your applications with complete peace of mind.*



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Type of relay		Interface relays RSB		
<b>Contact characteristics</b>				
Thermal current I <sub>th</sub> in A (temperature ≤55°C)		8	12	16
Number of contacts		2 "C/O"	1 "C/O"	1 "C/O"
Contact material		AgNi	AgNi	AgNi
Switching voltage, min. / max.		5 / 250 VAC/DC		
Switching capacity, min. / max. (mA / VA)		5 / 2000	5 / 3000	5 / 4000
<b>Coil characteristics</b>				
Average consumption, inrush,		0.75 VA / 0.45 W		
Permissible voltage variation		0.8/0.85–1.1 U <sub>n</sub> (50 / 60Hz or =)		
Catalog number		(1)	(1)	(1)
Coil supply voltage on DC	6 VDC	RSB2A080RD	RSB1A120RD	RSB1A160RD
	12 VDC	RSB2A080JD	RSB1A120JD	RSB1A160JD
	24 VDC	RSB2A080BD	RSB1A120BD	RSB1A160BD
	48 VDC	RSB2A080ED	RSB1A120ED	RSB1A160ED
	60 VDC	RSB2A080ND	RSB1A120ND	RSB1A160ND
	110 VDC	RSB2A080FD	RSB1A120FD	RSB1A160FD
Coil supply voltage on AC	24 VAC	RSB2A080B7	RSB1A120B7	RSB1A160B7
	48 VAC	RSB2A080E7	RSB1A120E7	RSB1A160E7
	120 VAC	RSB2A080F7	RSB1A120F7	RSB1A160F7
	220 VAC	RSB2A080M7	RSB1A120M7	RSB1A160M7
	230 VAC	RSB2A080P7	RSB1A120P7	RSB1A160P7
	240 VAC	RSB2A080U7	RSB1A120U7	RSB1A160U7

## Sockets for relays

Type of socket		For interface relays RSB		
<b>Mixed input/output type sockets with location for protection module</b>				
		–	–	–
		–	–	–
<b>Separate input/output type sockets with location for protection module</b>				
		RSZE1S48M	RSZE1S35M	RSZE1S48M (2)
<b>Protection modules</b>				
Diode	6–230 VDC	RZM040W		
RC circuit	24–60 VAC	RZM041BN7		
	110–240 VAC	RZM041FU7		
Varistor	6–24 VAC/DC	RZM021RB (3)		
	24–60 VAC/DC	RZM021BN (3)		
	110–230 VAC/DC	RZM021FP (3)		
	24 VAC/DC	–		
	240 VAC/DC	–		
Multifunction timer module	24–230 VAC/DC	–		
<b>Accessories</b>				
Plastic maintaining clamp		RSZR215		
Metal maintaining clamp		–		
Label for socket		RSZL300		
Bus jumper	2 poles	–		
DIN rail adapter		–		
Panel mounting adapter		–		

(1) Catalog numbers for relays without socket, for relays with socket, add the letter **S** to the end of the selected catalog number. (Example: RSB2A080B7 becomes RSB2A080B7S).

(2) To use RSB1A160pp relay with socket, terminals must be interconnected.

(3) With LED.

For additional information, reference catalog 8501CT0601.

## Miniature relays



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Type of relay		Miniature relays RXM			
<b>Contact characteristics</b>					
Thermal current I <sub>th</sub> in A (temperature ≤55°C)		12	10	6	3
Number of contacts		2 "C/O"	3 "C/O"	4 "C/O"	4 "C/O"
Contact material		AgNi	AgNi	AgNi	AgAu
Switching voltage, min. / max.		12 / 250 VAC/DC			
Switching capacity, min. / max. (mA / VA)		10 / 3000	10 / 2500	10 / 1500	2 / 1500
<b>Coil characteristics</b>					
Average consumption, inrush,		1.2 VA / 0.9 W			
Permissible voltage variation		0.8–1.1 U <sub>n</sub> (50 / 60Hz or =)			
Catalog number		(1)	(1)	(1)	(1)
Coil supply voltage on DC	6 VDC	–	–	–	–
	12 VDC	RXM2AB2JD	RXM3AB2JD	RXM4AB2JD	RXM4GB2JD
	24 VDC	RXM2AB2BD	RXM3AB2BD	RXM4AB2BD	RXM4GB2BD
	48 VDC	RXM2AB2ED	RXM3AB2ED	RXM4AB2ED	RXM4GB2ED
	60 VDC	–	–	–	–
	110 VDC	RXM2AB2FD	RXM3AB2ED	RXM4AB2ED	RXM4GB2ED
Coil supply voltage on AC	24 VAC	RXM2AB2B7	RXM3AB2B7	RXM4AB2B7	RXM4GB2B7
	48 VAC	RXM2AB2E7	RXM3AB2E7	RXM4AB2E7	RXM4GB2E7
	120 VAC	RXM2AB2F7	RXM3AB2F7	RXM4AB2F7	RXM4GB2F7
	220 VAC	–	–	–	–
	230 VAC	RXM2AB2P7	RXM3AB2P7	RXM4AB2P7	RXM4GB2P7
	240 VAC	–	–	–	RXM4GB2U7

## Sockets for relays

Type of socket		For miniature relays RXM			
<b>Mixed input/output type sockets with location for protection module</b>					
		RXZE2M114 (2)	–	RXZE2M114	RXZE2M114
		RXZE2M114M (2)	–	RXZE2M114M	RXZE2M114M
<b>Separate input/output type sockets with location for protection module</b>					
		RXZE2S108M	RXZE2S111M	RXZE2S114M	RXZE2S114M
<b>Protection modules</b>					
Diode	6–230 VDC	RXM040W			
RC circuit	24–60 VAC	RXM041BN7			
	110–240 VAC	RXM041FU7			
Varistor	6–24 VAC/DC	RXM021RB			
	24–60 VAC/DC	RXM021BN			
	110–230 VAC/DC	RXM021FP			
	24 VAC/DC	–			
	240 VAC/DC	–			
Multifunction timer module	24–230 VAC/DC	–			
<b>Accessories</b>					
Plastic maintaining clamp		RXZR335			
Metal maintaining clamp		RXZ400			
Label for socket		RXZL420 (except RXZE2M114)			
Bus jumper	2 poles	RXZS2			
DIN rail adapter		RXZE2DA			
Panel mounting adapter		RXZE2FA			

(1) Catalog numbers for relays with LED, for relays without LED, replace the number 2 in the catalog number by 1. (Example: RXM2AB2JD becomes RXM2AB1JD).

(2) Thermal current I<sub>th</sub>: 10 A.

For additional information, reference catalog 8501CT0601.

For other versions, please consult with your local Schneider Electric/





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Type of relay		Universal relays RUM				
<b>Contact characteristics</b>		Cylindrics			Faston	
Thermal current I <sub>th</sub> in A (temperature ≤55°C)		10	10	3	10	10
Number of contacts		2 "C/O"	3 "C/O"	3 "C/O"	2 "C/O"	3 "C/O"
Contact material		AgNi	AgNi	AgAu	AgNi	AgNi
Switching voltage, min. / max.		12 / 250 VAC/DC				
Switching capacity, min. / max. (mA / VA)		10 / 2500	10 / 2500	3 / 750	10 / 2500	10 / 2500
<b>Coil characteristics</b>						
Average consumption, inrush,		2–3 VA / 1.4 W				
Permissible voltage variation		0.8–1.1 U <sub>n</sub> (50 / 60Hz or =)				
<b>Catalog number</b>						
Coil supply voltage on DC	6 VDC	–	–	–	–	–
	12 VDC	RUMC2AB2JD	RUMC3AB2JD	–	RUMF2AB2JD	RUMF3AB2JD
	24 VDC	RUMC2AB2BD	RUMC3AB2BD	RUMC3GB2BD	RUMF2AB2BD	RUMF3AB2BD
	48 VDC	RUMC2AB2ED	RUMC3AB2ED	RUMC3GB2ED	RUMF2AB2ED	RUMF3AB2ED
	60 VDC	–	–	–	–	–
Coil supply voltage on AC	110 VDC	RUMC2AB2FD	RUMC3AB2FD	–	RUMF2AB2FD	RUMF3AB2FD
	24 VAC	RUMC2AB2B7	RUMC3AB2B7	RUMC3GB2B7	RUMF2AB2B7	RUMF3AB2B7
	48 VAC	RUMC2AB2E7	RUMC3AB2E7	RUMC3GB2E7	RUMF2AB2E7	RUMF3AB2E7
	120 VAC	RUMC2AB2F7	RUMC3AB2F7	RUMC3GB2F7	RUMF2AB2F7	RUMF3AB2F7
	220 VAC	–	–	–	–	–
	230 VAC	RUMC2AB2P7	RUMC3AB2P7	RUMC3GB2P7	RUMF2AB2P7	RUMF3AB2P7
240 VAC	–	–	–	–	–	

## Sockets for relays

Type of socket		For universal relays RUM				
<b>Mixed input/output type sockets with location for protection module</b>		RUZH2M	RUZH3M	RUZH3M	–	–
		–	–	–	–	–
<b>Separate input/output type sockets with location for protection module</b>		RUZH2M	RUZH3M	RUZH3M	RUZH3M	RUZH3M
<b>Protection modules</b>						
Diode	6–230 VDC	RUW240BD				
RC circuit	24–60 VAC	–				
	110–240 VAC	RUW241P7				
Varistor	6–24 VAC/DC	–				
	24–60 VAC/DC	–				
	110–230 VAC/DC	–				
	24 VAC/DC	RUW242B7				
	240 VAC/DC	RUW242P7				
Multifunction timer module	24–230 VAC/DC	RUW101MW				
<b>Accessories</b>						
Plastic maintaining clamp		–				
Metal maintaining clamp		RUZH200				
Label for socket		RUZH420				
Bus jumper	2 poles	RUZH2				
DIN rail adapter		–				
Panel mounting adapter		–				

## Power relays



Type of relay		Power relays RPM				RPF	
<b>Contact characteristics</b>							
Thermal current I <sub>th</sub> in A (temperature ≤55°C)		15	15	15	15	30	30
Number of contacts		1 "C/O"	2 "C/O"	3 "C/O"	4 "C/O"	2 "N.O."	2 "C/O"
Contact material		AgNi	AgNi	AgNi	AgNi	AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Switching voltage, min. / max.		12 / 250 VAC/DC				12 / 250 VAC/DC	
Switching capacity, min. / max. (mA / VA)		100 / 3750	100 / 3750	100 / 3750	100 / 3750	100 / 7200	100 / 7200
<b>Coil characteristics</b>							
Average consumption, inrush,		0.9 VA / 0.7 W	1.2 VA / 0.9 W	1.5 VA / 1.7 W	1.5 VA / 2 W	4 VA / 1.7 W	
Permissible voltage variation							
Catalog number		(1)	(1)	(1)	(1)	–	–
Coil supply voltage on DC	6 VDC	–	–	–	–	–	–
	12 VDC	RPM12JD	RPM22JD	RPM32JD	RPM42JD	RPF2AJD	RPF2BJD
	24 VDC	RPM12BD	RPM22BD	RPM32BD	RPM42BD	RPF2ABD	RPF2BBD
	48 VDC	RPM12ED	RPM22ED	RPM32ED	RPM42ED	–	–
	60 VDC	–	–	–	–	–	–
Coil supply voltage on AC	110 VDC	RPM12FD	RPM22FD	RPM32FD	RPM42FD	RPF2AFD	RPF2BFD
	24 VAC	RPM12B7	RPM22B7	RPM32B7	RPM42B7	RPF2AB7	RPF2BB7
	48 VAC	RPM12E7	RPM22E7	RPM32E7	RPM42E7	–	–
	120 VAC	RPM12F7	RPM22F7	RPM32F7	RPM42F7	RPF2AF7	RPF2BF7
	220 VAC	–	–	–	–	–	–
230 VAC	RPM12P7	RPM22P7	RPM32P7	RPM42P7	RPF2AP7	RPF2BP7	
240 VAC	–	–	–	–	–	–	

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## Sockets for relays

Type of socket		For power relays RPM				For power relays RPF
<b>Mixed input/output type sockets with location for protection module</b>						
		RPZF1	RPZF2	RPZF3	RPZF4	–
		–	–	–	–	–
<b>Separate input/output type sockets with location for protection module</b>						
		–	–	–	–	–
<b>Protection modules</b>		1 and 2 poles		3 and 4 poles		
Diode	6–230 VDC	RXM040W		RUW240BD		
RC circuit	24–60 VAC	RXM041BN7		–		
	110–240 VAC	RXM041FU7		RUW241P7		
Varistor	6–24 VAC/DC	RXM021RB		–		
	24–60 VAC/DC	RXM021BN		–		
	110–230 VAC/DC	RXM021FP		–		
	24 VAC/DC	RUW242B7		–		
	240 VAC/DC	–		RUW242P7		
Multifunction timer module	24–230 VAC/DC	–		RUW101MW		
<b>Accessories</b>						
Plastic maintaining clamp		–				–
Metal maintaining clamp		RPZF1 (for 1 pole relays)				–
Label for socket		–				–
Bus jumper		2 poles				–
DIN rail adapter		RPZ1DA	RXZE2DA	RPZ3DA	RPZ4DA	–
Panel mounting adapter		RPZ1FA	RXZE2FA	RPZ3FA	RPZ4FA	–

(1) Catalog numbers for relays with LED, for relays without LED, replace the number 2 in the catalog number by 1. (Example: RPM1 2B7 becomes RPM1 1B7).  
 (2) With LED.

For additional information, reference catalog 8501CT0601.

For other versions, please consult with your local Schneider Electric/



## General purpose relays Plug-in relays



3	Plug-in relays		Tube type termination		Spade type termination	
	Resistive rating (@ 120 VAC)		10 A	10 A	15 A	15 A
Number of Form C contacts		2	3	2	3	
Contact material		Silver Nickel	Silver Nickel	Silver Cadmium Oxide	Silver Cadmium Oxide	
Average consumption, inrush		VAC coils	3.6 VA	3.6 VA	3.6 VA	
		VDC coils	1.5 W	1.5 W	1.5 W	
Voltage range		VAC coils	+10 to -15%	+10 to -15%	+10 to -15%	
		VDC coils	+10 to -25%	+10 to -25%	+10 to -25%	
Catalog number		24 VAC	<b>8501KP12V14</b>	<b>8501KP13V14</b>	<b>8501KU12V14</b>	<b>8501KU13V14</b>
		120 VAC	<b>8501KP12V20</b>	<b>8501KP13V20</b>	<b>8501KU12V20</b>	<b>8501KU13V20</b>
		240 VAC	<b>8501KP12V24</b>	<b>8501KP13V24</b>	<b>8501KU12V24</b>	<b>8501KU13V24</b>
		12 VDC	<b>8501KPD12V51</b>	<b>8501KPD13V51</b>	<b>8501KUD12V51</b>	<b>8501KUD13V51</b>
		24 VDC	<b>8501KPD12V53</b>	<b>8501KPD13V53</b>	<b>8501KUD12V53</b>	<b>8501KUD13V53</b>
		110 VDC	<b>8501KPD12V60</b>	<b>8501KPD13V60</b>	<b>8501KUD12V60</b>	<b>8501KUD13V60</b>
		Relay socket	<b>8501NR51</b>	<b>8501NR61</b>	<b>8501NR82</b>	<b>8501NR82</b>
		Hold down clip	<b>8501NH51</b>	<b>8501NH61</b>	<b>8501NH82</b>	<b>8501NH82</b>

## Miniature plug-in relays



Miniature plug-in relays		Spade type termination				
Resistive rating (@ 120 VAC)		15 A	10 A	10 A	10 A	
Number of Form C contacts		1	2	3	4	
Contact material		Silver Cadmium Oxide	Silver Cadmium Oxide	Silver Cadmium Oxide	Silver Cadmium Oxide	
Average consumption, inrush		VAC coils	1.52 VA	2.2 VA	2.9 VA	
		VDC coils	0.7 W	0.9 W	1.0 W	
Voltage range		VAC coils	+10 to -15%	+10 to -15%	+10 to -15%	
		VDC coils	+10 to -20%	+10 to -20%	+10 to -20%	
Catalog number		24 VAC	<b>8501RS41V14</b>	<b>8501RS42V14</b>	<b>8501RS43V14</b>	<b>8501RS44V14</b>
		120 VAC	<b>8501RS41V20</b>	<b>8501RS42V20</b>	<b>8501RS43V20</b>	<b>8501RS44V20</b>
		12 VDC	<b>8501RSD41V51</b>	<b>8501RSD42V51</b>	<b>8501RSD43V51</b>	<b>8501RSD44V51</b>
		24 VDC	<b>8501RSD41V53</b>	<b>8501RSD42V53</b>	<b>8501RSD43V53</b>	<b>8501RSD44V53</b>
		Relay socket	<b>8501NR41</b>	<b>8501NR42</b>	<b>8501NR43</b>	<b>8501NR34</b>
		Hold down clip	–	<b>8501NH42</b>	<b>8501NH42</b>	<b>8501NH42</b>

For additional information, reference catalog 8501CT0601.

## Miniature plug-in relays



Miniature plug-in relays		Spade type termination		
Resistive Rating (@ 120 VAC)		1 A	3 A	5 A
Number of Form C contacts		4	4	4
Contact material		Bifurcated Fine Silver Gold Flashed	Fine Silver Gold Flashed	Silver Cadmium Oxide
Average consumption, inrush	VAC coils	1.2 VA	1.2 VA	1.2 VA
	VDC coils	0.9 W	0.9 W	0.9 W
Voltage range	VAC coils	+10 to -15%	+10 to -15%	+10 to -15%
	VDC coils	+10 to -20%	+10 to -20%	+10 to -20%
Catalog number	24 VAC	8501RS24V14	8501RS4V14	8501RS14V14
	120 VAC	8501RS24V20	8501RS4V20	8501RS14V20
	12 VDC	8501RSD24V51	8501RSD4V51	8501RSD14V51
	24 VDC	8501RSD24V53	8501RSD4V53	8501RSD14V53
	Relay socket	8501NR45	8501NR45	8501NR45
	Hold down clip	8501NH45	8501NH45	8501NH45

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## Power relays



Power relays		VAC rated contacts				
Resistive rating (@ 300 VAC)		30 A	30 A	30 A	30 A	30 A
Resistive rating (@ 600 VAC)		10 A	5 A	10 A	5 A	5 A
Single phase horsepower rating		2	1.5	2	1.5	1.5
Contact arrangement		1 N.O.	2 N.O.	1 N.C.	1 N.C. & 1 N.O.	2 N.C. & 2 N.O.
Contact material		Silver Cadmium Oxide				
Average consumption, inrush	VAC coils	10 VA	10 VA	10 VA	10 VA	10 VA
	VDC coils	2 W	2 W	2 W	2 W	2 W
Voltage range	VAC coils	+10 to -15%	+10 to -15%	+10 to -15%	+10 to -15%	+10 to -15%
	VDC coils	+10 to -20%	+10 to -20%	+10 to -20%	+10 to -20%	+10 to -20%
Catalog number	24 VAC	8501CO6V14	8501CO7V14	8501CO8V14	8501CO15V14	8501CO16V14
	120 VAC	8501CO6V20	8501CO7V20	8501CO8V20	8501CO15V20	8501CO16V20
	208 VAC	8501CO6V08	8501CO7V08	8501CO8V08	8501CO15V08	8501CO16V08
	240 VAC	8501CO6V24	8501CO7V24	8501CO8V24	8501CO15V24	8501CO16V24
	277 VAC	8501CO6V04	8501CO7V04	8501CO8V04	8501CO15V04	8501CO16V04
	480 VAC	8501CO6V29	8501CO7V29	8501CO8V29	8501CO15V29	8501CO16V29
	24 VDC	8501CDO6V53	8501CDO7V53	8501CDO8V53	8501CDO15V53	8501CDO16V53

For additional information, reference catalog 8501CT0601.

For other versions, please consult with your local Schneider Electric/





## Analog Interface Universal Thermocouple



3	Type	Thermocouple				
	Temperature range	0 to 150 °C 32 to 302 °F	0 to 300 °C 32 to 572 °F	0 to 600 °C 32 to 1112 °F	0 to 600 °C 32 to 1112 °F	0 to 1200 °C 32 to 2192 °F
Output range	0–10 V / 0–20 mA - 4–20 mA Switchable					
Dimensions H x W x D	80 x 22.5 x 80 mm					
Voltage	24 VDC - Non isolated					
Catalog number	RMTJ40BD	RMTJ60BD	RMTJ80BD	RMTK80BD	RMTK90BD	

## Universal PT 100



Type	PT 100				
Temperature range	-40 to 40 °C -40 to 104 °F	-100 to 100 °C -148 to 212 °F	0 to 100 °C 32 to 212 °F	0 to 250 °C 32 to 482 °F	0 to -500 °C 32 to 932 °F
Output range	0–10 V / 0–20 mA - 4–20 mA Switchable				
Dimensions H x W x D	80 x 22.5 x 80 mm				
Voltage	24 VDC - Non isolated				
Catalog number	RMPT10BD	RMPT20BD	RMPT30BD	RMPT50BD	RMPT70BD

For additional information, reference catalog 8501CT0601.

## Optimum PT 100



Type	PT 100				
Temperature range	-40 to 40 °C -40 to 104 °F	-100 to 100 °C -148 to 212 °F	0 to 100 °C 32 to 212 °F	0 to 250 °C 32 to 482 °F	0 to 500 °C 32 to 932 °F
Output range	0–10 V				
Dimensions H x W x D	80 x 22.5 x 80 mm				
Voltage	24 VDC - Non isolated				
Catalog number	RMPT13BD	RMPT23BD	RMPT33BD	RMPT53BD	RMPT73BD

3

## Universal Analog Converter



Type	Analog Converter			
Input range	0–10 V or 4–20 mA	0–10 V / -10→+10 V 0–20 mA 4–20 mA	0–50 V / 0–300 V 0–500 V	0–1,5 A / 0–5 A 0–15 A
Output range	0–10 V or 4–20 mA	0–10 V / -10→+10 V 0–20 mA 4–20 mA Switchable	0–10 V 0–20 mA 4–20 mA Switchable	0–10 V or 0–20 mA or 4–20 mA
Dimensions H x W x D	80 x 22.5 x 80 mm			80 x 45 x 80 mm
Voltage	24 VDC - Non isolated	24 VDC - Isolated	24 VDC - Non isolated	24 VDC - Non isolated
Catalog number	RMCN22BD	RMCL55BD	RMCV60BD	RMCA61BD

For additional information, reference catalog 8501CT0601.

For other versions, please consult with your local Schneider Electric/





3	Function	Rotational direction and presence of phases				
			+ Under voltage	+ Over and undervoltage	+ Asymmetry	
	Adjustable time delay	without	without	0.1–10 s	0.1–10 s	0.1–10 s
	Supply voltage	220–440V	380–440V	400V	380–440V	380–440V
	Output	2 C/O	2 C/O	2 C/O	2 C/O	2 C/O
	Catalog number	RM4TG20	RM4TU02	RM4TR34 (1)	RM4TR32 (2)	RM4TA32

(1) Relay with fixed voltage thresholds.

(2) Relay with adjustable voltage thresholds.

## Current and voltage measurement relays

(3) Basic catalog number. To be completed with the letters indicating the required voltage, as shown below:

Voltage	VAC, 50/60 Hz	VDC
24–240 V	MW	MW
110–130 V	F	–
220–240 V	M	–
380–415 V	Q	–



Function	Detection of over and under current			over and undervoltage		
	Measuring range	3–30 mA 10–100 mA 0.1–1 A	0.3–1.5 A 1–5 A 3–15 A	0.05–0.5 V 0.3–3 V 0.5–5 V	1–10 V 5–50 V 10–100 V	30–300 V 50–500 V
Adjustable time delay	0.05–30 s	0.05–30 s	0.05–30 s	0.05–30 s	0.05–30 s	0.1–10 s
Output	2 C/O	2 C/O	2 C/O	2 C/O	2 C/O	2 C/O
Catalog number	RM4JA31.. (3)	RM4JA32.. (3)	RM4UA31.. (3)	RM4UA32.. (3)	RM4UA33.. (3)	RM4UB35

(4) Basic catalog number. To be completed with the letters indicating the required voltage, as shown below:

Voltage	RM4-LG01	RM4-LA32	
	VAC, 50/60 Hz	VAC, 50/60 Hz	VDC
24 V	B	B	–
24–240 V	–	MW	MW
110–130 V	F	F	–
220–240 V	M	M	–
380–415 V	Q	Q	–



Control relays	Empty or fill	
Sensitivity scale	5–100 kΩ	0.25–5 kΩ 2.5–50 kΩ 25–500 kΩ
Time delay	without	adjustable, 0.1 to 10 s
Output	1 C/O	2 C/O
Catalog number	RM4LG01.. (4)	RM4LA32.. (4)

Liquid level control probe type	Measuring electrode and reference electrode	1 simple stainless steel electrode in PVC protective casing
Mounting	suspended	suspended
Maximum operating temperature	100°C	100°C
Catalog number	LA9RM201	RM79696043

For additional information, reference catalog 8430CT0001R6/02.

For other versions, please consult with your local Schneider Electric/

# Zelio Control

## Control relays for 3-phase supplies



Function	Phase reversal and presence of phases					
		+ Under voltage		+ Imbalance		
Adjustable time delay	Fixed 0.3s	0.2–10s	Fixed 0.2s	Fixed 0.2s	0.1–10s	0.1–10 s
Supply voltage	230–440 V	380–550 V	230 V	230 V	185–275 V	320–480 V
Output	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.
Catalog number	RM84873004	RM84873015	RM84873511(1)	RM84873501 (2)	RM84873310	RM84873311

3



Function	Phase reversal, phase loss, phase imbalance, and undervoltage				
Mounting Type	Plug-in	Plug-in	Panel Mount	Panel Mount	
Undervoltage setting	180–240 V	360–480 V	180–240 V	360–480 V	
Supply voltage	240 V 60 Hz	480 V 60 Hz	240 V 60 Hz	480 V 60 Hz	
Output	1 N.C. / 1 N.O.	1 N.C. / 1 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	
Catalog number	relay	8430MPSV24	8430MPSV29	8430MPDV24	8430MPDV29
	socket	8501NR51	8501NR82	–	–

For additional information on RM8, reference catalog 8430CT0001/R2/05.

For additional information on 8430, reference catalog 8430CT9701.

For other versions, please consult with your local Schneider Electric/





3	Display	LCD			
	Supply voltage	Internal battery			
	Number of digits displayed	8			
	Counting frequency	40 Hz or 7.5 Hz	40 Hz or 7.5 Hz	14 or 100 Hz	15 Hz
	Input	Voltage	Voltage	Solid state	Voltage
	Front face dimensions, W x H	48 x 24 mm	48 x 24 mm	48 x 24 mm	48 x 24 mm
	Catalog number	RC87610050	RC87610340	RC87610240	RC87610250

## Hour counters



Display	LCD	
Supply voltage	Internal battery	
Number of digits / display	6	
Supply frequency	-	
Input	Voltage	Voltage
Front face dimensions, W x H	48 x 24 mm	48 x 24 mm
Catalog number	RC87610150	RC87610440

# Timing relays Modular timers



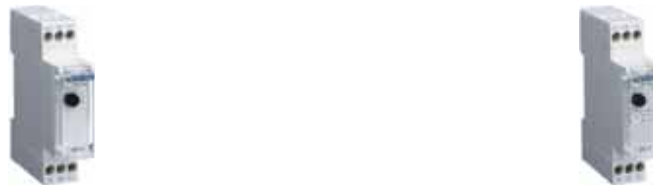
Type of modular timer width 17.5 mm, relay output	On-delay	Multifunction		
External control	no	–	–	–
Supply voltage	24 VDC - 24–240 VAC	24 VDC - 24–240 VAC	–	12–240VAC/DC
Timing range	0.1 s–100 h	0.1 s–100 h	0.1 s–10 h	0.1 s–100 h
Output	1 C/O	1 C/O	1 C/O	1 C/O
Catalog number	RE11RAMU	RE11RMMU (1)	RE11RMEMU (2)	RE11RMMW (1)

(1) Multifunction: 8 functions On-delay, Off-delay, repeat cycle, one shot.

(2) Multifunction: 9 functions On-delay, Off-delay, safe guard, impulse counter, impulse relay.



Type of modular timer width 17.5 mm, relay output	Asymmetrical repeat cycle	Off delay	One shot
External control	–	–	–
Supply voltage	24 VDC - 24–240 VAC	24 VDC - 24–240 VAC	24 VDC - 24–240 VAC
Timing range	0.1 s–100 h	0.1 s–100 h	0.1 s–100 h
Output	1 C/O	1 C/O	1 C/O
Catalog number	RE11RLMU	RE11RHMU	RE11RBMU



Type of modular timer width 17.5 mm, solid-state output	On-delay	Off-delay	Multifunction (3)
Supply voltage	24–240 VAC/DC	24–240 VAC	24–240 VAC
Timing range	0.1 s–100 h	0.1 s–100 h	0.1 s–100 h
Output	solid-state	solid-state	solid-state
Catalog number	RE11LAMW	RE11LCBM	RE11LMBM

(3) Multifunction: 8 functions On-delay, Off-delay, one shot, off-delay with control contract, repeat cycle timers, on-delay and off-delay, pulse on energization.



Panel-mounted relays	Timer on-delay	Asymmetrical flasher	Multifunction (4)	Multifunction (5)
Power supply	24–240 VAC/DC			
Time range	0.02 s–300 h			
Output	2 relay 5 A			
Catalog number	RE48ATM12MW	RE48ACV12MW	RE48AMH13MW (6)	RE48AML12MW (7)

(4) Timer on-delay / pulse on energization.

(5) Timer on-delay / calibrator / timer off-delay / symmetrical flasher.

(6) 1 selectable in instantaneous.

(7) Multi-function: 4 functions On-delay, one shot, Off-delay, repeat cycle.

For other versions, please consult with your local Schneider Electric/



## Industrial timers



3

Type of single function relay width 22.5 mm, relay output	On-delay		Off-delay		
	no	yes	no	yes	yes
External control	no	yes	no	yes	yes
Supply voltage	24VAC/DC 110–240 VAC	24VAC/DC 42–48 VAC/DC 110–240 VAC	24–240 VAC/DC	24 VAC/DC 42–48 VAC/DC 110–240 VAC	24 VAC/DC 42–48 VAC/DC 110–240 VAC
Timing range	0.05 s–300 h	0.05 s–300 h	0.05 s–10 mn	0.05 s–300 h	0.05 s–300 h
Output	1 C/O	2 C/O (1)	1 C/O	2 C/O (1)	1 C/O
Catalog number	RE7TL11BU	RE7TP13BU	RE7RB11MW	RE7RL13BU	RE7RM11BU

(1) 1 selectable in instantaneous mode.



Type of relay width 22.5 mm, relay output	Single function		Multifunction	
	Asymmetrical flashing	Pulse on energisation	6 functions (2)	8 functions (3)
External control	yes	no	–	–
Supply voltage	24VAC/DC 42–48 VAC/DC 110–240 VAC	24 VAC/DC 110–240 VAC	24 VAC/DC 42–48 VAC/DC 110–240 VAC	24 VAC/DC 110–240 VAC
Timing range	0.05 s–300 h	0.05 s–300 h	0.05 s–300 h	0.05 s–300 h
Output	1 C/O	1 C/O	1 C/O	2 C/O (4)
Catalog number	RE7CV11BU	RE7PE11BU	RE7ML11BU	RE7MY13BU

(2) RE7ML11BU functions: On-delay, Off-delay, Pulse on energization with start on energization, Pulse on energization with start on opening of remote control contact, Flashing with start during the OFF period, Flashing with start during the ON period.

(3) REMY13BU functions: On-delay, Off-delay, Pulse on energization with start on energization, Pulse on energization with start on opening of remote control contact, Flashing with start during the OFF period, Flashing with start during the ON period, Star-delta starting with double On-delay timing, Star-delta starting with contact for switching to star connection.

(4) 1 selectable in instantaneous mode.

## Miniature plug-in relays, relay output



Functions			
Timing ranges	7 switchable ranges	0.1 s–1 s - 1 s–10 s - 0.1 min–1 min - 1 min–10 min - 0.1 h–1 h - 1 h–10 h - 10 h–100 h	
Relay output		4 timed C/O contacts	2 timed C/O contacts
Rated current		AC 3 A	AC 5 A
Voltages	24 VDC	RE XL4TMBD	RE XL2TMBD
	24 VAC 50/60 Hz	RE XL4TMB7	RE XL2TMB7
	120 VAC 50/60 Hz	RE XL4TMF7	RE XL2TMF7
	230 VAC 50/60 Hz	RE XL4TMP7	RE XL2TMP7

## Plug-in timers



Type of plug-in timer			On-Delay		Off-delay		Interval
<b>Supply Voltage</b>			24 VAC/DC	120 VAC/110 VDC	24 VAC/DC	120 VAC/110 VDC	120 VAC/110 VDC
<b>Relay Output</b>			2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.
<b>Resistive Contact Rating</b>			10 A	10 A	10 A	10 A	10 A
<b>Output Pins</b>			8	8	11	11	8
<b>Catalog Number</b>	Timing range	0.1–10 sec	9050JCK11V14	9050JCK11V20	9050JCK21V14	9050JCK21V20	9050JCK31V20
		0.3–30 sec	9050JCK12V14	9050JCK12V20	9050JCK22V14	9050JCK22V20	9050JCK32V20
		0.6–60 sec	9050JCK13V14	9050JCK13V20	9050JCK23V14	9050JCK23V20	9050JCK33V20
		1.2–120 sec	9050JCK14V14	9050JCK14V20	9050JCK24V14	9050JCK24V20	9050JCK34V20
	Relay socket			8501NR51	8501NR51	8501NR61	8501NR61

For additional information on 9050JCK, reference Catalog 9050CT9601R7/04.



Type of plug-in timer			One Shot	Repeat Cycle	On- Delay	Multifunction	
<b>Supply Voltage</b>			120 VAC/110 VDC	120 VAC/110 VDC	120 VAC	24 VAC	120 VAC
<b>Relay Output</b>			2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.
<b>Resistive Contact Rating</b>			10 A	10 A	10 A	10 A	10 A
<b>Output Pins</b>			11	8	8	11	11
<b>Catalog Number</b>	Timing range	0.1–10 sec	9050JCK41V20	9050JCK51V20	–	–	–
		0.3–30 sec	9050JCK42V20	9050JCK52V20	–	–	–
		0.6–60 sec	9050JCK43V20	9050JCK53V20	–	–	–
		1.2–120 sec	9050JCK44V20	9050JCK54V20	–	–	–
		0.05 s to 999 m	–	–	9050JCK60V20	9050JCK70V14	9050JCK70V20
Relay socket			8501NR51	8501NR51	8501NR51	8501NR61	8501NR61

For additional information on 9050JCK, reference Catalog 9050CT9601R7/04.



Type of plug-in timer			On-Delay	Off- Delay	Repeat Cycle	Multifunction
<b>Supply Voltage</b>			24 VDC/24–240VAC	24 VDC/24–240VAC	24 VDC/24–240VAC	24 VDC/24–240VAC
<b>Timing Range</b>			0.1 s to 100 h	0.1 s to 100 h	0.1 s to 100 h	0.1 s to 100 h
<b>Relay Output</b>			2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.	2 N.C. / 2 N.O.
<b>Resistive Contact Rating</b>			8 A	8 A	8 A	8 A
<b>Output Pins</b>			8	11	11	11
<b>Catalog Number</b>			RE88867215	RE88867435	RE88867455	RE88867305
	Relay socket		8501NR51	8501NR61	8501NR61	8501NR61





3

Compact smart relays		With display, DC power supply					
Supply voltage		12VDC		24 VDC			
Number of inputs/outputs		12	20	10	12	20	20
Number of inputs	Discrete inputs	8	12	6	8	12	12
	including 0-10 V analog inputs	4	6	-	4	2	6
Number of outputs		4 relay	8 relay	4 relay	4	8 relay	8
Dimensions, W x D x H		71.2x59.5x107.6		124.6x59.5x107.6		71.2x59.5x107.6 mm	
Clock		yes	yes	no	yes	no	yes
Catalog number		SR2B121JD	SR2B201JD	SR2A101BD (1)	SR2B12pBD (2)	SR2A201BD (1)	SR2B20pBD (2)

(1) Programming on smart relay in LADDER language only.

(2) Replace the **p** by the number 1 to order a smart relay with **relay output** or by **2** for a smart relay with **transistor output** (Example: SR2B121BD).



Compact smart relays		With display, AC power supply					
Supply voltage		24 VAC		100–240 VAC			
Number of inputs/outputs		12	20	10	12	20	20
Number of inputs	Discrete inputs	8	12	6	8	12	12
	including 0-10 V analog inputs	4	6	-	4	2	6
Number of outputs		4 relay	8 relay	4 relay	4 relay	8 relay	8 relay
Dimensions, W x D x H		71.2x59.5x107.6		124.6x59.5x107.6		71.2 x 59.5 x 107.6mm	
Clock		yes	yes	no	yes	no	yes
Catalog number		SR2B121B	SR2B201B	SR2A101FU (1)	SR2B121FU	SR2A201FU (1)	SR2B201FU

(1) Programming on smart relay in LADDER language only.



Compact smart relays		Without display and without buttons, DC and AC power supply					
Supply voltage		24VDC			100–240 VAC		
Number of inputs/outputs		12	20	10	12	20	
Number of inputs	discrete inputs	6	8	12	6	8	12
	including 0-10 V analog inputs	-	4	6	-	-	-
Number of outputs		4 relay	4 relay	8 relay	4 relay	4 relay	8 relay
Dimensions, W x D x H		71.2x59.5x 107.6mm		124.6x59.5x107.6		71.2x59.5x 107.6 mm	
Clock		no	yes	yes	no	yes	yes
Catalog number		SR2D101BD (1)	SR2E121BD (2)	SR2E201BD (2)(3)	SR2D101FU (1)	SR2E121FU	SR2E201FU(3)

(1) Programming on smart relay in LADDER language only.

(2) To order a smart relay for a **24 VAC supply** (no analog inputs), delete the letter **D** from the end of the catalog number (**SR2E121B** and **SR2E201B**).

(3) To order a smart relay without a clock replace the letter **E** with the letter **D** (Example: SR2D201BD and SR2D201FU - these units can only be programmed in LADDER language).

## Modular, SR3



Modular smart relays*	With display, DC and AC power supply						
	12 VDC	24VDC		24 VAC		100–240VAC	
Supply voltage	12 VDC	24VDC		24 VAC		100–240VAC	
Number of inputs/outputs	26	10	26	10	26	10	26
Number of inputs	Discrete inputs	16	6	16	6	16	6
	including 0-10 V analog inputs	6	4	6	–	–	–
Number of outputs	10 relay	4	10	4 relay	10 relay	4 relay	10 relay
Dimensions, W x D x H	124.6x59.5x107.6	71.2x59.5x107.6	124.6x59.5x107.6	71.2x59.5x107.6	124.6x59.5x107.6	71.2x59.5x107.6	124.6x59.5x107.6
Clock	yes	yes	yes	yes	yes	yes	yes
Catalog number	SR3B261JD	SR3B10pBD (1)	SR3B26pBD (1)	SR3B101B	SR3B261B	SR3B101FU	SR3B261FU

\* The modular base can be fitted with one I/O extension module. The 24 VDC modular base can be fitted with one communication module and/or one I/O extension module.

(1) Replace the **p** by the number 1 to order a smart relay with **relay output** or by 2 for a smart relay with **transistor output** (Example: SR3B101BD).



Extension modules for Zelio Logic 2 SR3Bppppp (2)		Communication	Discrete Inputs/Outputs			Analog Inputs/Outputs
Application		MODBUS network	–	–	–	–
Number of inputs/outputs		–	6	10	14	4
Number of inputs	Discrete	–	4	6	8	–
	Analog (0–10 V, 0–20 mA, PT100)	–	–	–	–	2*
Number of outputs	Relay	–	2 relay	4 relay	6 relay	–
	Analog (0–10 V)	–	–	–	–	2
Dimensions, W x D x H		35.5x59.5x107.6	35.5x59.5x107.6	72x59.5x107.6	72x59.5x107.6	35.5x59.5x107.6
Catalog number	12 VDC	–	SR3XT61JD	SR3XT101JD	SR3XT141JD	–
	24 VAC	SR3MBU01BD	SR3XT61BD	SR3XT101BD	SR3XT141BD	SR3XT43BD
	24 VAC	–	SR3XT61B	SR3XT101B	SR3XT141B	–
	100–240 VAC	–	SR3XT61FU	SR3XT101FU	SR3XT141FU	–

\* max. 1 PT100 input

(2) The power supply of the extension modules is provided via the Zelio Logic 2 modular relays.

## Zelio Soft software and memory for SR2/SR3

Zelio Soft software and memory	Multilingual programming software	Connecting cables			Bac k-up memory	
Description	PCCD-ROM (Windows 98, NT, 2000, XP, ME) (3)	PC Serial to Relay	PC USB to SR2CBL01	PC USB to Relay	EEPROM (<V3.0 ZelioSoft)	EEPROM (≥ V3.0 ZelioSoft)
Catalog number	SR2SFT01	SR2CBL01	SR2CBL06	SR2USB01	SR2MEM01	SR2MEM02

(3) CD-ROM including Zelio Soft software, an application library, a self-training manual, installation instructions and a user's manual.

## Communication interface for SR2/SR3

Interface, Zelio Logic 2 Alarm software	Communication interface (4)	Alarm management software
Supply voltage	12–24 VDC	–
Description	–	PC CD-ROM (Windows 98, NT, 2000, XP)
Dimensions, W x D x H	72x59.5x107.6 mm	–
Catalog number	SR2COM01	SR2SFT02

(4) Modems to be supplied by user.



Type of base		Compact				
<b>Number of discrete I/O</b>		10	16	24	40	40
<b>Number of discrete inputs (24 VDC)</b>		6 sink/source (1)	9 sink/source (1)	14 sink/source (1)	24 sink/source (1)	24 sink/source (1)
<b>Number of discrete outputs</b>		4 relay 2 A	7 relay 2 A	10 relay 2 A	14 relay 2 A, 2 source transistor	
<b>Types of connection</b>		Non-removable screw terminals				
<b>Possible I/O extension modules</b>		–	–	4	7	7
<b>Counting (resolutions in bits)</b>		3 x 5 kHz (16 bit), 1 x 20 kHz (32 bit)			4x5 kHz (16 bit), 2x20 kHz (32 bit)	
<b>PWM position control</b>		–	–	–	2 x 7 kHz	2 x 7 kHz
<b>Serial ports</b>		1 x RS 485	1 x RS 485; as an option: 1 x RS 232C or RS 485			
<b>Protocol</b>		Modbus Master/slave, ASCII, remote RTU				and Ethernet
<b>Dimensions W x D x H</b>		80 x 70 x 90 mm	80 x 70 x 90 mm	95 x 70 x 90 mm	157 x 70 x 90 mm	157 x 70 x 90 mm
<b>Catalog number</b>	<b>Supply voltage 100–240 VAC</b>	<b>TWDLCAA10DRF</b>	<b>TWDLCAA16DR</b>	<b>TWDLCAA24DRF</b>	<b>TWDLCAA40DRF</b>	<b>TWDLCAE40DRF</b>
	<b>Supply voltage 19.2–30 VDC</b>	<b>TWDLCAA10DRF</b>	<b>TWDLCAA16DRF</b>	<b>TWDLCAA24DRF</b>	–	
	<b>Real-time clock (as an option)</b>	<b>TWDXCPRTC</b>				
	<b>Display unit (as an option)</b>	<b>TWDXCPODC</b>				

(1) Positive or negative logic.



<b>Number of discrete I/O</b>		20		40
<b>Number of discrete inputs (24 VDC)</b>		12 sink/source (2)		24 sink/source (2)
<b>Number of discrete outputs</b>		8 source transistor 0.3 A	6 relay and 2 source transistor 0.3 A	16 source transistor 0.3 A
<b>Types of connection</b>		HE 10 connector		Removable screw terminals
<b>Possible I/O extension modules</b>		4		7
<b>Supply voltage</b>		24 VDC		
<b>Integrated Counting</b>		2 x 5 kHz, 2 x 20 kHz		
<b>PLS/PWM position control</b>		2x7 kHz		
<b>Serial ports</b>		1 x RS 485; as an option: 1 x RS 232C or RS 485		
<b>Protocol</b>		Modbus Master/slave, ASCII, remote RTU		
<b>Dimensions W x D x H</b>		35.4 x 70 x 90 mm	47.5 x 70 x 90 mm	47.5 x 70 x 90 mm
<b>Catalog number</b>		<b>TWDLMDA20DTK (3)</b>	<b>TWDLMDA20DRT</b>	<b>TWDLMDA40DTK (3)</b>
	<b>Real-time clock (as an option)</b>	<b>TWDXCPRTC</b>		
	<b>Display unit (as an option)</b>	<b>TWDXCPODM</b>		
	<b>Memory extension (as an option)</b>	– <b>TWDXCPMF64</b>		

(2) Positive or negative logic.

(3) Also available in the following version: sink transistor outputs (TWDLMDA20DUK and TWDLMDA40DUK).

### Accessories

HE10 connectors	TWDLMDA20DTK/40DTK	TWDDI16DK/32DK	TWDDO16TK/32TK
TwidoFast™ "preformed" cable L = 3 m	TWDFCW30M	TWDFCW30K	TWDFCW30K
cable with bare wire on other end L = 5 m	TWDFCW50M	TWDFCW50K	TWDFCW50K
Telefast sub-bases L = 1 m	TWDFST20DR10	TWDFST16D10	TWDFST16DR10
1 passive, 1 relay, 1 "preformed" cable L = 2 m	TWDFST20DR20	TWDFST16D20	TWDFST16DR20

Description	Application update (32 Kb / 64 Kb)	with cable	with USB cable
Catalog number	TWDXCPMF32/TWDXCPMF64	TWDSPL1001V10M	TWDSPL1003V10M

I/O modules



Type of module		Analog					
Number of I/O		2 inputs	4 inputs	8 inputs	1 output	2 outputs	2 inputs/1 output
Connection		Removable screw terminals					
Inputs	Range	0–10 V (1) 4–20 mA (2)			–	0–10 V (1) 4–20 mA (2)	
	Resolution	12 bits (4096 points)			–	12 bits (4096 points)	
Outputs	Range	–	0–10 V 4–20 mA		± 10 V	0–10 V 4–20 mA	
	Resolution	–	12 bits(4096 points)		11 bits + sign (2048 points)	12 bits(4096 points)	
Measuring accuracy		±0.2 %					
Supply voltage		24 VDC					
Dimensions W x D x H		23.5 x 70 x 90 mm					
Catalog number		TWDAMI2HT	TWDAMI4LT	TWDAMI8HT	TWDAMO1HT	TWDAVO2HT	TWDAMM3HT   TWDALM3LT

(1) Non differential.  
(2) Differential.

3



Type of module		Discrete					AS-Interface Master
Number of discrete I/O		8	4 inputs/4 outputs	16	16	32	2 modules (4)
Logical input		Sink	Sink/Source				–
Connections		Removable screw terminals			HE 10 connectors		Removable screw terminals
Catalog number	Inputs 24 VDC	TWDDDI8DT	TWDDMM8DRT	TWDDDI16DT	TWDDDI16DK	TWDDDI32DK	–
	Inputs 120 V	TWDDAI8DT	–	–	–	–	–
	Relay outputs 2 A	TWDDRA8RT	TWDDMM8DRT	TWDDRA16RT	–	–	–
	Source transistor outputs 0.1 A	TWDDO8TT (3)	–	–	TWDDO16TK (3)	TWDDO32TK (3)	TWDDO10M3

(3) Also available in the following version: sink transistor outputs, (TWDDO8UT, TWDDO16UK and TWDDO32UK).  
(4) 2 modules max. 62 discrete slaves max. 7 analog slaves max. AS-Interface/M3, V 2.11 (S.7.4 profile not supported).

Communication modules



Type of module		CANopen Expansion	Serial interface module			Serial interface adaptor			Ethernet Interface
Physical layer (non isolated)		–	RS 232C	RS 485		RS 232C	RS 485		–
Connections		Screw terminals	Mini-DIN connector	Screw terminals		Mini-DIN connector	Screw terminals		RJ45
Protocol		–	Modbus Master/slave, ASCII, remote RTU						–
Compatibility with Twido base		Base 20, 24, or 40 I/O	Modular bases only: TWDLMDA			Compact base TWDLCAA16/24DRF Modular base via the integrated display module TWDXCPODM			All models
Catalog number		TWDCO1M	TWDCO232D	TWDCO485D	TWDCO485T	TWDCO232D	TWDCO485D	TWDCO485T	499TWD01100

For other versions, please consult with your local Schneider Electric/



## M340 platforms for Unity Pro software offer

3

Modicon M340, ideal for complex OEM machine control applications that require small size, powerful capabilities and highly integrated functionality.

- 3 built-in communications ports (Ethernet, Modbus, CANopen)
- High density 64 pt modules in standard widths
- Hot Swap modules ease maintenance
- Unity Software family development



<b>Number of Racks</b>	Maximum number of rack 4/6/8/12 slots Maximum number of free slots
<b>Inputs/Outputs</b>	<b>In-Rack IOs</b> Maximum number of in-rack Discrete inputs/outputs Maximum number of in-rack Analog inputs/outputs
	<b>Distributed IOs</b> Maximum number of distributed Discrete Inputs/outputs Maximum number of distributed Analog inputs/outputs
<b>Technology functions</b>	<b>In-Rack Application specific channels</b> Counting channels & Serial poty
	<b>Integrated software libraries</b> PLCopen Motion Library Process control library
<b>Communication</b>	<b>Embedded ports</b> Ethernet (100 Base-TX) - see page 4/54 for details CANopen Master (Dsub9, 63 Slaves) Modbus Master, Slave, RTU / ASCII (RJ45 19.2 Kbits/s RS485 / RS232) USB terminal port, Device connector 12 Mbits/s
	<b>Maximum numbers of networks (Ethernet)</b> Maximum nb of in-rack NOE ethernet TCP/IP module
<b>Memory capacity</b>	<b>CPU</b> Memory size - user application User data Program and symbols (Code, constants)
	<b>SD card</b> Application Backup Ready-to-Use System Diagnostic Web Server File storage (Standard SDcard / Optinal SDcard BMW RMS008MPF)
<b>Execution time</b>	<b>Execution time per instruction</b> Boolean One word or fixed-word arithmetic On floating points
	<b>Nb of Kinst per ms for typical applications</b> 100% Boolean 65% Boolean + 35% fixed arithmetic
<b>Multitasking operating system</b>	Master task Fast task Event task (I/O event task)

### Catalog number

Available 1<sup>st</sup> Quarter 2007

## Basic CPU

## Performance CPU



CPU 340-10,  
Modbus



CPU 340-20,  
Modbus,  
CANopen master



CPU 340-20,  
Modbus,  
Ethernet TCP/IP



CPU 340-20,  
Ethernet TCP/IP,  
CANopen master

1 (-> 2 at 4Q2007)

23

1 (-> 4 at 4Q2007)

47

512

128

1024

256

Limits related to the communication bus/network itself.

Limits related to the communication bus/network itself.

20

36

Motion Function Blocks Library  
CONT-CTL library

-

-

1

1

-

1

1

1

1

-

1

1

1

1

-

1

1

2 mb

128Kb

35Kinst

4 Mb

256Kb

70Kinst

16Mb program

2Mb User web pages

- / -

- / 8 Mb

0.28

0.5

3.5

0.14

0.25

1.75

3.7 Kins/ms

3.45 Kins/ms

7.4 Kins/ms

6.9 Kins/ms

1

1

32

84

**BMXP341000**

**BMXP342010**

**BMXP342020**

**BMXP342030**

Available 1<sup>st</sup> Quarter 2007

### Application

### Counter modules



3

<b>Number of channels</b>		2 channels	8 channels
<b>Frequency per channel</b>		60 KHz	10 KHz
<b>Module cycle time</b>			
<b>Counter/measurement input</b>	Counting pulses $\leq$ 24V	Yes	Yes
	Incremental encoder	10–30V with push-pull in outputs	10–30V with push-pull in outputs
	Absolute encoder		
<b>Reflex inputs/outputs</b>		6 inputs per channel (type 3) 2 transistors outputs 24 V per channel	2 inputs 24Vdc per channel
<b>Counting capacity</b>		32 bits per channel	16 bits per channel
<b>Functions</b>		4 counting modes, 4 measuring modes and PWM	5 counting modes, 1 measuring mode
<b>Processing</b>			
<b>Events</b>		8 sources	6 sources
<b>Connection</b>		2 x 16-point connectors for inputs 10-point connectors for sensors outputs	20-point connectors for inputs/outputs
<b>Type of Module</b>		<b>BMXEHC0200</b> High speed counter 2 Ch1	<b>BMXEHC0800</b> High Speed Counter 8 Ch

Available 1<sup>st</sup> Quarter 2007

## Application



(Available 2nd Quarter 2007)

(Available 2nd Quarter 2007)

(Available 2nd Quarter 2007)

Type	DC	DC	AC	DC/AC	DC	DC	DC
<b>Voltage</b>	24 VDC	48 VDC	120 VAC	24VDC or 24VAC	48 VAC	24 VDC	24 VDC
<b>Modularity (number of channels)</b>	16 isolated channels	16 isolated channels	16 isolated channels	16 isolated channels	16 isolated channels	32 isolated channels	64 isolated channels
<b>Connection</b>	<b>Terminal Block 20 points</b>						
	Number		1				
	Terminal block part number		3 types (1)				
	<b>FCN Type 40 points</b>						
Number					1		2
Compatibility with Telefast							Yes
<b>Inputs type</b>	IEC 1131 2 conformity	Type 3	Type 1	Type 3	Type 1	Type 3	Type 3
	Logic	Sink logic	Sink logic			Sink logic	Sink logic
	Sensor compatibility to IEC 947 5 2 standard	To be done					
<b>Type of discrete input and I/O modules</b>	<b>BMXDDI1602</b>	<b>BMXDDI1603</b>	<b>BMXDAI1604</b>	<b>BMXDAI1602</b>	<b>BMXDAI1603</b>	<b>BMXDDI3202K</b>	<b>BMXDDI6402K</b>

## Application



(Available 2nd Quarter 2007)

(Available 2nd Quarter 2007)

Type	DC Transistors	DC/AC Relays	DC/AC Isolated relays	AC Triacs	DC Transistors	DC Transistor	DC Transistor	
<b>Voltage</b>	24 VDC	24 VDC	24 VDC	24–240 VAC	24 VDC	24 VDC	24 VDC	
<b>Current</b>	0.5 Amp	3 Amp (lth)	4 Amp (lth)	1 Amp	0.5 Amp	0.1 Amp	0.1 Amp	
<b>Modularity (number of channels)</b>	16 Channels	16 Channels	8 Channels	16 Channels	16 Channels	32 Channels	64 Channels	
<b>Connection</b>	<b>Terminal Block 20 points</b>							
	Number		1					
	Terminal block part number		3 types (1)					
	<b>FCN Type 40 points</b>							
Number					1		2	
Compatibility with Telefast							Yes	
<b>Inputs type</b>	Fallback							
	IEC 1131 2 conformity							
	Protection	Diagnosis and protection channel by channel	No protection	No protection	No protection	Diagnosis and protection channel by group of 8 channels	Diagnosis and protection channel by channel	Diagnosis and protection channel by channel
	Logic	Source logic				Sink logic	Source logic	Source logic
<b>Type of discrete outputs and I/O modules</b>	<b>BMXDDO1602</b>	<b>BMXDRA1605</b>	<b>BMXDRA0805</b>	<b>BMXDAO1605</b>	<b>BMXDDO1612</b>	<b>BMXDDO3202K</b>	<b>BMXDDO6402K</b>	

(1) Cabling Accessory for Basic Micro Programmable Logic Controller

BMXFTB2000 Screw terminal strip (20 points), Standard

BNXFTB2010 Screw terminal strip (20 points), Circular adaptor

BMXFTB2020 Spring terminal strip (20 points)

Available 1<sup>st</sup> Quarter 2007

For other versions, please consult with your local Schneider Electric/



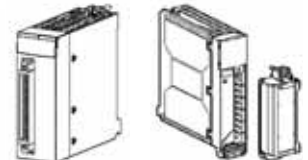
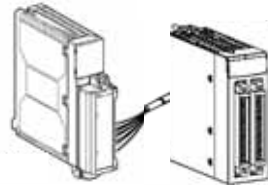


## Application

## Analog Inputs

## Analog Outputs

3



<b>Type of I/O</b>		High Level Fast isolated inputs between channels	Temperature isolated inputs between channels	Isolated Output between channel
<b>Type</b>		4 multi-range (U & I) channels	4 multi-range channels: Thermocouples and RTD (2, 3, 4 wires)	2 multi-range (U & I) channels:
<b>Range</b>	Voltage	+/- 10 V 0-10V 0-5 V 1-5 V	+/- 80 V -	+/- 10 V 0-20 mV
	Current	0-20 mA 4-20 mA		0-20 mA 4-20 mA
	Thermocouple temperature probes		Thermocouples and RTD (2, 3, 4 wires) - Thermocouple B, E, J, K, L, N, R, S, T, U - Temperature probes CEI Pt100/Pt1000, US/JIS Pt100/Pt1000 Cu10, Ni100/Ni1000 in 2, 3 or 4-wire temperature probes.	
<b>Modularity</b>		4 channels	4 channels	2 channels
<b>Isolation</b>		Between channels +/- 300 VDC Between bus and channels 2000 VDC Between channels and earth 2000 VDC	Between channels 750 VDC Between bus and channels 2000 VDC Between channels and earth 750 VDC	Between channels 1400 Vdc Between bus and channels 2000 VDC Between channels and earth 2000 VDC
<b>Read time</b>				
<b>Response time</b>		- 1 ms + 1 ms x nb of channels used - 5 ms ( All channels used)	400 ms/ 4 voies	< 1 ms
<b>Resolution</b>		16 bits	0.01 mV	16 bits
<b>Connection</b>		20 points terminal block, 3 types (1)	1 FCN type connectors (40 points) 25-way SUB-D connectors	20 points terminal block, 3 types (1)
		Telefast, 25-way SUB-D connectors ABE7CPA410	Telefast, 25-way SUB-D connectors ABE7CPA412	
<b>Type of module</b>		<b>BMXAMI0410</b>	<b>BMXART0414</b>	<b>BMXAMO0210</b>

(1) Cabling Accessory for BasicMicro Programmable Logic Controller

- BMXFTB2000 Screw terminal strip (20 points), Standard
- BMXFTB2010 Screw terminal strip (20 points), circular adaptor
- BMXFTB2020 Spring terminal strip (20 points)

Available 1<sup>st</sup> Quarter 2007

## Analog Outputs

## Analog Comb/O



Temperature inputs 8 multi-range channels: Thermocouples and RTD (2, 3, 4 wires)	Fast high level inputs, high level outputs 6 multi-range (U & I) channels: 4 input + 2 output
+/- 80 V	+/- 10 V input 0-10V input 0-5 V input 1-5 V input +/- 10 V output
-	0-20 mA input and output 4-20 mA input and output
Thermocouples and RTD (2, 3, 4 wires) - Thermocouple B, E, J, K, L, N, R, S, T, U - Temperature probes CEI Pt100/Pt1000, US/JIS Pt100/Pt1000 Cu10, Ni100/Ni1000 in 2, 3 or 4-wire temperature probes.	
8 channels Between channels 750 VDC Between bus and channels 2000 VDC Between channels and earth 750 VDC	8 channels Not isolated between inputs channel Not isolated between outputs channel Between channels 1400 VDC Between bus and channels 2000 VDC Between channels and earth 2000 VDC
800 ms/8 voies	5 ms (normal scan) 1 + 1 ms/channel used (fast scan) user-definable filtering 0 to 0.64 s
0.01 mV 1 FCN type connectors (40 points) 25-way SUB-D connectors	12 bits 20 points terminal block, 3 types (1)
Telefast, 25-way SUB-D connectors ABE7CPA412 <b>BMXART0814</b>	<b>BMXAMM0600</b>

Available 2<sup>nd</sup> Quarter 2007



3

Type of processor		TSX 3705	TSX 3708	TSX 3710
<b>Power supply</b>		110–240 VAC		24 VDC
<b>Number of slots</b>	Standard	2 (1 available)	3 (1 available)	2 (1 available)
	On extension	–	–	2
<b>Number of integrated discrete I/O modules</b>		1 (16 I, 12 Q)	2 (32 I, 24 Q)	1 (16 I, 12 Q)
<b>Number of integrated analog I/O channels</b>		–	–	–
<b>Type of integrated I/O</b>		I: 24 VDC, Q: relay	I: 24 VDC, Q: relay	I: 24 VDC, Q: sol.st. 0.5 A   I: 24 VDC, Q: relay
<b>Application-specific modules</b> (counter, position control)		2 half-size		2 half-size
<b>Bus</b>	AS-Interface cabling system	–		1 half-size
	CANopen machine bus	–		–
	Fipio fieldbus	–		–
<b>Networks</b>	Modbus Plus, Fipway	–		–
	Ethernet TCP/IP	–		1 external module
<b>Memory capacity</b>	Integrated	11 K words		14 K words
	With PCMCIA extension	–		–
<b>Execution time for one instruction</b>	Boolean	0.25 µs		0.25 µs
	Numerical	4.81 µs		4.81 µs
<b>Rack dimensions</b> W x D x H		170.3 x 132.5 x 151 mm	230 x 132.5 x 151 mm	170.3 x 132.5 x 151 mm
<b>Catalog number</b>	With screw terminals	<b>TSX3705028DR1</b>	<b>TSX3708056DR1</b>	<b>TSX3710128DT1</b>
	With HE 10 connector (1)	–	–	<b>TSX3710128DTK1</b>

(1) For use with Advantys Telefast ABE7 wiring system.

(2) Basic configuration provided without I/O modules.

## Memory extension



Type of PCMCIA card for TSX 3721/22	Application		
<b>Technology</b>	SRAM	Flash EPROM	Backup
<b>Memory size</b> (3)	32 K words	<b>TSXMRPP128K</b>	<b>TSXMFPP128K</b>
	32 K words/128 K words	<b>TSXMRPP348K</b>	<b>TSXMCPC224K</b>
	64 K words	<b>TSXMRPP224K</b>	<b>TSXMFPP224K</b>
	64 K words/128 K words	<b>TSXMRPP384K</b>	<b>TSXMCPC224K</b>
	128 K words	<b>TSXMRPC448K</b>	<b>TSXMFPP384K</b>
	128 K words/128 K words	<b>TSXMRPC768K</b>	–
			<b>TSXMFPB096K</b>

(3) The 1<sup>st</sup> value corresponds to the size of the application area, the second to the size of the area for data storage (recipes, production data, etc).

**Connection accessories:** See [www.us.telemecanique.com](http://www.us.telemecanique.com)



TSX 3710			TSX 3721		TSX 3722			
24 VDC	110–240 VAC		24 VDC	110–240 VAC		24 VDC	110–240 VAC	
2 (1 available)			3 (3 available)			3 (3 available)		
2			2			2		
2 (32 I, 32 Q)	1 (16 I, 12 Q)	1 (16 I, 12 Q)	–			–		
–	–	–	–			1 (8 I, 1 Q)		
I: 24 VDC, Q: sol. st. 0.1 A	I: 115 VAC, Q: relay		I: 24 VDC, Q: relay	–		I: 0–10 V or 0/4–20 mA, Q: 0...10 V		
2 half-size			4 half-size			4 half-size (2 integrated channels)		
1 half-size			1 half-size			1 half-size		
–			1 PCMCIA card			1 PCMCIA card		
–			1 PCMCIA card			1 PCMCIA card		
–			1 PCMCIA card			1 PCMCIA card		
1 external module			1 external module			1 external module		
14 K words			20 K words			20 K words		
–			128 K words + 128 K words for file storage			128 K words + 128 K words for file storage		
0.25 µs			0.13 µs (0.19 µs with PCMCIA)			0.13 µs (0.19 µs with PCMCIA)		
4.81 µs			4.50 µs			4.50 µs		
170.3 x 132.5 x 151 mm			230 x 132.5 x 151 mm					
–	TSX3710028AR1	TSX3710028DR1	TSX3721101 (2)	TSX3721001 (2)	TSX3722101 (2)	TSX3722001 (2)		
TSX3710164DTK1	–	–						

## Mini extension rack



Type of rack	2 slots (4 positions)
For use with	TSX3710/21/22
Rack dimensions W x D x H	112.5 x 132.5 x 151 mm
Catalog number	TSXRK22

Process power supplies see chapter 6 "Power supply."



3

Type of module		Discrete inputs			
Connection		By HE 10 connector (1)		By screw terminals supplied	
Module format		Half		Standard	Half
Number of channels		12		32	8
Input voltage	24 VDC positive logic	TSXDEZ12D2K	–	TSXDEZ32D2	–
	24 VDC positive/negative logic	–	TSXDEZ12D2	–	–
	100–120 VAC	–	–	–	TSXDEZ08A4
	200–240 VAC	–	–	–	TSXDEZ08A5

(1) For use with Advantys Telefast ABE7 wiring system.



Type of module		Discrete outputs				
		Solid state			Relay	
Connection		By HE 10 conn. (1)		By screw terms. supplied		
Module format		Half		Standard	Half	
Number of protected channels		8		32	4	8
Protection of outputs		Yes		Yes	Yes	No
Output voltage/current	24 VDC/0.5 A	TSXDSZ08T2K	TSXDSZ08T2	TSXDSZ32T2	–	–
	24 VDC/2 A	–	–	–	TSXDSZ04T22	–
	24 VDC/1 A per channel	–	–	–	–	TSXDSZ08R5
	24–240 VAC/1 A per channel	–	–	–	–	TSXDSZ32R5

(1) For use with Advantys Telefast ABE7 wiring system.



Type of module		Discrete I/O						
Connection		By HE 10 connector (1)			By screw terminals supplied			
Module format		Half		Standard				
Number of inputs		8	16	32	16	16	16	
Number of outputs		8 solid state	12 solid state	32 solid state	12 solid state	12 solid state	12 solid state	
Protection of outputs		Yes			No			
Voltage/current output	24 VDC/0.5 A	TSXDMZ16DTK	TSXDMZ28DTK	–	TSXDMZ28DT	–	–	
	24 VDC/0.1 A	–	–	TSXDMZ64DTK	–	–	–	
	100–120 VAC/50 VA	–	–	–	–	TSXDMZ28DR	TSXDMZ28AR	

(1) For use with Advantys Telefast ABE7 wiring system.

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)



Type of module		Ethernet TCP/IP network For TSX 3710/21/22 PLCs	
Speed		10/100 Mbps	10/100 Mbps
Standard services		TCP/IP(Uni-TE, Modbus)	TCP/IP(Uni-TE, Modbus)
Transparent Ready	Class	B20	C20
	I/O Scanning	Yes	Yes
Web server	Standard services	Yes	Yes
	FactoryCast services	-	Yes with 8 Mb of user Web pages and graphics editor
Catalog number		TSXETZ410	TSXETZ510

3



Type of module	AS-Interface cabling system	CANopen machine bus	Fipio fieldbus
Name and description	Half size in-rack	PCMCIA card	PCMCIA card
Speed	167 Kbps	20 Kbps-1 Mbps dep. on distance	1 Mbps
Catalog number	TSXSAZ10	TSXCPP110	TSXFPP10



Type of module		Serial links Uni-Telway, Modbus	
Name and description		Integrated port	Multiprotocol PCMCIA card
Speed		19.2 Kbps	1.2-19.2 Kbps
Catalog number	With interface	RS 485	TSXS37 (1)
		RS 232D	-
		20 mA CL	-
			TSXS37 (1)
			TSXS37 (1)
			TSXS37 (1)

(1) Catalog numbers: see pages 3/26 and 3/27, TSX3705/08/10 PLCs with link integrated on TER terminal port, or TSX3721/22 PLCs with link integrated on AUX terminal port.



Type of module	Networks	Fipway
Name and description	Modbus Plus	Fipway
Speed	1 Mbps	1 Mbps
Catalog number	TSXMBP100	TSXFPP20

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)



3

Type of processor		TSX 57C configuration 1 rack max.	TSX 5700 1 rack max.	TSX 5710 4 racks max.	TSX 5720 16 racks max.
Number of I/O in racks	Discrete	192	256	512	1024
	Analog	12	12	24	80
Integrated process control		No / Yes	No / Yes	No / Yes	30 loops / Yes
Application-specific channels (counter, position control, weighing)		4	4	8	24
Bus	AS-Interface cabling system	1	1	2	4
	CANopen machine bus	1 (integrated)	1 (integrated)	1	1
	INTERBUS, Profibus DP fieldbus	–	–	1	1
Networks (Ethernet, Modbus Plus, Fipway)		1	1	1	2 (6)
Memory capacity	Without PCMCIA extension	96 Kb data/prog	96 Kb data/prog	96 Kb data/prog.	160/192 Kb data/prog. (1)
	With PCMCIA extension	96 Kb data/128 Kb prog.	96 Kb data/128 Kb prog.	96 Kb data/224 Kb prog.	160/192 Kb data (1)/768 Kb prog.
Execution time for one instruction	Boolean	0.19 µs	0.19 µs	0.19 µs	0.19 µs
	On word or arithmetic	0.25 µs	0.25 µs	0.25 µs	0.25 µs
Catalog number	Without integrated port	–	–	<b>TSXP57104M</b>	<b>TSXP57204M</b>
	Integrated Ethernet	–	–	<b>TSXP571634M</b>	<b>TSXP572634M</b>
	Integrated CANopen	<b>TSXP570244M (2)</b>	<b>TSXP570244M</b>	–	–
	Integrated Fipio	–	–	<b>TSXP57154M</b>	<b>TSXP57254M</b>

(1) The second value corresponds to the integrated memory capacity when the processor is equipped with a Fipio manager integrated link.

(2) 24 VDC version : TSXP57CD0244M, 100–240 VAC version : TSXP57CA0244M.

(3) Processor with double format.

(4) PC format card on PCI bus.

## Processors under PL7 software



Type of processor		TSX 5710 4 racks max.	TSX 5720 16 racks max.
Number of I/O in racks	Discrete	512	1024
	Analog	24	80
Integrated process control		No	30 loops
Application-specific channels (counter, position control, weighing)		8	24
Bus	AS-Interface cabling system	2	4
	CANopen machine bus	1 (with TSXP57103M)	1
	INTERBUS, Profibus DP fieldbus	–	1
Networks (Ethernet, Modbus Plus, Fipway)		1	1
Memory capacity	Without PCMCIA extension	32 K words data/prog.	48 K words data/prog. (5)
	With PCMCIA extension	32 K words data/64 K words prog.	32 K words data (5)/160 K words prog.
Execution time for one instruction	Boolean	0.50 µs	0.19 µs
	On word or arithmetic	0.62 µs	0.25 µs
Catalog number	Without integrated port	<b>TSXP57103M</b>	<b>TSXP57203M</b>
	Integrated Ethernet	–	<b>TSXP572623M</b>
	Integrated Fipio	<b>TSXP57153M</b>	<b>TSXP57253M</b>
	Integrated Ethernet and Fipio	–	<b>TSXP572823M</b>

(5) The second value corresponds to the processor with integrated Fipio bus manager link.

## Processors under Unity Pro software

## Atrium slot-PLCs under Unity Pro software

# Modicon Premium



TSX 5730 16 racks max.	TSX 5740 16 racks max.	TSX 5750 16 racks max.	PCI 5720 16 racks max.	PCI 5730 16 racks max.
1024	2040	2040	1024	1024
128	256	512	80	128
45 loops / Yes	60 loops / Yes	90 loops / Yes	30 loops / Yes	45 loops / Yes
32	64	64	24	32
8	8	8	4	8
1	1	1	1	1
3	4	5	1	3
3	4	4	3 (6)	4
192/208 Kb data/prog. (1)	320 Kb data/prog.	640 Kb data/prog.	160 Kb data/prog. (1)	208 Kb data/prog. (1)
192/208 Kb data (1)/1,75 Mb prog.	440 Kb data/2 Mb prog.	896 Kb data/7 Mb prog.	160 Kb data/768 Kb prog.	208 Kb data (1)/1,75 Mb prog.
0.12 µs	0.06 µs	0.037 µs	0.19 µs	0.12 µs
0.17 µs	0.07 µs	0.045 µs	0.25 µs	0.17 µs
<b>TSXP57304M</b>	-	-	<b>TSXPCI57204M (4)</b>	-
<b>TSXP573634M</b>	<b>TSXP574634M</b>	<b>TSXP575634M</b>	-	-
-	-	-	-	-
<b>TSXP57354M</b>	<b>TSXP57454M</b>	<b>TSXP57554M</b>	-	<b>TSXPCI57354M (4)</b>

3



TSX 5730 16 racks max.	TSX 5740 16 racks max.
1024	2048
128	256
45 loops	60 loops
32	64
8	8
1	1
2	2
3	4
64/80 K words data/prog. (5)	96 K words data/prog.
80/96 K words data (5)/384 K words prog.	176 K words data/992 K words prog. (6)
0.12 µs	0.06 µs
0.17 µs	0.08 µs
<b>TSXP57303AM</b>	-
<b>TSXP573623AM</b>	-
<b>TSXP57353AM</b>	<b>TSXP57453AM</b>
-	<b>TSXP574823AM</b>

(6) with PL7 V4.4 min.





3

Type of PCMCIA card	Application		Additional data
<b>Technology</b>	SRAM	Flash EPROM only	SRAM
<b>Memory size</b>	96 Kb	–	TSMFPP096K (3)
	128 Kb	TSMRPP128K	TSMFPP128K
	224 Kb	TSMRPP224K / TSMCPC224K	TSMFPP224K
	384 Kb	TSMRPP384K	TSMFPP384K
	448 Kb	TSMRPC448K (1)	–
	512 kb	TSMCPC512K	–
	768 Kb	TSMRPC768K (1)	TSMFPP512K (512 Ko)
	1 Mb	TSMRPC001M (1)	TSMFPP001M
	1.7 Mb	TSMRPC01M7	–
	2 Mb	TSMRPC002M (1)	TSMCPC002M (2)
	3 Mb	TSMRPC003M (1)	–
	4 Mb	–	TSMFPP004M
	7 Mb	TSMRPC007M (1)	–
	8 Mb	–	TSMRPF008M

(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 PLC internal memory.

## Memory extensions for PL7 processors



Type of PCMCIA card	Application		Additional data
<b>Technology</b>	SRAM	Flash EPROM only	SRAM
<b>Memory size (4)</b>	32 K words	TSMRPP128K	TSMFPP128K
	64 K words	TSMRPP224K	TSMFPP224K
	64 K words/128 K words	TSMRPP384K	TSMCPC224K
	96 K words	–	TSMFPP096K
	128 K words	TSMRPC448K	TSMFPP384K
	128 K words/128 K words	TSMRPC768K (5)	–
	256 K words	TSMRPC001M	–
	256 K words/640 K words	TSMRPC01M7 (5)	–
	384 K words/640 K words	TSMRPC002M	–
	512 K words	TSMRPC003M (5)	–
	992 K words/640 K words	TSMRPC007M	–
	2048 K words	–	TSMRPF004M

(4) The 1<sup>st</sup> 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) with PV0.05

## Power supply modules (1)

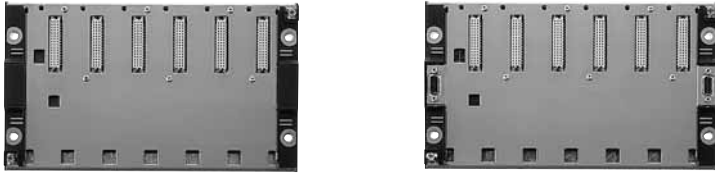


Type of power supply module for	Premium					Atrium (2)
Input voltage	24 VDC		100–240 VAC	100–120 / 200–240 VAC		24 VDC
Output voltage	5 VDC / 24 VDC					5 VDC
Total useful power	26 W	50 W	26 W	50 W	77 W	26 W
Format	Standard	Double	Standard	Double	Double	–
Catalog number	TSXPSY1610M	TSXPSY3610M	TSXPSY2600M	TSXPSY5500M	TSXPSY8500M	TSXPSI2010

(1) Process power supplies see chapter 6 “Power supply.”

(2) Only for Atrium slot-PLCs under Unity.

## Racks



Type of rack	Non extendable	Extendable
For configuration	Mono-rack	Multi-rack (16 max.)
Catalog number		
Dimensions W x D x P		
4 positions	188 x 160 x 151.5 mm (3)	–
6 positions	261.6 x 160 x 151.5 mm (3)	TSXRKY6
8 positions	335.3 x 160 x 151.5 mm (3)	TSXRKY8
12 positions	482.6 x 160 x 151.5 mm (3)	TSXRKY12
		TSXRKY4EX
		TSXRKY6EX
		TSXRKY8EX
		TSXRKY12EX

(3) Height of I/O modules : 151.5 mm with HE 10 or SUB-D connectors, 165 mm with screw terminals.

## Connection accessories

Type	Bus X daisy chaining cable for extendable racks	Line terminators
Catalog number	–	Set of 2
	–	TSXTLYEX
	L = 1 m	TSXCBY010K
	L = 3 m	TSXCBY030K
	L = 5 m	TSXCBY050K
	L = 12 m	TSXCBY120K
	L = 18 m	TSXCBY180K
	L = 28 m	TSXCBY280K
	L = 38 m	TSXCBY380K
	L = 50 m	TSXCBY500K
	L = 72 m	TSXCBY720K
	L = 100 m	TSXCBY1000K



3

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

- (1) Terminal block to be ordered separately.
- (2) For use with Advantys Telefast 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	
<b>Connection</b>		By screw terminals TSXBLY01 (1)		By HE 10 conn. (2)		By screw terminals TSXBLY01 (1)			
<b>Number of protected channels</b>		8	16	32	64	8	16	8	16
<b>Output voltage/current</b>	24 VDC/0.5 A	TSXDSY08T2	TSXDSY16T2	–	–	–	–	–	–
	24 VDC/2 A	TSXDSY08T2	–	–	–	–	–	–	–
	24 VDC/0.1 A	–	–	TSXDSY32T2K	TSXDSY64T2K	–	–	–	–
	48 VDC/1 A	TSXDSY08T3	–	–	–	–	–	–	–
	48 VDC/0.25 A	–	TSXDSY16T3	–	–	–	–	–	–
	24–48 VDC-24–240 VAC/5 A Th.c	–	–	–	–	TSXDSY08R5	–	–	–
	24–120 VAC/5 A Th.c	–	–	–	–	TSXDSY08R4D	–	–	–
	24–120 VAC/1 A	–	–	–	–	–	–	–	TSXDSY16S4
	48–240 VAC/1 A	–	–	–	–	–	–	–	TSXDSY16S5
	48–240 VA /2 A	–	–	–	–	–	–	–	TSXDSY08S5
	24 VDC-24–240 VAC/3A	–	–	–	–	TSXDSY08R5	TSXDSY16R5	–	–

- (1) Terminal block to be ordered separately.
- (2) For use with Advantys Telefast ABE7 wiring system.



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

- (2) For use with Advantys Telefast ABE7 wiring system.
- Connection accessories:** See [www.us.telemecanique.com](http://www.us.telemecanique.com)

## Analog I/O modules

# Modicon Premium



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 earth	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1780 Vrms
Catalog number	High level input (2)	<b>TSXAEY420</b>	<b>TSXAEY800</b>	<b>TSYAEY1600</b>	<b>TSXAEY810</b>	–	–
	Multi-range	–	–	–	–	<b>TSXAEY1614</b> (3)	<b>TSXAEY414</b> (4)

(1) Screw terminals **TSXBLY01** to be ordered separately.

(2) ± 10 V, 0–10 V, 0–5 V, 1–5 V, 0–20 mA, 4–20 mA.

(3) ± 63 mV thermocouple (B, E, J, K, L, N, R, S, T, U).

(4) ± 10 V, ± 5 V, 0–10 V, 0–5 V, 1–5 V, 0–20 mA, 4–20 mA, -13/+63 mV, 0–400 W, 0–3850 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 earth	~ 1500 Vrms	~ 1000 Vrms
Catalog number	Input signal (6)	<b>TSXASY410</b>	<b>TSXASY800</b>

(5) Terminal block to be ordered separately.

(6) ± 10 V, 0–10 V, 0–20 mA, 4–20 mA.

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)



3

Type of module	Counter		Counter/measurement	Electronic cam
Type of inputs for	Sensors (1) Incremental encoders (2)		Sensors (1) Encoders (2)(3)	Incremental encoders (2) Absolute encoders (4)
Counting	40 kHz		500 kHz/200 kHz (4)	
Cycle time module	5 ms	10 ms	1 ms	–
Number of channels	2		2	128 cams
Number of axes	–		–	1
Catalog number	TSXCTY2A	TSXCTY4A	TSXCTY2C	TSXCXY1128

(1) For 2/3-wire PNP/NPN 24 VDC sensors.

(2) For 5 VDC RS422, 10–30 VDC Totem Pole incremental encoders.

(3) For SSI serial or parallel output absolute encoders.

(4) For RS485 serial or parallel output absolute encoders.

## Motion control modules



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 05/17D, Twin Line				
Functions	Linear axes	–	Limited		Limited or infinite	Limited or infinite(5)	
	Slave axes	–	With static ratio		With dynamic ratio	–	
Frequency for each axis	187 kHz		500 kHz with incremental encoder, 200 kHz with absolute encoder (6)				
Number of axes	1	2	2	4	2	4	3
Catalog number	TSXCFY11	TSXCFY21	TSXCAY21	TSXCAY41	TSXCAY22	TSXCAY42	TSXCAY33

(5) With linear interpolation on 2 or 3 axes.

(6) 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 17D		
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 (7)	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 (8)	8 (8)	16 (9)
Catalog number	TSXCSY84	TSXCSY85	TSXCSY164

(7) TSXCSY85 module supplied with TJE trajectory editor: linear trajectories with links between segments according to polynomial or circular interpolation and circular trajectories.

(8) 8 real axes, 4 imaginary axes and 4 remote axes.

(9) 16 axes (real axes, imaginary and remote axes).

## Weighing modules



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	
Catalog number	Without display unit	TSXISPY101
	With display unit TSXXBTH100	TSXISPY111
	Please consult your Schneider Electric agency	

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)



Type of module		Ethernet TCP/IP				
Speed		10 Mbps	10/100 Mbps			
Standard services		Ethway, TCP/IP (Uni-TE, Modbus)	TCP/IP (Uni-TE, Modbus)			
Transparent Ready	Class	C10	B30	B30	C30	D10
	Global Data	–	Yes	Yes	Yes	–
	I/O Scanning	–	Yes	Yes	Yes	–
	TCP Open	Yes	–	–	Yes	–
Web server	Standard services	Yes	Yes	Yes	Yes	Yes
	FactoryCast services	Yes	–	–	Yes	–
	FactoryCast HMI services	–	–	–	–	Yes
Catalog number		TSXETY110WS	TSXP57 (1)	TSXETY4103	TSXETY5103	TSXWMY100

(1) Catalog numbers: see pages 3/30 and 3/31, Premium processors with integrated Ethernet TCP/IP port.



Type of module	AS-Interface cabling system	CANopen machine bus	Fipio manager fieldbus	INTERBUS fieldbus	Profibus DP fieldbus
Name and description	In-rack	PCMCIA	Integrated port	In-rack	In-rack
Speed	167 Kbps	20 K–1 Mbps	1 Mbps	0.5 Mbps	9.6 K–12 Mbps
Catalog number	TSXSAY1000	TSXCPP110	TSXP57 (2)	TSXIBY100	TSXPBY100

(2) Catalog numbers: see pages 3/30 and 3/31, 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 Kbps	19.2 Kbps	1.2–19.2 Kbps	19.2 Kbps	1.2–19.2 Kbps	1.2–19.2 Kbps
Catalog number	With interface RS 485	TSXP57 (1)	TSXSCY21601 (2)	TSXSACP114	TSXSCY11601	TSXSACP114	TSXSCP114
	RS 232D	–	–	TSXSCP111	–	TSXSCP111	TSXSCP111
	20mA CL	–	–	TSXSCP112	–	TSXSCP112	TSXSCP112

(1) Catalog numbers: see pages 3/30 and 3/31, Premium processors with integrated Ethernet TCP/IP port.

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



Type of module	Other networks	
Name and description	Modbus Plus	Fipway
Speed	1 Mbps	1 Mbps
Catalog number	TSXMFBP100	TSXFPP20
		Fipio (agent function)
Name and description	PCMCIA card	PCMCIA card
Speed	1 Mbps	1 Mbps
Catalog number	TSXMFBP100	TSXFPP10

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)

For other versions, please consult with your local Schneider Electric/





3

Type of processor		Simple applications	Simple and medium complexity applications
<b>Max. number of discrete I/O</b> (1)	Local	Unlimited (27 slots max.) 2 racks ( 1 main + 1 extension)	
	Decentralized/distributed	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	
<b>Max. number of analog I/O</b> (1)	Local	Unlimited (27 slots max.)	
	Decentralized/distributed	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
<b>Type of application-specific I/O</b>		Intrinsically safe I/O, counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus	
<b>Communication ports</b> (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	INTERBUS/Profibus DP: 6 in local rack
<b>Memory capacity</b>	Integrated	2 Mb	2 Mb
	With PCMCIA extension	–	–
	Data storage	–	–
<b>Catalog number</b>		<b>140CPU31110</b>	<b>140CPU43412U</b>

(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).

## Processors under Concept/ProWORX software



Type of processor		Simple applications	
<b>Max. number of discrete I/O</b> (1)	Local	Unlimited (27 slots max.) 2 racks ( 1 main + 1 extension)	
	Decentralized/distributed	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	
<b>Max. number of analog I/O</b> (1)	Local	Unlimited (27 slots max.)	
	Decentralized/distributed	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
<b>Type of application-specific I/O</b>		Intrinsically safe I/O, counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus	
<b>Communication ports</b> (2)	Integrated Modbus	1 RS 232	
	Modbus Plus	1 integrated, 2 in local rack	
	Ethernet TCP/IP	2 in local rack	
	Fieldbus	INTERBUS/Profibus DP: 2 in local rack	
<b>Memory capacity</b>	Integrated	256 Kb	512 Kb
<b>Catalog number</b>		Concept/ProWORX <b>140CPU11302</b>	<b>140CPU11303</b>

(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).



	Complex applications	Hot Standby redundant applications
	Unlimited (26 slots max.) 2 racks ( 1 main + 1 extension)	
	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	
	Unlimited (27 slots max.)	
	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
	Intrinsically safe I/O, counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus	
	1 RS 232/485	
	1 integrated, 6 in local rack	
	1 integrated, 6 in local rack	6 in local rack
	Profibus DP: 6 in local rack	
	2 Mb	
	7 Mb	
	8 Mb	
	<b>140CPU65150</b>	<b>140CPU65160</b>   <b>140CPU67160</b>

3



Simple and medium complexity applications	Complex applications
Unlimited (27 slots max.) 2 racks ( 1 main + 1 extension)	
31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	
Unlimited (27 slots max.)	
1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
Intrinsically safe I/O, counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus	
2 RS 232	
1 integrated, 6 in local rack	
6 in local rack	
INTERBUS/Profibus DP: 6 in local rack	
2 Mb	
<b>140CPU43412A (3)</b>	<b>140CPU53414B (3)</b>





3

Type of power supply module for			Quantum				
Input voltage			24 VDC	48–60 VDC	100–150 VDC	120–230 VAC	115/230 VAC
Output current			8 A/3 A	8 A	8 A/3 A	8 A/3 A	11 A
Catalog number	Type	Standalone (1)	140CPS21100	–	140CPS51100	140CPS11100	–
		Summable	140CPS21400	140CPS41400	–	–	140CPS11420
		Redundant	140CPS22400	140CPS42400	140CPS52400	140CPS12400	140CPS12420

(1) The output current for the standalone power supply modules is 3 A.

## PCMCIA memory extensions

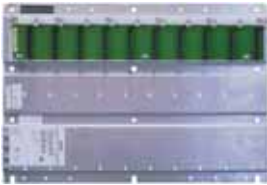


Type of PCMCIA card for Unity processors 140CPU65/67		Application		Additional data
Technology		SRAM	Flash EPROM	SRAM
Memory size	512 Kb/512 Kb (2)	–	TSXMCPC512K	–
	1 Mb (3)	TSXMRPC001M	TSXMFPP001M	–
	2 Mb (3)	TSXMRPC002M	TSXMFPP002M	–
	2 Mb/1 Mb (2)	–	TSXMCPC002M	–
	3 Mb (3)	TSXMRPC003M	–	–
	4 Mb	–	TSXMFPP004M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

(2) The 1<sup>st</sup> 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).

(3) By configuration the user can reserve part of the memory space for data storage (recipes, production data, etc).

**Racks**



**3**

Type			Racks	Rack extension module (1)
		Dimensions W x D x H		
Catalog number	2 slots	104 x 104 x 290 mm	140XBP00200	-
	3 slots	143 x 104 x 290 mm	140XBP00300	-
	4 slots	184 x 104 x 290 mm	140XBP00400	-
	6 slots	265 x 104 x 290 mm	140XBP00600	-
	10 slots	428 x 104 x 290 mm	140XBP01000	-
	16 slots	671 x 104 x 290 mm	140XBP01600	-
	Rack extension			-

(1) Local extension module, to be placed in main rack and secondary rack.

**Connection accessories (2)**

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

(2) Other accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)



3

Type of module		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)	–	<b>140DDI15310</b>	–	–	–
		24 VDC	–	<b>140DDI35300</b> (1)	–	–	<b>140DDI36400</b>
		10–60 VDC	–	<b>140DDI85300</b>	–	–	<b>140DDI84100</b>
		20–30 VDC	–	<b>140DSI35300</b> (1)	–	–	–
		125 VDC	–	–	<b>140DDI67300</b>	–	–
		24 VAC	<b>140DAI34000</b>	<b>140DAI35300</b>	–	–	–
		48 VAC	<b>140DAI44000</b>	<b>140DAI45300</b>	–	–	–
		115 VAC	<b>140DAI54000</b>	<b>140DAI55300</b>	–	<b>140DAI54300</b>	–
		230 VAC	<b>140DAI74000</b>	<b>140DAI75300</b>	–	–	–

(1) For negative logic, replace 00 at the end of the Catalog number with 10, for example **140DDI35300** becomes **140DDI35310**.



Type of module		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
Output voltage/current		5 VDC TTL/0.075 A (2)	–	<b>140DDO15310</b>	–	–
		24 VDC/0.5 A	–	<b>140DDO35301</b> (1)	–	–
		10–30 VDC/0.5 A (3)	–	<b>140DVO85300</b>	–	–
		19.2–30 VDC/0.5 A	–	–	–	<b>140DDO36400</b>
		10–60 VDC/2 A	–	–	<b>140DDO84300</b>	–
		24–125 VDC/0.75 A	–	–	–	<b>140DDO88500</b>
		24–48 VAC/4 A	–	<b>140DAO84220</b>	–	–
		24–115 VAC/4 A	<b>140DAO84010</b>	–	–	–
		24–230 VAC/ 4-3 A	<b>140DAO84000</b>	<b>140DAO85300</b>	–	–
		100–230 VAC/4-3 A	–	<b>140DAO84210</b>	–	–

(1) For negative logic, replace 01 at the end of the catalog number with 10, for example **140DDO35301** becomes **140DDO35310**.

(2) Negative logic.

(3) Controlled outputs.



Type of module		Discrete I/O – mixed			Discrete outputs	
		Solid state			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	125 VAC	125 VDC	–	–
Output voltage/current		30 VDC/15 A	125 VAC/4 A	125 VDC/4 A	150 VDC or 250 VAC/2 A	150 VDC or 250 VAC/5 A
Catalog number		<b>140DDM39000</b>	<b>140DAM59000</b>	<b>140DDM69000</b>	<b>140DRA84000</b>	<b>140DRC83000</b>

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)

# Analog I/O modules



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

(1) 0–25 mA, ± 20 mA, 4–20 mA, 0–10 V, ± 10 V, 0–5 V, ± 5 V, 1–5 V.

(2) Type B, E, J, K, R, S, T, mV.

3



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



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

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)

For other versions, please consult with your local Schneider Electric/





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Type of module	Inputs/Outputs				
	Discrete		Analog		
Conformity	Directive ATEX 94/9/EC, EN 50014, EN 50020, EN 50284, EN 50281-1				
Zone D (dust)	Mounted outside zone (to be used in conjunction with products for zone 20, 21 or 22)				
EC type examination certificate number / marking	SIRA 02ATEX2345X / Ex II (1) G/D-[EEEx ia] IIC				
Connection	By screw terminal 140XTS33200 (to be ordered separately)				
Number of inputs	8	–	8	–	–
Number of outputs	–	8	–	–	8
Signal inputs	–	–	Thermal probe Thermocouple (1)	0–25/20 mA 4–25 mA	–
Resolution	–	–	12 bits + sign	0–25000 points	15 bits
Catalog number	140DII33000	140DIO33000	140AII33000	140AII33010	140AIO33000

(1) Type J, K, E, T, S, R, B, mV.

## Counter and special purpose modules



Type of module	High-speed counter		High-speed inputs with interrupt	Time-stamp system	
Type of inputs for	Incremental encoders		Discrete 24 VDC (2)	DCF 77 24 VDC (3)	Discrete 24–125 VDC
Counting frequency	100 kHz	500 kHz	–	–	–
Number of channels	5	2	16	1	32
Catalog number	140EHC10500	140EHC20200	140HLI34000	140DCF07700	140ERT85410

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

(3) For GPS or DCF time receiver.



Type of module		Ethernet TCP/IP network			
<b>Speed</b>		10/100 Mbps			
<b>Standard services</b>		TCP/IP (Modbus)			
<b>Transparent Ready</b>	Class	B30	B30	C30	D10
	Global Data	Yes	Yes	Yes	–
	I/O Scanning	Yes	Yes	Yes	–
	FDR server	Yes	Yes	Yes	–
	SNMP protocol	Yes	Yes	Yes	Yes
<b>Web server</b>	Standard services	Yes	Yes	Yes	Yes
	FactoryCast services	–	–	Yes	Yes
	FactoryCast HMI services	–	–	–	Yes
<b>Catalog number</b>		<b>140CPU651 (1)</b>	<b>140NOE77101</b>	<b>140NOE77111</b>	<b>140NWM10000</b>

(1) Catalog numbers: see pages 3/38 and 3/39, Quantum processors with integrated Ethernet TCP/IP.



Type of module	Modbus Plus network	AS-Interface cabling system	INTERBUS fieldbus (2)	Profibus DP V0 fieldbus (3)
<b>Name and description</b>	Integrated link	In-rack	In-rack	In-rack
<b>Speed</b>	1 Mbps	167 Kbps	1 Mbps	9,6 K–12 Mbps
<b>Catalog number</b>	<b>140CPU (4)</b>	<b>140EIA92100</b>	<b>140NOA61100</b>	<b>140CRP81100</b>

(2) Compatible with concept and ProWORK32 software.

(3) Available in Profibus DP V1 version, please consult your Schneider Electric agency.

(4) Catalog numbers: see pages 3/38 and 3/39, Quantum processors with integrated Modbus Plus.



Type of module	Serial link Modbus	ASCI
<b>Name and description</b>	Integrated link	In-rack
<b>Speed</b>	19.2 Kbps	19.2 Kbps
<b>Catalog number</b>	<b>140CPU (5) (6)</b>	<b>140ESI06210</b>

(5) Catalog numbers: see pages 3/38 and 3/39, Quantum processors with integrated Modbus.

(6) RS 232/RS 485 on **140CPU651pp** and **140CPU67160** processors and RS 232 on **140CPU31110**, **140CPU43412A**, **140CPU53414A** processors.

**Connection accessories:** See [www.us.telemecanique.com](http://www.us.telemecanique.com)



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Type of software		Unity Pro Medium version 2.2			
Type of license version 2.2		Single (1 station)	Group (3 stations)	Open Team (10 stations)	Site (> 10 stations)
Catalog number	Software package	UNYSPUMFUCD22	UNYSPUMFGCD22	–	–
	Update (1)	UNYSPUMZUCD22	UNYSPUMZGCD22	–	–
Type of software		Unity Pro Large version 2.2			
Type of license version 2.2		Single (1 station)	Group (3 stations)	Open Team (10 stations)	Site (> 10 stations)
Catalog number	Software package	UNYSPULFUCD22	UNYSPULFGCD22	UNYSPULFTCD22	UNYSPULFFCD22
	Update (1)	UNYSPULZUCD22	UNYSPULZGCD22	UNYSPULZTCD202	UNYSPULZFCDD22
Type of software		Unity Pro Extra large version 2.2			
Type of license version 2.2		Single (1 station)	Group (3 stations)	Open Team (10 stations)	Site (> 10 stations)
Catalog number	Software package	UNYSPUEFUCD22	UNYSPUEFGCD22	UNYSPUEFTCD22	UNYSPUEFFCD22
	Update (2)	UNYSPUEZUCD22	UNYSPUEZGCD22	UNYSPUEZTCD22	UNYSPUEZFCDD22

(1) From Concept M et PL7 junior.

(2) From Concept M, PL7 junior, PrdWORXNxt and ProWORX 32.



**Unity Pro** is the common programming, debugging and operating software for the Premium, Atrium and Quantum ranges of PLCs. It is based on the standards set by PL7 and Concept software and provides a comprehensive set of new functions for greater productivity and openness to other software.

The five IEC61131-3 languages are supported as standard in Unity Pro with all the debugging functions, on the simulator or directly online with the PLC.

Thanks to independent symbolic memory variables, structured data and user function blocks, the application objects directly reflect the application-specific components of the automated process.

Using graphic libraries, the Unity Pro operator screens are configured in the application by the user. Operator access is simple and direct.

Debugging and maintenance are made simple by animated graphic objects.

For diagnostics, a display window provides a clear display in chronological order (time-stamped at source) of all system and application faults. The navigation function for finding the causes of faults traces missing conditions back to the source.

The standard XML Web format for exchanging data has been adopted as the source format for Unity applications. All or part of the application can be exchanged with other software in the project simply using the Import/Export function.

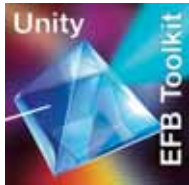
The converters integrated in Unity Pro automatically convert IEC 61131-3 PL7 and Concept standards and applications.



SFC View application diagnostic and monitoring software

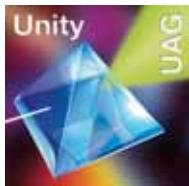
Type of software		Unity SFC View		
Type of license	version 2.0	Single (1 station)	Group (10 stations)	Site (100 stations)
Catalog number	Software package	UNYSDUMFUCD20	UNYSDUMFTCD20	UNYSDUMFFCD20

3



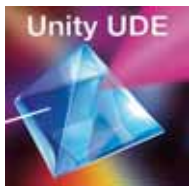
EF/EFB function development software in C language

Type of software		Unity EFB Toolkit	
Type of license		Single (1 station), English version (software and manual)	
Catalog number	Software package	UNYSPUZFUCD20E	
	Renewal	UNYCSPSPUZBU	



Software for designing and generating batch/process applications

Type of software		Unity UAG (Unity application generator)	
Type of license	version 2.2	Single (1 station)	Site
Catalog number	Medium Software package	UAGSEWMFUCD22	UAGSEWMFFCD22
	Large Software package	UAGSEWLFUCD22	UAGSEWLFCD22



Pack for developing specific solutions

Type of software		Unity UDE (Unity Developer's Edition)	
Type of license		Single (1 station)	
Catalog number	Software package	UNYUDEVFUCD20E	





PL7 is the common programming, debugging and operating software for the TSX Micro and Premium ranges of PLCs (see pages 3/26 and 3/37).

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.

3	<b>Type of software</b>		<b>PL7 Micro for TSX Micro platform</b>			
	<b>Type of license version 4.5</b>		Single (1 station)	Single with SyCon V2.8	Group (3 stations)	Open Team (10 stations)
	<b>Catalog number</b>	Software package (1)	TLXCDPL7MPPU45M	TLXCDPL7MPPC45M	TLXCD3PL7MPPU45M	TLXOTPL7MP45M
		Update (2)	TLXRCPL7MP45M	TLXRCPL7MPC45M	TLXRC3PL7MP45M	–
			<b>PL7 Junior for TSX Micro/Premium and Atrium coprocessor platforms</b>			
	<b>Type of license version 4.5</b>		Single (1 station)	Group (3 stations)		
	<b>Catalog number</b>	Software package (1)	TLXCDPL7JPU45M	TLXCD3PL7JPU45M		
		Update (2)	TLXRCPL7JP45M	TLXRC3DPL7JP45M		
		Upgrade (3)	TLXUCDPL7JP45M	TLXUCD3PL7JP45M		
			<b>PL7 Pro for TSX Micro/Premium and Atrium coprocessor platforms</b>			
	<b>Type of license version 4.5</b>		Single (1 station)	Group (3 stations)	Open Team (10 stations)	Open Site
	<b>Catalog number</b>	Software package (1)	TLXCDPL7PPU45M	TLXCD3PL7PPU45M	TLXOTPL7PP45M	TLXOSPL7PP45M
Update (2)		TLXRCPL7PP45M	TLXRC3PL7PP45M	–	–	
Upgrade (3)		TLXUCDPL7PP45M	TLXUCD3PL7PP45M	–	–	

(1) PU at the end of the catalog number: software package supplied with cable for USB port on PC, replace with P for cable for RS 232C port on PC.

(2) From the previous software version.

(3) From lower level, earlier version software.

## Specialist tools

### EF function development software in C language

<b>Type of software</b>		<b>PL7 SDKC for EF function development software in C language</b>	
PL7 SDKC software extension		For PL7 Micro/Junior/Pro	
<b>Catalog number</b>		TLXLSDKCPL741M	

### Development of applications in C language

<b>Type of software</b>		<b>PL7 FUZ for processing process applications using fuzzy logic</b>	
PL7 FUZ software extension		For PL7 Micro/Junior/Pro, TSX Micro/Premium	
<b>Catalog number</b>		TLXLPL7FUZ34M	

### Comparison of PL7 applications

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

### Availability of control systems based on Premium platforms

<b>Type of software</b>		<b>Warm Standby redundant</b>	
Warm Standby software extension		For PL7 Junior/Pro	
<b>Type of license</b>		Single (1 station)	
<b>Catalog number</b>		TLXCDWSBYP40F / E	

# Programming software Automation For Modicon Quantum, Momentum



**Concept** is the IEC programming software for the Momentum and Quantum range of PLCs. It provides advanced Microsoft Windows based tools that deliver a multi-language development environment for control system programming.

Uses familiar, standardized editors, bundled in a single application to create and integrate PLC 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 (3)	372ESS47101	–	–	–
	Concept M (3)	372ESS47201	–	–	–
	Concept XL (3)	372ESS47401	372ESS47403	372ISS4740310	372ISS4741000

(3) From an earlier software version.

## Specialist tools

### EF/EFB function development software in C language

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

### Concept application loader software

Type of software		Concept Application Loader	
Type of license		Version 2.6	
Catalog number	Software package	372SPU47701V26	

### Software for designing and generating batch/process applications

Type of software		Unity UAG (Unity application generator)	
Type of license version 2.2		Single (1 station)	Site
Catalog number	Medium Software package	UAGSEWMFUCD22	UAGSEWMFFCD22
	Large Software package	UAGSEWLFUCD22	UAGSEWLFFCD22

### SFC View application diagnostic and monitoring software

Type of software		Concept SFC View		
Type of license version 3.0		Single (1 station)	Group (10 stations)	Site (100 stations)
Catalog number		372SFV16000V30	372SFV16020V30	372SFV16030V30

## ProWORX for Modicon Quantum, Momentum

**ProWORX 32** is the flexible, easy-to-use cross-platform LL984-programming software for Modicon range PLCs. 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, all 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 PLC run-time environment to ensure your system will run at peak efficiency.

Type of software		ProWORX for Quantum/Momentum platforms			
Type of license version 2.0		Single (1 station)	Group (3 stations)	Multi-user (10 stations)	Site
Software catalog numbers	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 catalog numbers (4)		372SPU78401LPUP	372SPU78401LPTH	372SPU78401LPTE	–

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

Accessories : See [www.us.telemecanique.com](http://www.us.telemecanique.com)

For other versions, please consult with your local Schneider Electric/





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



Type of module		Discrete outputs						
		Solid state			Triac			
<b>Connection</b>		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)						
<b>Output voltage</b>		5-24 VAC, 24-230 VAC	24 VDC		120 VAC		230 VAC	
<b>Number of protected channels</b>		6 (1 common pt)	16 (2 common pts)	32 (2 common pts)	8 (2 common pts)	16 (2 common pts)	8 (2 common pts)	16 (2 common pts)
<b>Output current</b>	Per channel	5A	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	21A	8 A	16 A	8 A	8 A	8 A	8 A
<b>Dimensions W x D x H</b>		125 x 47.5 x 141.5 mm (with communication modules or processors) 144 x 70 x 141.5 mm (with M1/M1E processors and optional modules)						
<b>Catalog number</b>		170ADO83030	170ADO34000	170ADO35000	170ADO53050	170ADO54050	170ADO73050	170ADO74050



Type of module		Discrete I/O						
		Solid state			Relay		Triac	
<b>Connection</b>		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)						
<b>Number of channels</b>	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)
<b>Input voltage</b>		12-48 VDC	24 VDC				120 VAC	
<b>Output voltage</b>		12-48 VDC		24 VDC		24-230 VAC/20-115 VDC		120 VAC
<b>Output current</b>	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
<b>Dimensions W x D x H</b>		125 x 47.5 x 141.5 mm (with communication modules or processors) 144 x 70 x 141.5 mm (with M1/M1E processors and optional modules)						
<b>Catalog number</b>		170ADM85010	170ADM35010	170ADM35015	170ADM37010	170ADM39010	170ADM39030	170ADM69051

(1) For a version with high-speed positive logic, replace 0 at the end of the catalog number with 1. E.g. 170ADM35010 becomes 170ADM35011.

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)

## Analog I/O modules



Type of module	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	$\pm 5\text{ V}$ , $\pm 10\text{ V}$ , $\pm 20\text{ mA}$ , 1–5 V, 4–20 mA	$\pm 5\text{ V}$ , $\pm 10\text{ V}$ , 4–20 mA	Multi-range $\pm 25\text{ mV}$ , $\pm 10\text{ mV}$ (1)
Resolution	14 bits + sign, 15 bits unipolar	12 bits + sign	15 bits + sign
Dimensions W x D x H	125 x 47.5 x 141.5 mm (with communication modules or processors) 144 x 70 x 141.5 mm (with M1/M1E processors and optional modules)		
Catalog number	<b>170AAI03000</b>	<b>170AAI14000</b>	<b>170AAI52040</b>

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



Type of module	Analog outputs		Analog I/O and discrete I/O		
Connection	By screw terminals 140XTS00200 (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)	4 with com pt + 8 discrete (24 VDC)	
Input signal	$\pm 10\text{ V}$ , 0–20 mA	$\pm 10\text{ V}$ , 4–20 mA	$\pm 5\text{ V}$ , $\pm 10\text{ V}$ , $\pm 20\text{ mA}$ , 1–5 V, 4–20 mA	0–10 V	$\pm 10\text{ V}$
Output signal	–		$\pm 10\text{ V}$ , 4–20 mA	0–10 V	$\pm 10\text{ V}$
Resolution	12 bits + sign		12–14 bits dep. on signal	14 bits	14 bits
Dimensions W x D x H	125 x 47.5 x 141.5 mm (with communication modules or processors) 144 x 70 x 141.5 mm (with M1/M1E processors and optional modules)				
Catalog number	<b>170AAO12000</b>	<b>170AAO92100</b>	<b>170AMM09000</b>	<b>170ANR12090</b>	<b>170ANR12091</b>

## Application-specific I/O modules



Type of module	High-speed counter	Discrete I/O with Modbus port
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	125 x 47.5 x 141.5 mm (with communication modules or M1/M1E processors) 144 x 70 x 141.5 mm (with M1/M1E processors and optional modules)	
Catalog number	<b>170AEC92000</b>	<b>170ADM54080</b>



3	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
Manager PLC	–	–	Premium	–	–	
Redundancy	No	–	No	No	No	
Standard services	Modbus TCP/IP	–	–	–	–	
Catalog number	170ENT11002	170ENT11001	170FNT11001	170INT11000 (1)	170DNT11000	

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



Type of module	Other networks		De viceNet
	Modbus Plus		
Speed	1 Mbps		0.5 Mbps
Manager PLC	Premium or Quantum IEC	Quantum IEC	–
Redundancy	No	Yes	No
Standard services	–	–	–
Catalog number	170PNT11020(2)	170PNT16020 (2)	170LNT71000

(2) For 984 data format, use 170NEF11021 (not redundant) or 170NEF16021 (redundant).

## Optional modules for M1/M1E processors



Type of module (3)	Modbus Plus		Asynchronous serial link
Communication ports	1 Modbus Plus	2 redundant Modbus Plus	1 RS 232/RS 485 Modbus
Real-time clock	Integrated, ± 13 sec/day accuracy		
Connection	By 9-way SUB-D connector		
Catalog number	172PNN21022	172PNN26022	172JNN21032

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

## Connection accessories

Type	RS 232C communication cable		
Length	1 m	3 m	6 m
Catalog number	110XCA28201	110XCA28202	110XCA28203

Connection accessories: See [www.us.telemecanique.com](http://www.us.telemecanique.com)

## M1/M1E processors



3

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
	Ether netTCP/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	0.63 ms/K	1 ms/K	0.63 ms/K	1 ms/K
Catalog number		171CCS70000	171CCS70010	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		–	
	Ether netTCP/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			
Catalog number		171CCC76010	171CCC98020	171CCC98030	171CCC96020	171CCC96030

## Power supply module (4)



Type of 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	73 x 44.5 x 146 mm
Catalog number	170CPS11100

(4) Process power supplies see chapter 6 "Power supply".



ConneXium Ethernet Switches			4 PORT			8 PORT		
			4 TX	3TX/1FX-MM(SM*)	2TX/2FX-MM(SM*)	8TX	7TX/1FX-MM(SM*)	6TX/2FX-MM(SM*)
Interfaces	Copper cable ports	Number and type	4 x 10BASE-T/ 100BASE-TX Ports	3 x 10BASE-T/ 100BASE-TX Ports	2 x 10BASE-T/ 100BASE-TX Ports	8 x 10BASE-T/ 100BASE-TX Ports	7 x 10BASE-T/ 100BASE-TX Ports	6 x 10BASE-T/ 100BASE-TX Ports
		Shielded connectors	RJ45			RJ45		
		Medium	Shielded twisted pair, CAT5E			Shielded twisted pair, CAT5E		
		Max. distances	100 m			100 m		
Optical fiber ports		Number and type	–	1 X 100BASE-FX ports	1 X 100BASE-FX ports	–	1 X 100BASE-FX ports	1 X 100BASE-FX ports
		Connectors	–	SC	SC	–	SC	SC
		Medium	–	Multimode fiber (or Single Mode*)	Multimode fiber (or Single Mode*)	–	Multimode fiber (or Single Mode*)	Multimode fiber (or Single Mode*)
		Fiber length						
		50/125 μm	–	5000 m (1)	5000 m (1)	–	5000 m (1)	5000 m (1)
62.2/125 μm	–	4000 m (1)	4000 m (1)	–	4000 m (1)	4000 m (1)		
9/125 μm	–			–				
Ethernet services			FDR client, SNMP V3, SNTp, multicast filtering for optimization of the Global Data protocol, Web based configuration VLAN, IGMP Snooping, RSTP (Rapid Spanning Tree Protocol), Port priority, Flow control, Port security, PTP Client (Precision Time Protocol) according to IEEE 1588					
Topology	No. of Switches	Cascaded	Any					
		Redundant in a ring	50 max.					
Redundancy			P1 and P2 redundant power supplies					
Power supply	Voltage		24 VAC (9.6–60 VDC and 18–32 VDC), safety extra low voltage (SELV)					
	Power consumption		5.3 W	6.5 W	7.7 W	5.3 W	6.5 W	7.3 W
	Removable terminals 5-way		Yes					
Operating temperature			0 to 60 °C (+32 to +131°F)					
Relative humidity			10–95% non-condensing					
Degree of protection			IP20					
Dimensions W x H x D			47 x 131 x 111 mm			74 x 131 x 111 mm		
Conformity to standards			CE and IEC 61131-2, cUL 60950, UL 508 and CSA 14, UL 1604 and CSA 213 Class 1 Division 2, e, GL					
LED indicators			P1 and P2 power supplies, Ethernet link status, redundancy management					
Alarm contact			Power supply failure, permanent fault in hub, faulty link status of TP port (volt-free contact 1 A max. under 24 VAC)					
Catalog number			TCSESM043F23F0	TCSESM043F1CU0 *TCSESM043F1CS0	TCSESM043F2CU0 *TCSESM043F2CS0	TCSESM083F1CU0 *TCSESM083F1CS0	TCSESM083F2CU0 *TCSESM083F2CS0	TCSESM163F23F0

(1) Depends on the optical fiber budget and fiber attenuation (typical specification: 2 km).

(2) Depends on the optical fiber budget and fiber attenuation (typical specification: 15 km).



ConneXium Ethernet Switches			16 PORT		24 PORT	GIGABIT 10 PORT		GIGABIT
			16 TX	14TX/2FX-MM	22TX/2FX-MM	8TX/2TX-Gbit	8TX/2SFP-Gbit	Fiber modules
Interfaces	Copper cable ports	Number and type	16 x 10BASE-T/ 100BASE-TX Ports	14 x 10BASE-T/ 100BASE-TX Ports	22 x 10BASE-T/ 100BASE-TX Ports	8x10/100BASE-TX 2x10/100/1000-TX	8x10/100BASE-TX	2max.@ 1000-FX
		Shielded connectors	RJ45			RJ45		
		Medium	Shielded twisted pair, CAT5E			Shielded twisted pair, CAT5E		
		Max. distances	100 m			100 m		
	Optical fiber ports	Number and type	–	2 X 100BASE-FX ports	1 X 100BASE-FX ports	–	1 X 100BASE-FX ports	1 X 100BASE-FX ports
		Connectors	–	SC	SC	–	SFP	SFP
		Medium	–	Multimode fiber	Multimode fiber	–	Order 2 max. configurable fiber modules	Multimode or single mode fiber
		Fiber length						
		50/125 μm	–	5000 m (1)	5000 m (1)	–	choose options	550 m
		62.2/125 μm	–	4000 m (1)	4000 m (1)	–	choose options	675 m or 20 Km
		9/125 μm	–			–	choose options	72 Km
		Ethernet services	FDR client, SNMP V3, SNTP; multicast filtering for optimization of the Global Data protocol, Web based configuration VLAN, IGMP Snooping, RSTP (Rapid Spanning Tree Protocol), Port priority, Flow control, Port security, PTP Client (Precision Time Protocol) according to IEEE 1588					
Topology	Number of Switches	Cascaded	Any					
		Redundant in a ring	50 max.					
Redundancy	P1 and P2 redundant power supplies							
Power supply	Voltage	24 VAC (9.6–60 VDC and 18–32 VDC), safety extra low voltage (SELV)						
	Power consumption	9.4 W	11.8 W	15.5 W	8.9 W	8.3 w	–	
	Removable terminals 5-way	Yes						
Operating temperature	0 to 60 °C (+32 to +131°F)							
Relative humidity	10–95% non-condensing							
Degree of protection	IP20							
Dimensions W x H x D	111 x 131 x 111 mm				74 x 131 x 111 mm		–	
Conformity to standards	CE and IEC 61131-2, cUL 60950, UL 508 and CSA 14, UL 1604 and CSA 213 Class 1 Division 2, e, GL							
LED indicators	P1 and P2 power supplies, Ethernet link status, redundancy management							
Alarm contact	Power supply failure, permanent fault in hub, faulty link status of TP port (voltage-free contact 1 A max. under 24 VAC)							
Catalog number	TCSESM163F23F0	TCSESM163F2CU0	TCSESM243F2CU0	TCSESM103F2G0	TCSESM103F2L0	TCSEAAF1LFU00	TCSEAAF1LFS00	TCSEAAF1LFH00

(1) Depends on the optical fiber budget and fiber attenuation (typical specification: 2 km).

(2) Depends on the optical fiber budget and fiber attenuation (typical specification: 15 km).

## ConneXview Software



ConneXview™ is a user-friendly, powerful diagnostic software program that lets you visualize your entire network on a single screen, making it easy to monitor, edit and troubleshoot your industrial Ethernet networks. More than just a simple tool to visualize your network, ConneXview allows users to perform a wide variety of intelligent functions to keep your network traffic moving at peak efficiency, and your entire factory moving at optimum productivity.

- Reduce downtime & increase productivity
- Optimize network performance and efficiency
- Decrease maintenance and startup costs
- Increase system quality and performance

- TCSEAZ01PSFE10 Single user license
- TCSEAZ01PGFE10 Group license (3-user)
- TCSEAZ01PTFE10 Team license (10-user)
- TCSEAZ01PFFE10 Site license (Facility license)