Automation

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, Zelio Time 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 from10 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 smal 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.

Contents

Relays

Programmable controllers, Automation platforms

Distributed inputs/outputs

Ethernet Connectivity

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.

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.

Plug-in relays
Interface relays

3

Type of relay			Interface relays RSB		
Contact characteristics					
Thermal current Ith 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
Coil characteristics					
Average consumption, inrush,			0.75 VA / 0.45 W		
Permissible voltage variation			0.8/0.85–1.1 Un (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		
Mixed input/output type sockets with location for protection module				
		–	–	–
		–	–	–
Separate input/output type sockets with location for protection module				
		RSZE1S48M	RSZE1S35M	RSZE1S48M (2)
Protection modules				
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	–		
Accessories				
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 RSB2A080B7**S**).

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

(3) With LED.

For additional information, reference catalog 8501CT0601.

Miniature relays

Type of relay		Miniature relays RXM			
Contact characteristics					
Thermal current Ith 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
Coil characteristics					
Average consumption, inrush,		1.2 VA / 0.9 W			
Permissible voltage variation		0.8–1.1 Un (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			
Mixed input/output type sockets with location for protection module					
		RXZE2M114 (2)	–	**RXZE2M114**	**RXZE2M114**
		RXZE2M114M (2)	–	**RXZE2M114M**	**RXZE2M114M**
Separate input/output type sockets with location for protection module					
		RXZE2S108M	**RXZE2S111M**	**RXZE2S114M**	**RXZE2S114M**
Protection modules					
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	–			
Accessories					
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: RXM2AB**2**JD becomes RXM2AB**1**JD).

(2) Thermal current Ith: 10 A.

For additional information, reference catalog 8501CT0601.

Plug-in relays
Universal relays

3

Type of relay		Universal relays RUM				
Contact characteristics		Cylindrics			Faston	
Thermal current Ith 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
Coil characteristics						
Average consumption, inrush,		2–3 VA / 1.4 W				
Permissible voltage variation		0.8–1.1 Un (50 / 60Hz or =)				
Catalog number						
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	–	–	–	–	–
	110 VDC	**RUMC2AB2FD**	**RUMC3AB2FD**	–	**RUMF2AB2FD**	**RUMF3AB2FD**
Coil supply voltage on AC	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				
Mixed input/output type sockets with location for protection module						
		RUZC2M	**RUZC3M**	**RUZC3M**	–	–
		–	–	–	–	–
Separate input/output type sockets with location for protection module						
		RUZSC2M	**RUZSC3M**	**RUZSC3M**	**RUZSF3M**	**RUZSF3M**
Protection modules						
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**				
Accessories						
Plastic maintaining clamp		–				
Metal maintaining clamp		**RUZC200**				
Label for socket		**RUZL420**				
Bus jumper	2 poles	**RUZS2**				
DIN rail adapter		–				
Panel mounting adapter		–				

For additional information, reference catalog 8501CT0601.

Power relays

Type of relay		Power relays RPM				RPF	
Contact characteristics							
Thermal current Ith 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	$AgSnO_2$	$AgSnO_2$
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
Coil characteristics							
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	–	–	–	–	–	
	110 VDC	**RPM12FD**	**RPM22FD**	**RPM32FD**	**RPM42FD**	**RPF2AFD**	**RPF2BFD**
Coil supply voltage on AC	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	–	–	–	–	–	–

Sockets for relays

Type of socket		For power relays RPM				For power relays RPF
Mixed input/output type sockets with location for protection module						
		RPZF1	**RPZF2**	**RPZF3**	**RPZF4**	–
		–	–	–	–	–
Separate input/output type sockets with location for protection module						
		–	–	–	–	–
Protection modules		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**		–
Accessories						
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**2**B7 becomes RPM1**1**B7).

(2) With LED.

For additional information, reference catalog 8501CT0601.

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	3.6 VA
	VDC coils	1.5 W	1.5 W	1.5 W	1.5 W
Voltage range	VAC coils	+10 to -15%	+10 to -15%	+10 to -15%	+10 to -15%
	VDC coils	+10 to -25%	+10 to -25%	+10 to -25%	+10 to -25%
Catalog number	24 VAC	**8501KP12V14**	**8501KP13V14**	**8501KU12V14**	**8501KU13V14**
	120 VAC	**8501KP12V20**	**8501KP13V20**	**8501KU12V20**	**8501KU13V20**
	240 VAC	**8501KP12V24**	**8501KP13V24**	**8501KU12V24**	**8501KU13V24**
	12 VDC	**8501KPD12V51**	**8501KPD13V51**	**8501KUD12V51**	**8501KUD13V51**
	24VDC	**8501KPD12V53**	**8501KPD13V53**	**8501KUD12V53**	**8501KUD13V53**
	110 VDC	**8501KPD12V60**	**8501KPD13V60**	**8501KUD12V60**	**8501KUD13V60**
	Relay socket	**8501NR51**	**8501NR61**	**8501NR82**	**8501NR82**
	Hold down clip	**8501NH51**	**8501NH61**	**8501NH82**	**8501NH82**

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	3.7 VA
	VDC coils	0.7 W	0.9 W	1.0 W	1.0 W
Voltage range	VAC coils	+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%
Catalog number	24 VAC	**8501RS41V14**	**8501RS42V14**	**8501RS43V14**	**8501RS44V14**
	120 VAC	**8501RS41V20**	**8501RS42V20**	**8501RS43V20**	**8501RS44V20**
	12 VDC	**8501RSD41V51**	**8501RSD42V51**	**8501RSD43V51**	**8501RSD44V51**
	24 VDC	**8501RSD41V53**	**8501RSD42V53**	**8501RSD43V53**	**8501RSD44V53**
	Relay socket	**8501NR41**	**8501NR42**	**8501NR43**	**8501NR34**
	Hold down clip	–	**8501NH42**	**8501NH42**	**8501NH42**

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**

Power relays

Power relays		VAC rated contacts				
Resistive rating (@ 300 VAC)		30 A	30 A	30A	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**	**8501CO1V29**
	24 VDC	**8501CDO6V53**	**8501CDO7V53**	**8501CDO8V53**	**8501CDO15V53**	**8501CDO16V53**

For additional information, reference catalog 8501CT0601.

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**

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.

Relays

Control relays for 3-phase supplies

3

Function	Rotational direction and presence of phases				
		+ Undervoltage	+ 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 undercurrent			
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	180–270 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**

Liquid level control relays

(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 addditonal information, reference catalog 8430CT0001R6/02.

Control relays for 3-phase supplies

Function	Phase reversal and presence of phases					
		+ Undervoltage		+ 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**

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

For additional information on 8430, referencee catalog 8430CT9701.

Counters
Totalizers

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**

For additional information, reference catalog 9051T0501.


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		12–240 VAC/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.

Industrial timers


Type of single function relay width 22.5 mm, relay output	On-delay		Off-delay		
External control	no	yes	no	yes	yes
Supply voltage	24 VAC/DC 110–240 VAC	24 VAC/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	24 VAC/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 50/6 0 Hz	**RE XL4TMP7**	**RE XL2TMP7**

Plug-in timers

Type of plug-in timer			On-Delay		Off-delay		Interval
Supply Voltage			24 VAC/DC	120 VAC/110 VDC	24 VAC/DC	120 VAC/110 VDC	120 VAC/110 VDC
Relay 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.
Resistive Contact Rating			10 A	10 A	10 A	10 A	10 A
Output Pins			8	8	11	11	8
Catalog Number	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**	**8501NR51**

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

Type of plug-in timer			One Shot	Repeat Cycle	On- Delay	Multifuction	
Supply Voltage			120 VAC/110 VDC	120 VAC/110 VDC	120 VAC	24 VAC	120 VAC
Relay 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.
Resistive Contact Rating			10 A	10 A	10 A	10 A	10 A
Output Pins			11	8	8	11	11
Catalog Number	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	Multifuction
Supply Voltage		24 VDC/24–240VAC	24 VDC/24–240VAC	24 VDC/24–240VAC	24 VDC/24–240VAC
Timing Range		0.1 s to 100 h	0.1 s to 100 h	0.1 s to 100 h	0.1 s to 100 h
Relay 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.
Resistive Contact Rating		8 A	8 A	8 A	8 A
Output Pins		8	11	11	11
Catalog Number		**RE88867215**	**RE88867435**	**RE88867455**	**RE88867305**
	Relay socket	**8501NR51**	**8501NR61**	**8501NR61**	**8501NR61**

Programmable smart relays
Compact, SR2

Compact smart relays		With display, DC power supply					
Supply voltage		**12 VDC**		**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		124.6x59.5x107.6 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: SR2B12**1**BD).

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
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 107.6 mm		124.6 x 59.5 x 107.6 mm	
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		**24 VDC**			**100–240 VAC**		
Number of inputs/outputs	**10**	**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		71.2 x 59.5 x 107.6 mm		124.6x59.5x107.6	71.2 x 59.5 x 107.6 mm		124.6x59.5x107.6
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						
Supply voltage		**12 VDC**	**24 VDC**		**24 VAC**		**100–240 VAC**	
Number of inputs/outputs		**26**	**10**	**26**	**10**	**26**	**10**	**26**
Number of inputs	Discrete inputs	16	6	16	6	16	6	16
	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: SR3B10**1**BD).

Extension modules for Zelio Logic 2 SR3Bpppppp (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			Back-up memory	
Description	PC CD-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.

Programmable controllers
Bases

Type of base		Compact				
Number of discrete I/O		10	16	24	40	40
Number of discrete inputs (24 VDC)		6 sink/source (1)	9 sink/source (1)	14 sink/source (1)	24 sink/source (1)	24 sink/source (1)
Number of discrete outputs		4 relay 2 A	7 relay 2 A	10 relay 2 A	14 relay 2 A, 2 source transistor	
Types of connection		Non-removable screw terminals				
Possible I/O extension modules		–	–	4	7	7
Counting (resolutions in bits)		3 x 5 kHz (16 bit), 1 x 20 kHz (32 bit)			4x5 kHz (16 bit), 2x20 kHz (32 bit)	
PWM position control		–	–	–	2 x 7 kHz	2 x 7 kHz
Serial ports		1 x RS 485	1 x RS 485; as an option: 1 x RS 232C or RS 485			
Protocol		Modbus Master/slave, ASCII, remote RTU				and Ethernet
Dimensions W x D x H		80 x 70 x 90 mm	80 x 70 x 90 mm	95 x 70x 90 mm	157 x 70 x 90 mm	157 x 70 x 90 mm
Catalog number	**Supply voltage** 100–240 VAC	**TWDLCAA10DRF**	**TWDLCAA16DR**	**TWDLCAA24DRF**	**TWDLCAA40DRF**	**TWDLCAE40DRF**
	Supply voltage 19.2–30 VDC	**TWDLCDA10DRF**	**TWDLCDA16DRF**	**TWDLCDA24DRF**	–	
	Real-time clock (as an option)	**TWDXCPRTC**				
	Display unit (as an option)	**TWDXCPODC**				

(1) Positive or negative logic.

Number of discrete I/O		20		40
Number of discrete inputs (24 VDC)		12 sink/source (2)	12 sink/source (2)	24 sink/source (2)
Number of discrete outputs		8 source transistor 0.3 A	6 relay and 2 source transistor 0.3 A	16 source transistor 0.3 A
Types of connection		HE 10 connector	Removable screw terminals	HE 10 connector
Possible I/O extension modules		4	7	7
Supply voltage		24 VDC		
Integrated Counting		2 x 5 kHz, 2 x 20 kHz		
PLS/PWM position control		2x7 kHz		
Serial ports		1 x RS 485; as an option: 1 x RS 232C or RS485		
Protocol		Modbus Master/slave, ASCII, remote RTU		
Dimensions W x D x H		35.4 x 70 x 90 mm	47.5 x 70 x 90 mm	47.5 x 70 x 90 mm
Catalog number		**TWDLMDA20DTK** (3)	**TWDLMDA20DRT**	**TWDLMDA40DTK** (3)
	Real-time clock (as an option)	**TWDXCPRTC**		
	Display unit (as an option)	**TWDXCPODM**		
	Memory extension (as an option)	–	**TWDXCPMFK64**	

(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
Twido Fast "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	**TWDXCPMFK32/TWDXCPMFK64**	**TWDSPU1001V10M**	**TWDSPU1003V10M**

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)	Type K, J, T thermocouples 3-wire Pt100 thermal probe
	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	
	Résolution	–			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.





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	**TWDDDO8TT** (3)	–	–	**TWDDDO16TK** (3)	**TWDDDO32TK** (3)	**TWDNOI10M3**

(3) Also available in the following version: sink transistor outputs, (TWDDDO8**U**T, TWDDDO16**U**K and TWDDDO32**U**K).

(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		**TWDNCO1M**	**TWDNOZ232D**	**TWDNOZ485D**	**TWDNOZ485T**	**TWDNAC232D**	**TWDNAC485D**	**TWDNAC485T**	**499TWD01100**

M340 platforms for Unity Pro software offer

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

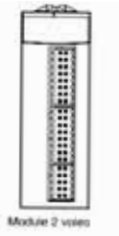
Number of Racks	Maximum number of rack 4/6/8/12 slots
	Maximum number of free slots
Inputs/Outputs	**In-Rack IOs**
	Maximum number of in-rack Discrete inputs/outputs
	Maximum number of in-rack Analog inputs/outputs
	Distributed IOs
	Maximum number of distributed Discrete Inputs/outputs
	Maximum number of distributed Analog inputs/outputs
Technology functions	**In-Rack Application specific channels**
	Counting channels & Serial poty
	Integrated software libraries
	PLCopen Motion Library
	Process control library
Communication	**Embedded ports**
	Ethernet (100 Base-TX) - see page 4/54 for details
	CANopen Master (Dsub9, 63 Slaves)
	Modibus Master, Slave, RTU / ASCII (RJ45 19.2 Kbits/s RS485 / RS232)
	USB terminal port, Device connector 12 Mbits/s
	Maximum numbers of networks (Ethernet)
	Maximum nb of in-rack NOE ethernet TCP/IP module
Memory capacity	**CPU**
	Memory size - user application
	User data
	Program and symbols (Code, constants)
	SD card
	Application Backup
	Ready-to-Use System Diagnostic Web Server
	File storage (Standard SDcard / Optinal SDcard BMWRMS008MPF)
Execution time	**Execution time per instruction**
	Boolean
	One word or fixed-word arithmetic
	On floating points
	Nb of Kinst per ms for typical applications
	100% Boolean
	65% Boolean + 35% fixed arithmetic
Multitasking operating system	Master task
	Fast task
	Event task (I/O event task)
Catalog number	

Available 1st Quarter 2007

Basic CPU	Performance CPU		
			
CPU 340-10, Modbus	CPU 340-20, Modbus, CANopen master	CPU 340-20, Modbus, EThernet TCPIP	CPU 340-20, Ethernet TCPIP, CANopen master
1 (-> 2 at 4Q2007)	1 (-> 4 at 4Q2007)		
23	47		
512	1024		
128	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	4 Mb		
128Kb	256Kb		
35Kinst	70Kinst		
16Mb program			
2Mb User web pages			
- / -	- / 8 Mb		
0.28	0.14		
0.5	0.25		
3.5	1.75		
3.7 Kins/ms	7.4 Kins/ms		
3.45 Kins/ms	6.9 Kins/ms		
	1		
	1		
32	84		
BMXP341000	**BMXP342010**	**BMXP342020**	**BMXP342030**

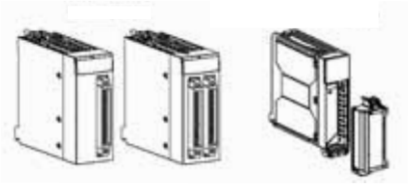
Available 1st Quarter 2007

Counter modules

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

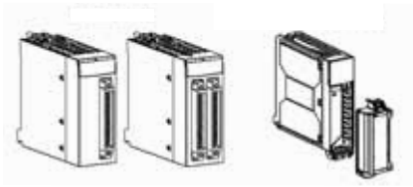
Available 1st Quarter 2007

Application



			(Available 2nd Quarter 2007)		(Available 2nd Quarter 2007)	(Available 2nd Quarter 2007)		
Type		DC	DC	AC	DC/AC	DC	DC	DC
Voltage		24 VDC	48 VDC	120 VAC	24VDC or 24VAC	48 VAC	24 VDC	24 VDC
Modularity (number of channels)		16 isolated channels	16 isolated channels	16 isolated channels	16 isolated channels	16 isolated channels	32 isolated channels	64 isolated channels
Connection	**Terminal Block 20 points**							
	Number	1						-
	Terminal block part number	3 types (1)						-
	FCN Type 40 points							
	Number	-					1	2
	Compatibility with Telefast							Yes
Inputs type	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 compatibilty to IEC 947 5 2 standard	To be done						
Type of discrete input and I/O modules		**BMXDDI1602**	**BMXDDI1603**	**BMXDAI1604**	**BMXDAI1602**	**BMXDAI1603**	**BMXDDI3202K**	**BMXDDI6402K**

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
Voltage		24 VDC	24 VDC 24–240 VAC	24 VDC 24–240 VAC	24–240 VAC	24 VDC	24 VDC	24 VDC
Current		0.5 Amp	3 Amp (Ith)	4 Amp (Ith)	1 Amp	0.5 Amp	0.1 Amp	0.1 Amp
Modularity (number of channels)		16 Channels	16 Channels	8 Channels	16 Channels	16 Channels	32 Channels	64 Channels
Connection	**Terminal Block 20 points**							
	Number	1						-
	Terminal block part number	3 types (1)						-
	FCN Type 40 points	-						
	Number	-					1	2
	Compatibility with Telefast							Yes
Inputs type	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
Type of discrete outputs and I/O modules		**BMXDDO1602**	**BMXDRA1605**	**BMXDRA0805**	**BMXDAO1605**	**BMXDDO1612**	**BMXDDO3202K**	**BMXDDO6402K**

(1) Cabling Accessory for Basic Micro Programmable Logic Controller

BMXFTB2000 Screw terminal strip (20 points), Standard

BNXFTB2010 Screw terminal strip (20 points), Circular adaptor

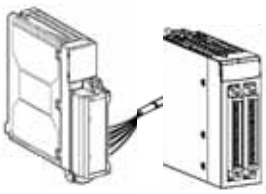
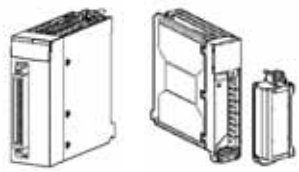
BMXFTB2020 Spring terminal strip (20 points)

Available 1st Quarter 2007

Analog I/O modules

Application Analog Inputs Analog Outputs



Type of I/O		High Level Fast isolated inputs between channels	Temperature isolated inputs between channels	Isolated Output between channel
Type		4 multi-range (U & I) channels	4 multi-range channels: Thermocouples and RTD (2, 3, 4 wires)	2 multi-range (U & I) channels:
Range	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.	
Modularity		4 channels	4 channels	2 channels
Isolation		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
Read time				
Response time		- 1 ms + 1 ms x nb of channels used - 5 ms (All channels used)	400 ms/ 4 voies	< 1 ms
Resolution		16 bits	0.01 mV	16 bits
Connection		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	
Type of module		**BMXAMI0410**	**BMXART0414**	**BMXAMO0210**

(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 1st Quarter 2007

Analog Outputs

Analog Combol/O

Temperature inputs 8 multi-range channels:	Fast high lievel inputs, high level outputs 6 multi-range (U & I) channels:
Thermocouples and RTD (2, 3, 4 wires)	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	8 channels
Between channels 750 VDC Between bus and channels 2000 VDC Between channels and earth 750 VDC	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
	5 ms (normal scan) 1 + 1 ms/channel used (fast scan)
800 ms/8 voies	user-definable filtering 0 to 0.64 s
0.01 mV	12 bits
1 FCN type connectors (40 points) 25-way SUB-D connectors	20 points terminal block, 3 types (1)
Telefast, 25-way SUB-D connectors ABE7CPA412	
BMXART0814	**BMXAMM0600**

Available 2nd Quarter 2007

Automation platform
Basic configurations



3

Type of processor		TSX 3705	TSX 3708	TSX 3710	
Power supply		110–240 VAC		24 VDC	
Number of slots	Standard	2 (1 available)	3 (1 available)	2 (1 available)	
	On extension	–	–	2	
Number of integrated discrete I/O modules		1 (16 I, 12 Q)	2 (32 I, 24 Q)	1 (16 I, 12 Q)	1 (16 I, 12 Q)
Number of integrated analog I/O channels		–	–	–	–
Type of integrated I/O		I: 24 VDC, Q: relay	I: 24 VDC, Q: relay	I: 24 VDC, Q: sol.st. 0.5 A	I: 24 VDC, Q: relay
Application-specific modules (counter, position control)		2 half-size		2 half-size	
Bus	AS-Interface cabling system	–		1 half-size	
	CANopen machine bus	–		–	
	Fipio fieldbus	–		–	
Networks	Modbus Plus, Fipway	–		–	
	Ethernet TCP/IP	–		1 external module	
Memory capacity	Integrated	11 K words		14 K words	
	With PCMCIA extension	–		–	
Execution time for one instruction	Boolean	0.25 µs		0.25 µs	
	Numerical	4.81 µs		4.81 µs	
Rack dimensions 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	
Catalog number	With screw terminals	**TSX3705028DR1**	**TSX3708056DR1**	**TSX3710128DT1**	**TSX3710128DR1**
	With HE 10 connector (1)	**–**	**–**	**TSX3710128DTK1**	**–**

(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		
Technology		SRAM	Flash EPROM	Backup
Memory size (3)	32 K words	**TSXMRPP128K**	**TSXMFPP128K**	**TSXMFPB096K**
	32 K words/128 K words	**TSXMRPP348K**	**TSXMCPC224K**	**–**
	64 K words	**TSXMRPP224K**	**TSXMFPP224K**	**–**
	64 K words/128 K words	**TSXMRPP384K**	**TSXMCPC224K**	**–**
	128 K words	**TSXMRPC448K**	**TSXMFPP384K**	**–**
	128 K words/128 K words	**TSXMRPC768K**	**–**	**–**

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

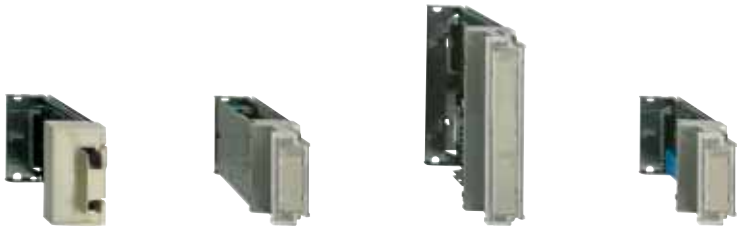
Connection accessories: See www.us.telemecanique.com

	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	**TSXRKZ2**

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	32
Protection of outputs		Yes		Yes	Yes	No	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

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**

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	**TSX37** (1)	**TSXSCP114**
		RS 232D	–	**TSXSCP111**
		20 mA CL	–	**TSXSCP112**

(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 Modbus Plus	Fipway
Name and description	PCMCIA card	PCMCIA card
Speed	1 Mbps	1 Mbps
Catalog number	**TSXMBP100**	**TSXFPP20**

Connection accessories: See www.us.telemecanique.com

Automation platform

Processors under Unity Pro software




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	Discrete	192	256	512	1024
in racks	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	Boolean	0.19 µs	0.19 µs	0.19 µs	0.19 µs
for one instruction	On word or arithmetic	0.25 µs	0.25 µs	0.25 µs	0.25 µs
Catalog number	Without integrated port	–	–	**TSXP57104M**	**TSXP57204M**
	Integrated Ethernet	–	–	**TSXP571634M**	**TSXP572634M**
	Integrated CANopen	**TSXP57Cp0244M** (2)	**TSXP570244M**	–	–
	Integrated Fipio	–	–	**TSXP57154M**	**TSXP57254M**

(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	Discrete	512	1024
in racks	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	Boolean	0.50 µs	0.19 µs
for one instruction	On word or arithmetic	0.62 µs	0.25 µs
Catalog number	Without integrated port	**TSXP57103M**	**TSXP57203M**
	Integrated Ethernet	–	**TSXP572623M**
	Integrated Fipio	**TSXP57153M**	**TSXP57253M**
	Integrated Ethernet and Fipio	–	**TSXP572823M**

(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





	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
	TSXP57304M	–	–	**TSXPCI57204M** (4)	–
	TSXP573634M	**TSXP574634M**	**TSXP575634M**	–	–
	–	–	–	–	–
	TSXP57354M	**TSXP57454M**	**TSXP57554M**	–	**TSXPCI57354M** (4)


	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
	TSXP57303AM	–
	TSXP573623AM	–
	TSXP57353AM	**TSXP57453AM**
	–	**TSXP574823AM**

(6) with PL7 V4.4 min.

Memory extensions for Unity Pro processors

3

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

(1) By configuration, the user can reserve part of the memory space for data storage (recipes, production data) on request.

(2) These cards have an additional SRAM area for storing data (recipes, production data).

(3) Backup cartridge of the program when this one reside entirely in PLC internal memory.

Memory extensions for PL7 processors

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

(4) The 1st value corresponds to the size of the application area, the second to the size of the additional data area for storing data (recipes, production data, etc).

(5) These cards have an additional SRAM area for storing application object symbols.

(6) 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.)
	Dimensions W x D x P		
Catalog number 4 positions	188 x 160 x 151.5 mm (3)	–	**TSXRKY4EX**
6 positions	261.6 x 160 x 151.5 mm (3)	**TSXRKY6**	**TSXRKY6EX**
8 positions	335.3 x 160 x 151.5 mm (3)	**TSXRKY8**	**TSXRKY8EX**
12 positions	482.6 x 160 x 151.5 mm (3)	**TSXRKY12**	**TSXRKY12EX**

(3) Hight 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
		–	Set of 2
Catalog number		–	**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				
Connection		By screw terminals TSXBLY01 (1)		By HE 10 connector (2) high density		
Number of isolated channels		8	16	16 (3)	32	64
Input voltage	24 VDC	**TSXDEY08D2**	**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	
Connection		By screw terminals TSXBLY01 (1)		By HE10 conn. (2)		By screw terminals TSXBLY01 (1)			
Number of protected channels		8	16	32	64	8	16	8	16
Output voltage/current	24 VDC/0.5 A	**TSXDSY08T2**	**TSXDSY16T2**	–	–	–	–	–	–
	24 VDC/2 A	**TSXDSY08T22**	–	–	–	–	–	–	–
	24 VDC/0.1 A	–	–	**TSXDSY32T2K**	**TSXDSY64T2K**	–	–	–	–
	48 VDC/1 A	**TSXDSY08T31**	–	–	–	–	–	–	–
	48 VDC/0.25 A	–	**TSXDSY16T3**	–	–	–	–	–	–
	24–48 VDC-24–240 VAC/5 A Th.c	–	–	–	–	**TSXDSY08R5A**	–	–	–
	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	
Connection		By HE 10 connector (2) high density	
Number of inputs		16 high-speed	
Number of protected outputs		12 solid state	12 reflex or timed
Output voltage/current	24 VDC/0.5 A	**TSXDMY28FK**	**TSXDMY28RFK**

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

Connection accessories: See www.us.telemecanique.com

Analog I/O modules

Type of module		Analog input					
		High level with common point			High level isolated	Low level isolated	
Connection		By 25-way SUB-D connector					By terminal block (1)
Number of channels		4 high-speed	8	16	8	16	4
Resolution		16 bits	12 bits		16 bits	16 bits	16 bits
Isolation	Between channels	Common point	Common point	Common point	± 200 VDC	± 100 VDC	± 2830 Vrms
	Between channels and earth	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1000 Vrms	~ 1780 Vrms
Catalog number	High level input (2)	**TSXAEY420**	**TSXAEY800**	**TSYAEY1600**	**TSXAEY810**	–	–
	Multi-range	–	–	–	–	**TSXAEY1614** (3)	**TSXAEY414** (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)	**TSXASY410**	**TSXASY800**

(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

Automation platform
Counter modules

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	4	2	128 cams
Number of axes	–	–	–	1
Catalog number	**TSXCTY2A**	**TSXCTY4A**	**TSXCTY2C**	**TSXCCY1128**

(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 Ex 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**	**Please consult your Schneider Electric agency**
	With display unit TSXXBTH100	**TSXISPY111**	**Please consult your Schneider Electric agency**

Connection accessories: See 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)	**TSXSCP114**	**TSXSCY11601**	**TSXSCP114**	**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 Modbus Plus	Fipway	Fipio (agent function)
Name and description	PCMCIA card	PCMCIA card	PCMCIA card
Speed	1 Mbps	1 Mbps	1 Mbps
Catalog number	**TSXMBP100**	**TSXFPP20**	**TSXFPP10**

Connection accessories: See www.us.telemecanique.com

Automation platform

Processors under Unity Pro software

Type of processor		Simple applications	Simple and medium complexity applications
Max. number of discrete I/O (1)	Local	Unlimited (27 slots max.) 2 racks (1 main + 1 extension)	
	Decentralized/distributed	31744 inputs (RIO)/8000 inputs (DIO) and 31744 outputs (RIO)/8000 outputs (DIO)	
Max. number of analog I/O (1)	Local	Unlimited (27 slots max.)	
	Decentralized/distributed	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
Type of application-specific I/O		Intrinsically safe I/O, counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus	
Communication ports (2)	Integrated Modbus	2 RS 232/RS 485	2 RS 232
	Modbus Plus	1 integrated, 2 in local rack	1 integrated, 6 in local rack
	Ethernet TCP/IP	2 in local rack	6 in local rack
	Fieldbus	Profibus DP: 2 in local rack	INTERBUS/Profibus DP: 6 in local rack
Memory capacity	Integrated	2 Mb	2 Mb
	With PCMCIA extension	_	_
	Data storage	_	_
Catalog number		**140CPU31110**	**140CPU43412U**

(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/*Pro*WORX software

Type of processor		Simple applications	
Max. number of discrete I/O (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)	
Max. number of analog I/O (1)	Local	Unlimited (27 slots max.)	
	Decentralized/distributed	1984 inputs (RIO)/500 inputs (DIO) and 1984 outputs (RIO)/500 outputs (DIO)	
Type of application-specific I/O		Intrinsically safe I/O, counter, motion control, high-speed interrupt inputs, time-stamp, serial link, AS-Interface sensor/actuator bus	
Communication ports (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	
Memory capacity	Integrated	256 Kb	512 Kb
Catalog number	Concept/*Pro*WORX	**140CPU11302**	**140CPU11303**

(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		
	140CPU65150	**140CPU65160**	**140CPU67160**


	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	4 Mb
	140CPU43412A (3)	**140CPU53414B** (3)

Automation platform
Power supply modules (1)

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.

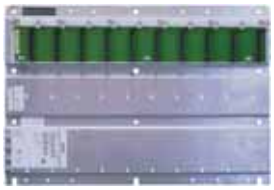
PCMCIA memory extensions

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 1st value corresponds to the size of the application area, the second to the size of the additional data area for storing data (recipes, production data, etc).

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

Racks



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		–	140XBE10000

(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

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

(1) For negative logic, replace 00 at the end of the 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	2 groups of 6
Output voltage/current	5 VDC TTL/0.075 A (2)	–	**140DDO15310**	–	–	–	–
	24 VDC/0.5 A	–	**140DDO35301**(1)	–	–	–	–
	10–30 VDC/0.5 A (3)	–	**140DVO85300**	–	–	–	–
	19.2–30 VDC/0.5 A	–	–	–	–	**140DDO36400**	–
	10–60 VDC/2 A	–	–	–	**140DDO84300**	–	–
	24–125 VDC/0.75 A	–	–	–	–	–	**140DDO88500**
	24–48 VAC/4 A	–	–	**140DAO84220**	–	–	–
	24–115 VAC/4 A	**140DAO84010**	–	–	–	–	–
	24–230 VAC/ 4-3 A	**140DAO84000**	**140DAO85300**	–	–	–	–
	100–230 VAC/4-3 A	–	–	**140DAO84210**	–	–	–

(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 Solid state			Discrete outputs Relay	
Connection	By screw terminals 140XTS00200 (to be ordered separately)				–
Number of I/O	2 groups of 8/2 groups of 4		1 group of 4/ 4 isolated	–/16 NO	–/8 NO/NC
Input voltage	24 VDC	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	**140DDM39000**	**140DAM59000**	**140DDM69000**	**140DRA84000**	**140DRC83000**

Connection accessories: See 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.

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

3

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-[EEx 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			
Speed		10/100 Mbps			
Standard services		TCP/IP(Modbus)			
Transparent Ready	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
Web server	Standard services	Yes	Yes	Yes	Yes
	FactoryCast services	–	–	Yes	Yes
	FactoryCast HMI services	–	–	–	Yes
Catalog number		**140CPU651** (1)	**140NOE77101**	**140NOE77111**	**140NWM10000**

(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)
Name and description	Integrated link	In-rack	In-rack	In-rack
Speed	1 Mbps	167 Kbps	1 Mbps	9,6 K–12 Mbps
Catalog number	**140CPU** (4)	**140EIA92100**	**140NOA61100**	**140CRP81100**

(2) Compatible with concept and *Pro*WORK32 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	ASCII
Name and description	Integrated link	In-rack
Speed	19.2 Kbps	19.2 Kbps
Catalog number	**140CPU** (5) (6)	**140ESI06210**

(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

Unity™ software
For Modicon Premium, Quantum and Atrium slot PLCs

3

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**	**UNYSPULZFCD22**
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**	**UNYSPUEZFCD22**

(1) From Concept M et PL7 junior.

(2) From Concept M, PL7 junior, *Pro*WORX NxT and *Pro*WORX 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

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	UAGSEWLFFCD22

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

Programming software
For Modicon TSX Micro and Premium

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.

Type of software		PL7 Micro for TSX Micro platform			
Type of license version 4.5		Single (1 station)	Single with SyCon V2.8	Group (3 stations)	Open Team (10 stations)
Catalog number	Software package (1)	TLXCDPL7MPPU45M	TLXCDPL7MPPC45M	TLXCD3PL7MPPU45M	TLXOTPL7MP45M
	Update (2)	TLXRCDPL7MP45M	TLXRCDPL7MPC45M	TLXRCD3PL7MP45M	–
		PL7 Junior for TSX Micro/Premium and Atrium coprocessor platforms			
Type of license version 4.5		Single (1 station)	Group (3 stations)		
Catalog number	Software package (1)	TLXCDPL7JPU45M	TLXCD3PL7JPU45M		
	Update (2)	TLXRCDPL7JP45M	TLXRC3DPL7JP45M		
	Upgrade (3)	TLXUCDPL7JP45M	TLXUCD3PL7JP45M		
		PL7 Pro for TSX Micro/Premium and Atrium coprocessor platforms			
Type of license version 4.5		Single (1 station)	Group (3 stations)	Open Team (10 stations)	Open Site
Catalog number	Software package (1)	TLXCDPL7PPU45M	TLXCD3PL7PPU45M	TLXOTPL7PP45M	TLXOSPL7PP45M
	Update (2)	TLXRCDPL7PP45M	TLXRCD3PL7PP45M	–	–
	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

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

Development of applications in C language

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

Comparison of PL7 applications

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

Availability of control systems based on Premium platforms

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

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**

*Pro*WORX for Modicon Quantum, Momentum

***Pro*WORX 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.

*Pro*WORX 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		*Pro*WORX for Quantum/Momentum platforms			
Type of license version 2.0		Single (1 station)	Group (3 stations)	Multi-user (10 stations)	Site
Software catalog numbers	*Pro*WORX 32 Server	**372SPU78001PSEV**	–	–	–
	*Pro*WORX 32 Suite	**372SPU78001PSSV**	–	–	–
	*Pro*WORX 32 Client, Full Dev.	**372SPU78001PDEV**	**372SPU78001PSTH**	**372SPU78001PSTE**	**372SPU78001SITE**
	*Pro*WORX 32 Online	**372SPU78101PONL**	–	–	–
	*Pro*WORX 32 Lite	**372SPU71001PLDV**	**372SPU71001PLTH**	**372SPU71001PLTE**	–
Upgrade to *Pro*WORX 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

3

Type of module	Discrete inputs			
Connection	By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)			
Input voltage	24 VDC		120 VAC	230 VAC
Number of channels	16 (1 common point)	32 (2 common points)	16 (2 common points)	
Dimensions W x D x H	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	**170ADI34000**	**170ADI35000**	**170ADI54050**	**170ADI74050**

Type of module		Discrete outputs						
		Solid state			Triac			
Connection		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)						
Output voltage		5–24 VAC, 24–230 VAC	24 VDC		120 VAC		230 VAC	
Number of protected channels		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)
Output current	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
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		**170ADO83030**	**170ADO34000**	**170ADO35000**	**170ADO53050**	**170ADO54050**	**170ADO73050**	**170ADO74050**

Type of module		Discrete I/O							
		Solid state					Relay		Triac
Connection		By screw terminals 170XTS00100 or spring terminals 170XTS00200 (to be ordered separately)							
Number of channels	Inputs	16 (1 common pt)	16 (4 com. pts)	16 (1 com. pt)	10 (1 common pt)				
	Input logic	Positive	Positive (1)	Negative	Positive			–	
	Outputs	16 (1 common pt)	16 (2 common pts)		8/4 (1 com. pt)	12	8 (2 common pts)		8 (1 com. pt)
Input voltage		12–48 VDC	24 VDC						120 VAC
Output voltage		12–48 VDC	24 VDC				24–230 VAC/20–115 VDC		120 VAC
Output current	Per output	0.5 A	0.5 A		2 A	0.5 A	2 A		0.5 A
	Per group of channels	–	4 A		4 A	4/2 A	8 A		4 A
	Per module	8 A	8 A		8 A	6 A	16 A		4 A
Dimensions W x D x H		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		**170ADM85010**	**170ADM35010**	**170ADM35015**	**170ADM37010**	**170ADM39010**	**170ADM39030**	**170ARM37030**	**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

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	± 5 V, ± 10 V, ± 20 mA, 1–5 V, 4–20 mA	± 5 V, ± 10 V, 4–20 mA	Multi-range ± 25 mV, ± 10 mV (1)
Resolution	14 bits + sign, 15 bits unipolar	12 bits + sign	15 bits + sign
Dimensions W x D x H	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	**170AAI03000**	**170AAI14000**	**170AAI52040**

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

Type of module		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		± 10 V, 0–20 mA	± 10 V, 4–20 mA	± 5 V, ± 10 V, ± 20 mA, 1–5 V, 4–20 mA	0–10 V	± 10 V
Output signal		–		± 10 V, 4–20 mA	0–10 V	± 10 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		**170AAO12000**	**170AAO92100**	**170AMM09000**	**170ANR12090**	**170ANR12091**

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	**170AEC92000**	**170ADM54080**

Communication modules




Type of module	Ethernet TCP/IP network		Fipio fieldbus	InterBus (1) fieldbus	Profibus DP fieldbus
Speed	10 Mbps	10/100 Mbps	1 Mbps	0.5 Mbps	9.6 K–12 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 Modbus Plus		DeviceNet
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

M1/M1E processors

Type of processor		M1				
Number of I/O	Discrete	2048 I/O			2048 I/2048 Q	8192 I/O
	Registers	2048 words			4096 words	26048 words
Integrated communication ports	Modbus	1 RS 232C		1 RS 232C + 1 RS 485	1 RS 232C	1 RS 232C + 1 RS 485
	Ethernet TCP/IP	–				
	I/O bus (1)	–			1 I/O port	–
Transparent Ready	Embedded Web server	–				
Memory capacity	RAM	64 Kb			256 Kb	512 Kb
	Flash	256 Kb			256 Kb	512 Kb
	User, 984 LL language (2)	2.4 K			12 K	18 K
	User, IEC language (3)	–			160 K	240 K
	Data	2 K			4 K	24 K
Cycle time		1 ms/K	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		–	
	Ethernet TCP/IP	–	1 integrated Ethernet port			
	I/O bus (1)	1 I/O port	–		1 I/O port	
Transparent Ready	Embedded Web server	–	Standard services (class A10)			
Memory capacity	RAM	512 Kb	544 Kb			
	Flash	512 Kb		1 Mb	512 Kb	1 Mb
	User, 984 LL language (2)	18 K				
	User, IEC language (3)	240 K	–	200 K	–	200 K
	Data	24 K				
Cycle time		1 ms/K	0.3 ms/K			
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”.

3

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 (Rapide Scanning 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	8 x 10/100BASE-TX 2 x 10/100/1000-TX	8 x 10/100BASE-TX	2 max. @ 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. configur-able 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 (Rapide Scanning 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 (volt-free contact 1 A max. under 24 VAC)					
Catalog number			**TCSESM163F23F0**	**TCSESM163F2CU0**	**TCSESM243F2CU0**	**TCSESM103F23G0**	**TCSESM103F2LG0**	**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)