



# PacDrive 3 LMC Eco/Pro2

Motion controllers for automating machines/  
lines with 0 - 130 servo or robot axes

# Quick access to product information

## Get technical information about your product

References

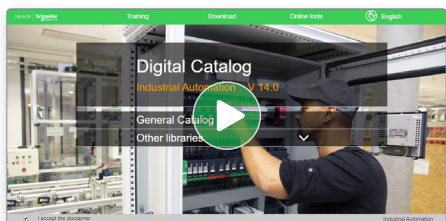
**Modicon TM3**  
I/O expansion modules for Modicon controllers  
Analog I/O modules

Number and type of channels	Input range	Output range	Resolution	Input format (mA)	Reference	Weight (kg)
2 voltage/current inputs	-15...+15 VDC 0...20 mA r.t. 20 mA	16.00V or 12.00V r.t. 12.00V	16.00V or 12.00V	Source Sink	TM3AI2H TM3AI2G	0.110 0.100
4 voltage/current inputs	-15...+15 VDC 0...20 mA r.t. 20 mA	16.00V or 12.00V r.t. 12.00V	16.00V or 12.00V	Source Sink	TM3AI4H TM3AI4G	0.110 0.100
4 differential temperature inputs (I <sup>2</sup> C, R, S, T, N, E, C)	Thermopiles or RTD (PT100, NI1000, PT100, PT200) -20...125 °C 0...20 mA r.t. 20 mA	16.00V or 12.00V r.t. 12.00V	16.00V or 12.00V	Source Sink	TM3TI4H TM3TI4G	0.110 0.100
4 differential temperature inputs (I <sup>2</sup> C, R, S, T, N, E, C)	Thermopiles or RTD (PT100, NI1000, PT100, PT200) -20...125 °C 0...20 mA r.t. 20 mA	16.00V or 12.00V r.t. 12.00V	16.00V or 12.00V	Source Sink	TM3TI4H TM3TI4G	0.110 0.100
8 self-diagnosing	-15...+15 VDC	16.00V or 12.00V r.t. 12.00V	16.00V or 12.00V	Source Sink	TM3AI8H TM3AI8G	0.110 0.100

Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual

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Motion controllers for automating machines/lines

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To be competitive in today's digital era, machine builders must be innovative. Smart machines, those that are better connected, more flexible, more efficient, and safe, are enabling machine builders to innovate in ways never before possible.

EcoStruxure, Schneider Electric's open, IoT-enabled architecture and platform, offers powerful solutions for the digital era. As part of this, EcoStruxure Machine brings powerful opportunities for machine builders and OEMs, empowering them to offer smart machines and compete in the new, digital era.

EcoStruxure Machine brings together key technologies for product connectivity and edge control on premises, and cloud technologies to provide analytics and digital services. EcoStruxure Machine helps you bring more innovation and added value to your customers throughout the entire machine life cycle.

**Innovation at Every Level for Machines is full systems across three layers:**

- Connected products  
Our connected products for measuring, actuating, device level monitoring, and control adhere to open standards to provide unmatched integration opportunities and flexibility
- Edge Control  
We are IIoT-ready with a proven set of tested and validated reference architectures that enable the design of end-to-end open, connected, and interoperable systems based on industry standards. Ethernet and OPC UA facilitates IT/OT convergence meaning machine builders reap benefits from web interfaces and cloud.

- Apps, Analytics & Services  
Seamless integration of machines to the IT layer allows the collection and aggregation of data ready for analysis – for machine builders and end users alike this means increased uptime and the ability to find information faster for more efficient operations and maintenance.

**These levels are completely integrated from shop floor to top floor. And we have cloud offers and end-to-end cybersecurity wrapped around.**

EcoStruxure Machine makes it easier for OEMs/ machine builders to offer their customers smarter machines. The advent of smart machines is driven by the changing needs of end users:

- Evolving workforce
- Reducing costs
- Dynamic markets
- Shorter life cycles
- Prioritizing safety and cybersecurity

EcoStruxure Machine provides one solution for the whole machine life cycle:

- With Smart Design & Engineering the time to market is reduced by up to 30% using our automated engineering and the simulation capabilities
- During Commissioning & Operation of the machine, resources such as energy, material and loss can be improved, and with seamless integration to the IT world efficiency can be improved by up to 40%
- Smart Maintenance & Services reduces the time for corrective actions up to 50%






# EcoStruxure™ Machine



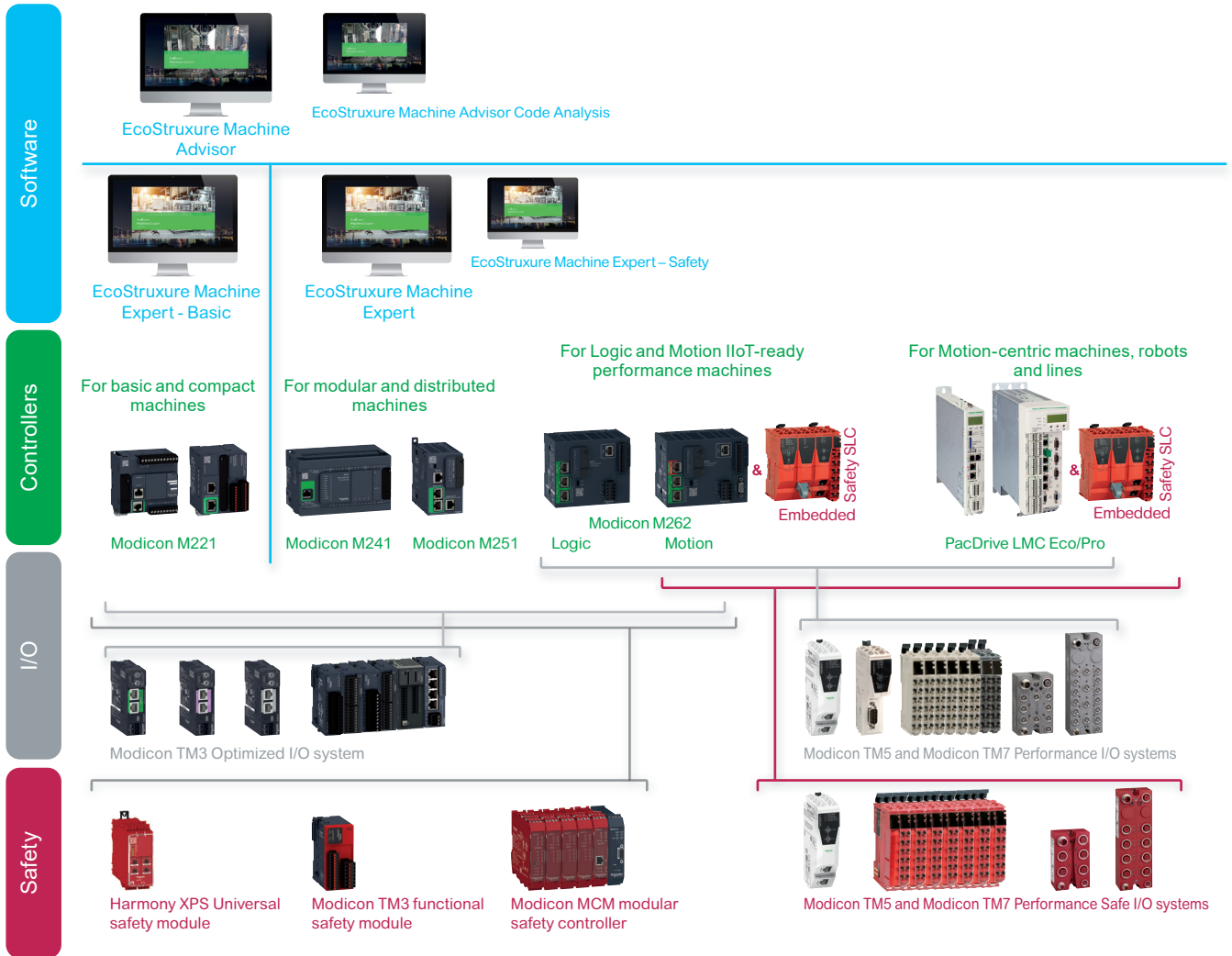
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# PacDrive 3 LMC Eco/Pro2

Motion controllers for automating machines/lines  
Controllers for industrial machines

Applications		Logic controller			Logic/motion controller	Motion controller	
Type	Specification	For hardwired architectures	For performance-demanding applications	For modular and distributed architectures	IIoT ready for performance machines	For automating machines/lines with 0 - 130 servo or robot axes	
							
<b>Performance</b>		0.2 µs/inst	22 ns/inst	22 ns/inst	3...5 ns/inst	0.5...2 ns/inst	
<b>Memory</b>		640 KB RAM, 2 MB Flash	64 MB RAM, 128 MB Flash	64 MB RAM, 128 MB Flash	192 MB RAM, 256 MB Flash	128 KB to 256 KB NV RAM, 512 MB DDR2 to 1 GB DDR3L	
<b>Supply voltage</b>		24 V $\overline{\text{---}}$ or 100...240 V $\sim$	24 V $\overline{\text{---}}$ or 100...240 V $\sim$	24 V $\overline{\text{---}}$	24 V $\overline{\text{---}}$	24 V $\overline{\text{---}}$	
<b>Communication fieldbus and networks</b>	Embedded	<ul style="list-style-type: none"> <li>■ EtherNet/IP Adapter</li> <li>■ Modbus TCP</li> <li>■ RS 232/RS 485 Serial Line</li> <li>■ USB mini-B programming port</li> </ul>	<ul style="list-style-type: none"> <li>■ EtherNet/IP</li> <li>■ Modbus TCP</li> <li>■ CANopen (master) and SAE J1939</li> <li>■ Serial Line</li> <li>■ USB mini-B programming port</li> </ul>	<ul style="list-style-type: none"> <li>■ EtherNet/IP</li> <li>■ Modbus TCP</li> <li>■ CANopen (master) and SAE J1939</li> <li>■ Serial Line</li> <li>■ USB mini-B programming port</li> </ul>	<ul style="list-style-type: none"> <li>■ EtherNet/IP</li> <li>■ Modbus TCP</li> <li>■ Sercos III</li> <li>■ Serial Line</li> <li>■ USB mini-B programming port</li> </ul>	<ul style="list-style-type: none"> <li>■ EtherNet/IP</li> <li>■ Sercos III</li> <li>■ CANopen</li> <li>■ Profibus</li> <li>■ Profinet</li> <li>■ EtherCAT</li> </ul>	
	OPC Unified Architecture (OPC UA)	–	■ Server	■ Server	<ul style="list-style-type: none"> <li>■ Server (encrypted)</li> <li>■ Client (encrypted) (depending on reference)</li> </ul>	<ul style="list-style-type: none"> <li>■ Server (encrypted)</li> <li>■ Client (encrypted)</li> </ul>	
	Optional	■ 1 Serial Line	<ul style="list-style-type: none"> <li>■ Ethernet</li> <li>■ Profibus DP</li> </ul>	<ul style="list-style-type: none"> <li>■ Ethernet</li> <li>■ Profibus DP</li> </ul>	<ul style="list-style-type: none"> <li>■ Ethernet, EtherNet/IP Adapter</li> <li>■ CANopen Master</li> </ul>	<ul style="list-style-type: none"> <li>■ CANopen</li> <li>■ Profibus DP</li> <li>■ RT-Ethernet</li> </ul>	
<b>Embedded I/O</b>	Input types	Up to 40 logic inputs 2 analog inputs	Up to 24 logic inputs	–	4 fast digital inputs	Up to 20 digital inputs Up to 16 touch probe inputs Up to 4 interrupt inputs Up to 2 analog inputs	
	Output types	Up to 16 relay outputs Up to 16 transistor outputs	Up to 16 transistor outputs	–	4 fast digital outputs	Up to 16 digital outputs Up to 2 analog outputs	
<b>Synchronized axes</b>		–	–	–	Up to 24 synchronized axes	Up to 130 synchronized axes	
<b>Configuration software</b>		EcoStruxure Machine Expert-Basic	EcoStruxure Machine Expert				
<b>Compatible expansion I/O module ranges</b> (Consult the catalog)	Local I/O	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	–	
	Remote I/O	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	–	
	Distributed I/O on Ethernet	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> ) ● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> ) ● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> ) ● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> )	● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> )	
	Distributed I/O on CANopen	–	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> ) ● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> ) ● Modicon TM7 ( <a href="#">DIA3ED2140405EN</a> )	
	Distributed I/O on Sercos	–	–	–	● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> )	● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> )	
	Distributed I/O on Modbus Serial Line	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	–	
	Safety I/O	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> )	● Modicon TM3 ( <a href="#">DIA3ED2140109EN</a> ) ● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> ) ● Modicon TM7 ( <a href="#">DIA3ED2140405EN</a> )	● Modicon TM5 ( <a href="#">DIA3ED2131204EN</a> ) ● Modicon TM7 ( <a href="#">DIA3ED2140405EN</a> )	
<b>Controller range</b>	<b>Modicon M221/M221 Book</b>	<b>Modicon M241</b>	<b>Modicon M251</b>	<b>Modicon M262</b>	<b>PacDrive LMC Eco, LMC Pro2</b>		
<b>More details in catalog</b>	<a href="#">DIA3ED2140106EN</a>	<a href="#">DIA3ED2140107EN</a>	<a href="#">DIA3ED2140108EN</a>	<a href="#">DIA3ED2180503EN</a>	<a href="#">DIA7ED2160303EN</a>		

## Machine Automation



### Machine control

The scalability and consistency of I/O ranges allow you to select the right offer depending on your needs

Embedded Safety provides holistic solutions to Modicon M262 and PacDrive 3 LMC controllers, increasing overall safety demand in Machine Automation

All of those devices are managed within a single software, **EcoStruxure Machine Expert**, a powerful and collaborative engineering environment

- > From basic to motion- and robot-centric machines with the PacDrive 3 offer, Modicon controllers and solutions bring a consistent and scalable response to achieving flexibility, performance, productivity and digitization.
- > Modicon TM3 Optimized I/O system for more compact and modular machines
- > Modicon TM5 for more performance-demanding machines, with Modicon TM7 for harsh environments: Both Performance I/O ranges (Modicon TM5 and Modicon TM7) allow safety functions to be implemented using Modicon TM5CSLC safety logic controller
- > Harmony XPS Universal safety modules cover a wide range of safety functions, suitable for small applications with 4-5 safety functions, with diagnostic information provided to controllers via a single wire connection
- > Modicon TM3 safety functional modules are suitable for small applications covering E-Stop functions and diagnostics via TM3 I/O bus
- > Modicon MCM modular safety controllers are suitable for medium size applications with up to 64 dual channel safety functions and diagnostics via Modbus TCP, Modbus RTU, EtherNet/IP, CANopen, EtherCAT and Profibus
- > EcoStruxure Machine Expert – Safety: an optional addon for programming safety logic controllers
- > EcoStruxure Machine Expert – Basic: a software for programming Modicon M221 logic controllers, an intuitive standalone environment accessible to basic skilled technicians
- > EcoStruxure Machine Advisor: a cloud-based services platform designed for machine builders to track machines in operation worldwide, monitor performance data and resolve exceptional events, while reducing support costs by up to 50%

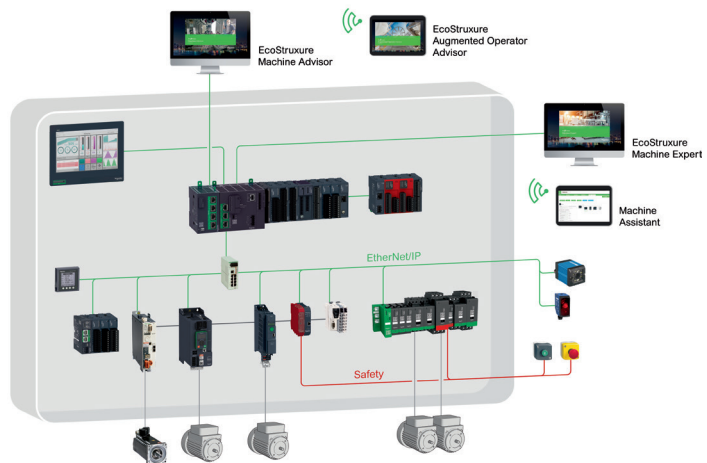
#### Machine Automation

#### Comprehensive Schneider offers for machine builders

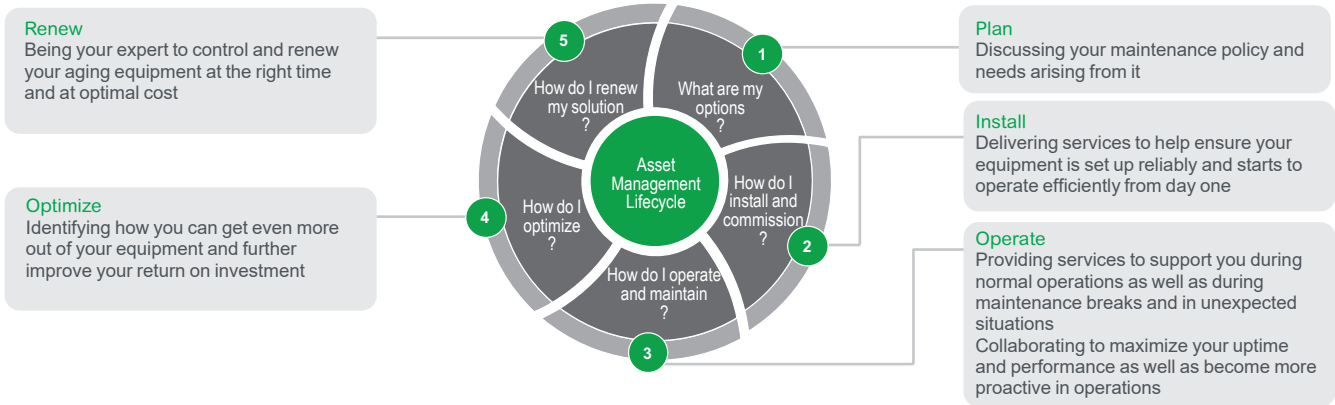
- > Lexium servo drives, motors and robotics are designed to control applications ranging from a single independent axis up to high-performance synchronized multi-axis machines requiring high-speed and precise positioning and movements



- > The Lexium offer is designed for a broad range of motion-centric machines in applications such as [Packaging](#), [Material Handling](#), [Material Working](#), [Food and Beverage](#) and Electronics
- > Schneider Electric has developed Tested Validated & Documented Architectures (TVDA) applicable for generic machine control applications as well as for dedicated segment applications such as Packaging, Material Handling, Material Working, Hoisting, Pumping, or generic [Machine Control applications](#)



#### Choose Schneider Electric to help secure your investment and benefit from worldwide services at every step of your project



- > From planning and inception to modernization, we help ensure optimal technical and business performance. Our field service engineers combine 30+ years of manufacturer-level experience with the latest technology to bring innovation to every level of our offer and every step of your project.
- > Our machine control dedicated services empower you to maximize your business infrastructure and face increasingly stringent demands on productivity, safety, equipment availability and performance optimization.

# PacDrive 3 LMC Eco/Pro2

Motion controllers for automating machines/lines  
Scalable performance for high-performance industrial machines

## Scalable performance for high-performance industrial machines

PacDrive LMC motion controllers cover a wide range of applications.

### > Full software compatibility

PacDrive LMC motion controllers are a broad family of twelve different controllers, with a powerful CPU for applications requiring 0 to 130 synchronized axes (at 1 msec network update rate)

- up to 130 servo axes, and up to 255 virtual axes
- with multiple fieldbuses used in parallel to Sercos: CANopen, Profibus DP, etc.

All controllers are software-compatible, thanks to EcoStruxure™ Machine Expert programming software, a Logic Motion Runtime software:

- same runtime
- same libraries
- same engineering tool
- same diagnostic tools
- same support of drives, IOs, etc.

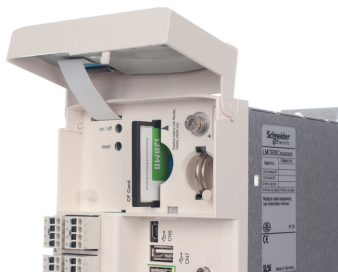
Up to 4096 dynamic electronic cam disks can be programmed to operate in parallel. The program can switch between electronic cam disks during operation. All controllers have an integrated PLC (5 µsec for 1000-bit instructions).

### > Benefits for you and your customers

- **Diagnostics functionalities included:** integrated software oscilloscope and message logger
- **Outstanding performance:** powerful motion engine
- **Connectivity:** broad support of fieldbuses and IT communication protocols
- **Service-oriented:** memory card for storing/transferring programming and configuration data
- **Easy to service:** no PC required, integrated plaintext display in five languages for system messages and diagnostics



PacDrive LMC motion controllers



Memory card



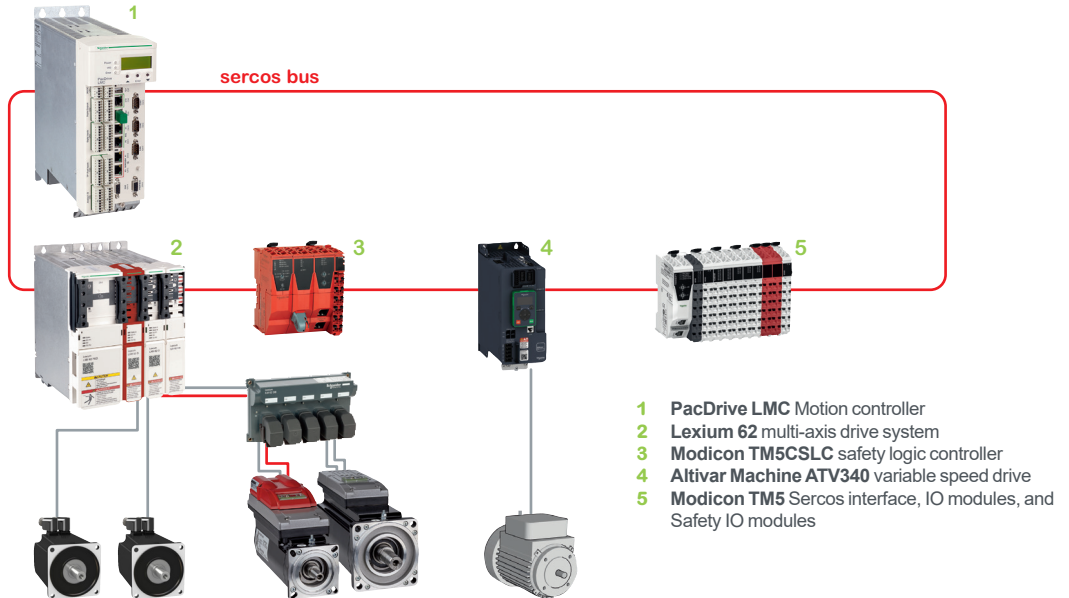
**sercos**  
the automation bus

- Cat 5e
- Baudrate: 100 Mbps
- Cycle time: 1...4 ms

## Ethernet-based communication with Sercos

Sercos is the preferred automation bus for PacDrive:

- Drive communication
- I/O communication
- Safe communication and non realtime IP communication
- All embedded in one cable



- 1 PacDrive LMC Motion controller
- 2 Lexium 62 multi-axis drive system
- 3 Modicon TM5CSLC safety logic controller
- 4 Altivar Machine ATV340 variable speed drive
- 5 Modicon TM5 Sercos interface, IO modules, and Safety IO modules

### > Key benefits of Sercos for PacDrive

- **Universal:** fully integrated Ethernet-based solution for drive, fieldbus, and safety communication
- **Reliable:** media redundancy to reduce probability of failure
- **Powerful:** network update rate of 1...4 ms for 130 servo axes. Less than 100 ns jitter
- **Cost-effective:** simple, no hub or switches, Cat 5e cable is generally sufficient
- **High availability:** Sercos supports all PacDrive functions for automating the setup of servo drives/motors, including assignment of bus address
- **Vendor-neutral:** supported by more than 50 controller manufacturers and 30 drive manufacturers
- **Green:** Sercos energy profile defines rules for creating standardized energy modes

### > Flexible I/O design with standard and safe I/O

The modular Schneider Electric Modicon TM5 (1) and Modicon TM7 (1) systems for Sercos provide I/O technology with IP 20 and IP 67 protection. Safe communication versions of both TM5 and TM7 safety modules are available, color-coded to clearly differentiate them from standard technology. Standard and safe I/O modules can be mixed.

### > Connectivity

- In addition to the Sercos automation bus, PacDrive LMC motion controllers support the following communication standards:

Fieldbuses	IT protocols	Serial communication
<ul style="list-style-type: none"> <li>- Profinet</li> <li>- Profibus DP</li> <li>- CAN</li> <li>- EtherNet/IP</li> <li>- EtherCat</li> <li>- Modbus TCP</li> </ul>	<ul style="list-style-type: none"> <li>- TCP/IP</li> <li>- UDP/IP</li> <li>- OPC UA</li> <li>- FTP</li> <li>- HTTP (embedded web visualization)</li> </ul>	<ul style="list-style-type: none"> <li>- USB / serial interface</li> </ul>

- Optional expansion cards are also available for all controllers to implement additional fieldbus interfaces such as EtherNet/IP. USB and serial interfaces are also standard in all controllers. The PacDrive LMC controllers also have a Profibus DP interface (Master and Slave).

(1) For more information, Please refer to [Modicon TM5, High-Performance and Safe IP20 Modular I/O System catalog](#), and [Modicon TM7, High-Performance and Safe IP67 Distributed I/O System catalog](#).



# PacDrive 3 LMC Eco/Pro2

Motion controllers for automating machines/lines

Characteristics

Motion controller type	PacDrive LMC Eco						PacDrive LMC Pro2		
	LMC100	LMC101	LMC106	LMC201	LMC212	LMC216	LMC402	LMC802	LMC902



Number of drives	0 servo axes	4 servo axes	6 servo axes	8 servo axes	12 servo axes	16 servo axes	16 servo axes	130 servo axes	130 servo axes	
Processor	Intel Atom 1.6 GHz						Intel Celeron 2000E 2.2 GHz	Intel Celeron 2000E 2.2 GHz	Intel Core i5 4410E 2.9 GHz	
	512 KB L2 Cache						2 MB Smart Cache	2 MB Smart Cache	3 MB Smart Cache	
RAM	512 MB DDR2 RAM						1 GB DDR3L			
NV RAM	128 KB						256 KB			
Power supply	Supply voltage	24 VDC						24 VDC		
	Supply consumption	30 W						36 W		
Battery	Yes						Yes			
Memory card	At least 512 MB (SD Card)						At least 128 MB (CF Card)			
Cooling	Passive						Fan			
Real-Time Clock (RTC)	Yes						Yes			
Real-Time Operating System	VxWorks and SEAAutomation Kernel						VxWorks and SEAAutomation Kernel			
Input	Digital input	8						20		
	Touchprobe input	4						16		
	Interrupt input	-						4		
	Analog input	-						2		
Output	Digital output	8						16		
	Analog output	-						2		
Integrated communication	CAN	1 (9 pin SUB-D plug x1)						1 (9 pin SUB-D plug x1)		
	RS232	1 (RJ45 x1)						1 (9 pin SUB-D plug x1)		
	RS422/RS485	1 (RJ45 x1)						1 (9 pin SUB-D plug x1)		
	USB-A	1 (USB x1)						1 (USBx1)		
	Profibus DP-DP	-						1 (9 pin SUB-D socket x1)		
	Master encoder	1 (RJ45 x1)						1 (9 pin SUB-D socket x1)		
	Ethernet	1 (RJ45 x1)						1 (RJ45 x1)		
	Realtime Ethernet	-						1 (RJ45 x2)		
	Sercos	1 (RJ45 x2)						1 (RJ45 x2)		
	PacNet	-						1 (RJ45 x1)		

Motion controller type	PacDrive LMC Eco	PacDrive LMC Pro2
	LMC100, LMC101, LMC106, LMC201, LMC212, LMC216	LMC402, LMC802, LMC902

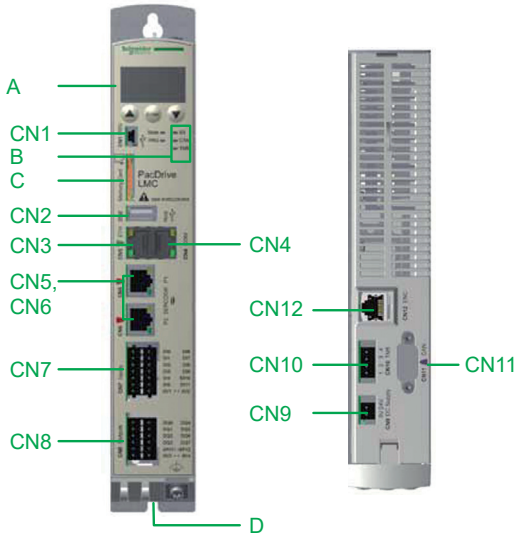


Integrated I/O				
<b>Touchprobe input</b>	Number	4	16	
	Nominal input voltage	24 VDC		
	Input filter	100 µs		
	TP0 to TP15	10 µs		
<b>Digital input</b>	Number	8	20	
	Nominal input voltage	24 VDC		
	Input filter	–	1 or 5 ms (can be parameterized)	
<b>Interrupt input</b>	Number	–	4	
	Nominal input voltage	–	24 VDC	
	Input filter	–	0.1 or 1 ms (can be parameterized)	
<b>Analog input</b>	Number	–	2	
	Type	–	Voltage/current	
	Range	–	- 10...10 V (resistor 100 kOhm) - 20...20 mA	
	Resolution	–	12 bits	
<b>Digital output</b>	Number	8	16	
	Output voltage	24 VDC		
	Nominal current (I <sub>e</sub> )	100 mA per output	250 mA per output	
	Transmission time	100 µs		
	Short-circuit protection	Yes		
<b>Analog output</b>	Number	–	2	
	Type	–	Voltage	
	Range	–	-10...10 V	
	Resolution	–	12 bits	
Communication				
<b>Bus connections</b>	Integrated motion bus	Sercos		
	Integrated additional fieldbus connection (configuration 1)	CANopen (Master/Slave)	Profibus DP Master/Slave and CANopen (2.0B)	
	Integrated additional fieldbus connection (configuration 2)	–	RT-Ethernet (2 ports) and Profibus DP (Master/Slave) or CANopen (2.0B)	
	PacNet interface	–	1	
<b>Communication/ interface</b>	Serial interfaces	COM: RS-232/RS-485	COM1: Not supported COM2: RS-422/RS-485	
	Network connection	1x Ethernet 10/100/1000 Base-T	1x Ethernet 10/100/1000 BASE-T	
	USB connection	1x USB-A-2.0		
	Master encoder interface	1x Hiperface® master encoder or 1x incremental master encoder		
	Programming interface	Ethernet		
	Additional encoder input via PacNet interface	–	Up to 4 Hiperface encoder inputs and up to 8 incremental master encoder outputs	
	Encoder output via PacNet interface	–	Up to 4x incremental encoder outputs	
	Integrated OPC interface	OPC-UA Slave		
	Diagnostic interface for remote maintenance	Ethernet or Modem		
	Communication protocols	HTTP (Hypertext Transfer Protocol) FTP (File Transfer Protocol)		
	Communication modules	1 Option module	Up to 2 Option modules	
		<ul style="list-style-type: none"> <li>■ RT-Ethernet</li> <li>□ Profinet IO-RT (Controller/Device)</li> <li>□ EtherNet/IP (Scanner / Adapter)</li> <li>□ EtherCAT IO (Master/Slave)</li> <li>■ Profibus DP (Master/Slave)</li> </ul>	<ul style="list-style-type: none"> <li>■ CANopen</li> <li>■ Profibus DP</li> <li>■ RT-Ethernet</li> <li>□ Profinet IO-RT (Controller/Device)</li> <li>□ EtherNet/IP (Scanner / Adapter)</li> <li>□ EtherCAT IO (Master/Slave)</li> <li>■ RT-Ethernet x2</li> <li>■ RT-Ethernet and CANopen</li> <li>■ RT-Ethernet and Profibus DP</li> </ul>	

## Description

# PacDrive 3 LMC Eco/Pro2

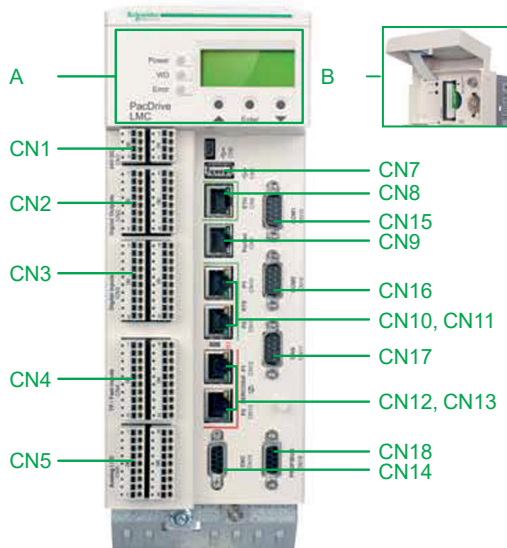
Motion controllers for automating machines/lines  
PacDrive LMC Eco/Pro2 controllers



### PacDrive LMC Eco controller

LMC100, LMC101, LMC106, LMC201, LMC212, LMC216

Item	Function
A	LCD and LED
B	LED connector
C	SD card
D	Optional module slots
CN1	USB master (not active)
CN2	USB Host
CN3	Ethernet 1 GB/s
CN4	COM: RS-232/RS-485
CN5, CN6	Sercos 100 MB/s
CN7	12 digital input and 4 touchprobe input
CN8	8 digital output
CN9	24 VDC power supply
CN10	Not active
CN11	CAN/CANopen
CN12	Master encoder



### PacDrive LMC Pro2 controller

LMC402, LMC802, LMC902

Item	Function
A	LCD and LED
B	CF card and battery
CN1	24 VDC power supply and Watchdog
CN2	16 digital output
CN3	20 digital input
CN4	16 touchprobe input and 4 fast input
CN5	2 analog input and 2 analog output
CN7	USB host
CN8	Ethernet 1GB/s
CN9	PacNet
CN10, CN11	RT-Ethernet 100 MB/s
CN12, CN13	Sercos 100 MB/s
CN14	Master encoder
CN15	COM1: Not supported
CN16	COM2: RS-422/RS-485
CN17	CANopen
CN18	Profibus DP

## PacDrive LMC Eco/Pro2 controllers



(1) For PacDrive LMC Eco controllers.  
(2) For PacDrive LMC Pro2 controllers.

# PacDrive 3 LMC Eco/Pro2

Motion controllers for automating machines/lines  
PacDrive LMC Eco controllers



PacDrive LMC Eco controller

PacDrive LMC Eco controllers				
Size	Max. number of controlled servo axes	Options	Reference	Weight kg/lb
LMC100	0	– (basic)	<a href="#">LMC100CAA10000</a>	2.200/ 4.85
LMC101	4	– (basic)	<a href="#">LMC101CAA10000</a>	
LMC106	6	– (basic)	<a href="#">LMC106CAA10000</a>	
LMC201	8	– (basic)	<a href="#">LMC201CAA10000</a>	
LMC212	12	– (basic)	<a href="#">LMC212CAA10000</a>	
LMC216	16	– (basic)	<a href="#">LMC216CAA10000</a>	

*Nota: Accessory kit included in controller packaging as described below.*

## Spare parts for PacDrive LMC Eco controllers

### Communication modules

Designation	Description	Reference	Weight kg/lb
Communication module Profibus DP	1x 9 pin SUB-D	<a href="#">VW3E704000000</a>	0.080/ 0.18
Communication module Ethernet real time (RT)	2x RJ45 ports	<a href="#">VW3E704100000</a>	0.080/ 0.18

### Spare parts

Designation	Description	Reference	Weight kg/lb
Accessory kit	Complete connector set for PacDrive LMC Eco controllers (100C...216C) and Sercos cable (0.13 m / 0.43ft)	<a href="#">VW3E6019</a>	0.100/ 0.22
SD card	512 MB	<a href="#">VW3E70360AA00</a>	0.025/ 0.06

### Programming software

EcoStructure Machine Expert software *Please refer to our [EcoStructure Machine Expert catalog](#)*



VW3E704000000



VW3E704100000



VW3E6019

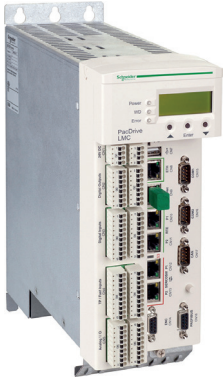


VW3E70360AA00

# PacDrive 3 LMC Eco/Pro2

## Motion controllers for automating machines/lines

### PacDrive LMC Pro2 controllers



PacDrive LMC Pro2 controller

PacDrive LMC Pro2 controllers				
Size	Max. number of controlled servo axes	Options	Reference	Weight kg/lb
LMC402	16	– (basic)	<a href="#">LMC402CAA10000</a>	3.500/ 7.72
		CANopen option module	<a href="#">LMC402CBB10000</a>	
		Profibus DP option module	<a href="#">LMC402CBC10000</a>	
		RT-Ethernet option module	<a href="#">LMC402CBD10000</a>	
		2x RT-Ethernet option modules	<a href="#">LMC402CBG10000</a>	
		1x CANopen option module + 1x RT-Ethernet option module	<a href="#">LMC402CBI10000</a>	
		1x Profibus DP option module + 1x RT-Ethernet option module	<a href="#">LMC402CBL10000</a>	
		Uninterruptible power supply	<a href="#">LMC402CCA10000</a>	
		CANopen option module + Uninterruptible power supply	<a href="#">LMC402CCB10000</a>	
		Profibus DP option module + Uninterruptible power supply	<a href="#">LMC402CCC10000</a>	
		RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC402CCD10000</a>	
		2x RT-Ethernet option modules + Uninterruptible power supply	<a href="#">LMC402CCG10000</a>	
		1x CANopen option module + 1x RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC402CCI10000</a>	
		1x Profibus DP option module + 1x RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC402CCL10000</a>	
		LMC802	130	
CANopen option module	<a href="#">LMC802CBB10000</a>			
Profibus DP option module	<a href="#">LMC802CBC10000</a>			
RT-Ethernet option module	<a href="#">LMC802CBD10000</a>			
2x RT-Ethernet option modules	<a href="#">LMC802CBG10000</a>			
1x CANopen option module + 1x RT-Ethernet option module	<a href="#">LMC802CBI10000</a>			
1x Profibus DP option module + 1x RT-Ethernet option module	<a href="#">LMC802CBL10000</a>			
Uninterruptible power supply	<a href="#">LMC802CCA10000</a>			
CANopen option module + Uninterruptible power supply	<a href="#">LMC802CCB10000</a>			
Profibus DP option module + Uninterruptible power supply	<a href="#">LMC802CCC10000</a>			
RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC802CCD10000</a>			
2x RT-Ethernet option modules + Uninterruptible power supply	<a href="#">LMC802CCG10000</a>			
1x CANopen option module + 1x RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC802CCI10000</a>			
1x Profibus DP option module + 1x RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC802CCL10000</a>			
LMC902	130			– (basic)
		CANopen option module	<a href="#">LMC902CBB10000</a>	
		Profibus DP option module	<a href="#">LMC902CBC10000</a>	
		RT-Ethernet option module	<a href="#">LMC902CBD10000</a>	
		2x RT-Ethernet option modules	<a href="#">LMC902CBG10000</a>	
		1x CANopen option module + 1x RT-Ethernet option module	<a href="#">LMC902CBI10000</a>	
		1x Profibus DP option module + 1x RT-Ethernet option module	<a href="#">LMC902CBL10000</a>	
		Uninterruptible power supply	<a href="#">LMC902CCA10000</a>	
		CANopen option module + Uninterruptible power supply	<a href="#">LMC902CCB10000</a>	
		Profibus DP option module + Uninterruptible power supply	<a href="#">LMC902CCC10000</a>	
		RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC902CCD10000</a>	
		2x RT-Ethernet option modules + Uninterruptible power supply	<a href="#">LMC902CCG10000</a>	
		1x CANopen option module + 1x RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC902CCI10000</a>	
		1x Profibus DP option module + 1x RT-Ethernet option module + Uninterruptible power supply	<a href="#">LMC902CCL10000</a>	

Nota: Accessory kit included in controller packaging as described below.

Spare parts for PacDrive LMC Pro2 controllers				
Spare parts				
Designation	Description	Reference	Weight kg/lb	
Accessory kit	Complete connector set for PacDrive LMC Pro2 controllers and Sercos cable (0.13 m/ 0.43ft)	<a href="#">VW3E6004</a>	0.100/ 0.22	
Compact flash memory card	512 MB	<a href="#">VW3E7037000000</a>	0.025/ 0.06	
Battery	Lithium battery front, 3 V	<a href="#">VW3E6020</a>	0.060/ 0.13	

**Programming software**  
**EcoStruxure Machine Expert software** *Please refer to our [EcoStructure Machine Expert catalog](#)*



VW3E6004



VW3E7037000000



VW3E5001R●●●

### Cables, terminals

#### Sercos cables

Designation	Length m	ft	Reference	Weight kg/lb
<b>Sercos cables for redundant Sercos ring</b> Equipped with two RJ45 connectors	0.5	1.640	<a href="#">VW3E5001R005</a>	0.045 / 0.10
	1	3.281	<a href="#">VW3E5001R010</a>	0.065 / 0.14
	1.5	4.921	<a href="#">VW3E5001R015</a>	0.068 / 0.15
	2	6.562	<a href="#">VW3E5001R020</a>	0.081 / 0.18
	3	9.843	<a href="#">VW3E5001R030</a>	0.124 / 0.27
	5	16.404	<a href="#">VW3E5001R050</a>	0.199 / 0.44
	10	32.808	<a href="#">VW3E5001R100</a>	0.325 / 0.72
	15	49.213	<a href="#">VW3E5001R150</a>	0.610 / 1.34
	20	65.617	<a href="#">VW3E5001R200</a>	0.810 / 1.79
	25	82.021	<a href="#">VW3E5001R250</a>	1.020 / 2.25
	30	98.425	<a href="#">VW3E5001R300</a>	1.220 / 2.69
	40	131.234	<a href="#">VW3E5001R400</a>	3.100 / 6.83
	50	164.042	<a href="#">VW3E5001R500</a>	2.020 / 4.45

#### Encoder cables

<b>Incremental Primary encoder cable (UL)</b>	1.5	4.921	<a href="#">VW3E2097R015</a>	0.196 / 1.43
	5	16.404	<a href="#">VW3E2097R050</a>	0.415 / 0.91
	10	32.808	<a href="#">VW3E2097R100</a>	0.757 / 1.67
	15	49.213	<a href="#">VW3E2097R150</a>	1.087 / 2.40
	20	65.617	<a href="#">VW3E2097R200</a>	1.417 / 3.12
	30	98.425	<a href="#">VW3E2097R300</a>	2.077 / 4.58
	40	131.234	<a href="#">VW3E2097R400</a>	2.737 / 6.03
	50	164.042	<a href="#">VW3E2097R500</a>	3.397 / 7.49

#### PacNet terminals

Designation	Description	Reference	Weight kg/lb
<b>Bus terminal</b>	PacNet bus terminal 16x digital inputs/16x digital outputs	<a href="#">VBO04S00</a>	0.980 / 2.16
<b>Bus terminal</b>	PacNet bus terminal 2x Primary encoder inputs (incremental or SinCos) / 1x incremental encoder input and output	<a href="#">VBO05S00</a>	0.790 / 1.74

#### PacNet and Patch cables (controller-Bus terminal-4) (1)

Designation	Length m	ft	Reference	Weight kg/lb
<b>PacNet cables</b>	0.5	1.640	<a href="#">VW3E3001R005</a>	0.027 / 0.06
	1	3.281	<a href="#">VW3E3001R010</a>	0.054 / 0.12
	2	6.562	<a href="#">VW3E3001R020</a>	0.108 / 0.24
	3	9.843	<a href="#">VW3E3001R030</a>	0.162 / 0.36
	5	16.404	<a href="#">VW3E3001R050</a>	0.270 / 0.60
<b>Patch cables</b>	10	32.808	<a href="#">VW3E3001R100</a>	0.540 / 1.19
	15	49.213	<a href="#">VW3E3001R150</a>	0.810 / 1.78
	20	65.617	<a href="#">VW3E3001R200</a>	1.080 / 2.38
	25	82.021	<a href="#">VW3E3001R250</a>	1.350 / 2.98
	30	98.425	<a href="#">VW3E3001R300</a>	1.620 / 3.57
	40	131.234	<a href="#">VW3E3001R400</a>	2.160 / 4.76
	50	164.042	<a href="#">VW3E3001R500</a>	2.700 / 5.95

(1) PacNet cables are available only in the given lengths.



VBO04S00



VBO05S00



# PacDrive 3 LMC Eco/Pro2

Motion controllers for automating machines/lines  
Robot controllers



PacDrive LMC Robot controller

Robot controllers				
Size	Number of synchronized servo axes	Number of license points included	Reference	Weight kg/lb
<b>PacDrive LMC Eco robot controllers</b>				
LMC101	up to 4	80	<a href="#">LMC101CAA150RC</a>	3.500/ 7.72
LMC201	up to 8	80	<a href="#">LMC201CAA150RC</a>	
		160	<a href="#">LMC201CAA170RC</a>	

Robot controller includes a number of license points and free support for robotics.  
For details, Please refer to [EcoStruxure Machine Expert catalog](#)

<b>L</b>			
LMC100CAA10000	14	VW3E3001R005	16
LMC101CAA10000	14	VW3E3001R010	16
LMC101CAA150RC	17	VW3E3001R020	16
LMC106CAA10000	14	VW3E3001R030	16
LMC201CAA10000	14	VW3E3001R050	16
LMC201CAA150RC	17	VW3E3001R100	16
LMC201CAA170RC	17	VW3E3001R150	16
LMC212CAA10000	14	VW3E3001R200	16
LMC216CAA10000	14	VW3E3001R250	16
LMC402CAA10000	15	VW3E3001R300	16
LMC402CBB10000	15	VW3E3001R400	16
LMC402CBC10000	15	VW3E3001R500	16
LMC402CBD10000	15	VW3E5001R005	16
LMC402CBG10000	15	VW3E5001R010	16
LMC402CBI10000	15	VW3E5001R015	16
LMC402CBL10000	15	VW3E5001R020	16
LMC402CCA10000	15	VW3E5001R030	16
LMC402CCB10000	15	VW3E5001R050	16
LMC402CCC10000	15	VW3E5001R100	16
LMC402CCD10000	15	VW3E5001R150	16
LMC402CCG10000	15	VW3E5001R200	16
LMC402CCI10000	15	VW3E5001R250	16
LMC402CCL10000	15	VW3E5001R300	16
LMC802CAA10000	15	VW3E5001R400	16
LMC802CBB10000	15	VW3E5001R500	16
LMC802CBC10000	15	VW3E6004	15
LMC802CBD10000	15	VW3E6019	14
LMC802CBG10000	15	VW3E6020	15
LMC802CBI10000	15	VW3E70360AA00	14
LMC802CBL10000	15	VW3E7037000000	15
LMC802CCA10000	15	VW3E704000000	14
LMC802CCB10000	15	VW3E704100000	14
LMC802CCC10000	15		
LMC802CCD10000	15		
LMC802CCG10000	15		
LMC802CCI10000	15		
LMC802CCL10000	15		
LMC902CAA10000	15		
LMC902CBB10000	15		
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LMC902CCG10000	15		
LMC902CCI10000	15		
LMC902CCL10000	15		
<b>V</b>			
VBO04S00	16		
VBO05S00	16		
VW3E2097R015	16		
VW3E2097R050	16		
VW3E2097R100	16		
VW3E2097R150	16		
VW3E2097R200	16		
VW3E2097R300	16		
VW3E2097R400	16		
VW3E2097R500	16		

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