

# TeSys T Version History

Mar 2023

## Summary of firmware versions

day/month/year	
03/13/2023	<b>Pack15 (MPI12X Profichip)</b>
17/05/2021	<b>Pack13 (FDR improvements, IP Allowlist)</b>
16/12/2019	<b>Pack12 (Cybersecurity Updates)</b>
30/11/2018	<b>Pack11 (Ethernet FW Updates)</b>
26/02/2018	<b>Pack10 (Ethernet Updates)</b>
27/04/2015	<b>Pack9 (EtherNet/IP launch)</b>
10/10/2013	<b>Pack8 (Firmware and languages for LTMCU)</b>
17/12/2012	<b>Pack7 (Firmware and Custom Logic improvements)</b>
01/06/2010	<b>Pack6 (Ethernet Advanced)</b>
23/03/2009	<b>Pack5 (Technical upgrade)</b>
28/07/2008	<b>Pack4 (Ethernet launch)</b>
20/05/2008	<b>Pack3 (LTMCU integration)</b>
15/10/2007	<b>Pack2 (Restarting and Pt100)</b>
16/04/2007	<b>Pack1 (Launch version)</b>

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**PACK15:** March 13<sup>th</sup>, 2023

## Issue corrections

Function	Correction
NA	NA

## Feature evolutions

Function	Origin	Evolution
MPI12X	Profibus Field Bus	Implemented MPI12X Initialization feature for new assembled Profichip. (Implementation works for new and old chips -MPI12X and VPC3+, accordingly-).  NOTE: Do not revert to firmware versions prior to Pack15 for Profibus devices (LTMRxxPy) manufactured from date code WX230901 or later

<b>Configuration Software and applications</b>	<ul style="list-style-type: none"> <li>Configuration Software: SoMove 2.8.4 + TeSysDTMLibrary 2.15.0</li> <li>TeSys Programmer 3.1.000</li> <li>LTMCU FW 2.7.000, LTMCUF FW 3.1.000</li> <li>Magelis XBTN410 1 to many: LTM_1T8_x_V1.03.dop</li> <li>GSD_Profibus_TeSysT_V0202</li> </ul>
<b>Product identification</b>	Date Code starting from <b>WX23091</b> Packaging logistics codes: no change

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack9	V2.7.000	na	V1.9.000
<b>CANopen</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>DeviceNet</b>	Pack9	V2.7.000	V1.8.000	V1.9.000
<b>Profibus</b>	<b>Pack15</b>	V2.7.000	<b>V1.7.000</b>	V1.9.000
<b>Ethernet</b>	Pack13	V2.9.000	V4.5.000	V1.9.000

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### **PACK13:** May 17<sup>th</sup> 2021

#### Issue corrections

Function	Correction
FDR (Fast Device Replacement)	Corrected FDR status and troubleshooting data Improved backwards compatibility
IP Stack	Updated Treck IP stack for Ripple20 vulnerabilities See the security notification for more information: <a href="https://www.se.com/ww/en/download/document/SEVD-2020-175-01/">https://www.se.com/ww/en/download/document/SEVD-2020-175-01/</a>

#### Feature evolutions

Function	Origin	Evolution
Cybersecurity for LTMR Ethernet	IP Allowlist	Implemented IP Allowlist feature for enhanced cybersecurity
LTMCUF	FDR Backup/Restore	Handles backup/restore of new IP Allowlist registers (3120-3140) for Ethernet LTMR

<b>Configuration Software and applications</b>	<ul style="list-style-type: none"> <li>• Configuration Software: SoMove 2.8.4 + <b>TeSysDTMLibrary 2.15.0</b></li> <li>• <b>TeSys Programmer 3.1.000</b></li> <li>• LTMCU FW 2.0.000, <b>LTMCUF FW 3.1.000</b></li> <li>• Landown_V1.6.0 with LTMCU_Language_Pack_1300.zip / LTMCUF_Language_Pack_1440.zip</li> <li>• Magelis XBTN410 1 to many: LTM_1T8_x_V1.03.dop</li> <li>• EDS_EtherNetIP_TeSysT_1.5.000</li> <li>• EDS_CANopen_TeSysT_V0201</li> <li>• EDS_DeviceNet_TeSysT_V0206</li> <li>• GSD_Profibus_TeSysT_V0202</li> </ul>
<b>Product identification</b>	Date Code starting from <b>WX21241</b> Packaging logistics codes: no change

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack9	V2.7.000	na	V1.9.000
<b>CANopen</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>DeviceNet</b>	Pack9	V2.7.000	V1.8.000	V1.9.000
<b>Profibus</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>Ethernet</b>	<b>Pack13</b>	<b>V2.9.000</b>	<b>V4.5.000</b>	V1.9.000

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**PACK12:** Dec 16<sup>th</sup> 2019

### Issue corrections

Function	Correction
EtherNet/IP Run/Idle Bit	Corrected behavior of the EtherNet/IP Class 1 Run/Idle Bit

### Feature evolutions

Function	Origin	Evolution
Cybersecurity for LTMR Ethernet version	FW Upgrade Security	Implemented Digital Signature and Validation for firmware upgrades on Pack12 and later.
	FTP Server	Improved robustness of FTP functionality: <ul style="list-style-type: none"> <li>• Disabled Read Access</li> <li>• Write Access only for FW Upgrade</li> <li>• File name validation</li> <li>• Size/Rate/Attempts limits</li> </ul>
	HTTP Server	Improved robustness of HTTP Server by disabling write access.
	SNMP Service	Disabled

<b>Configuration Software and applications</b>	<ul style="list-style-type: none"> <li>• Configuration Software: SoMove 2.7.6 + <b>TeSysDTMLibrary 2.13.0</b></li> <li>• <b>TeSys Programmer 3.0.000</b></li> <li>• LTMCU FW 2.0.000, LTMCUF FW 3.0.000</li> <li>• Landown_V1.6.0 and LTMCU_languages_1300.zip</li> <li>• Magelis XBTN410 1 to many: LTM_1T8_x_V1.03.dop</li> <li>• <b>EDS_EtherNetIP_TeSysT_1.5.000</b></li> <li>• EDS_CANopen_TeSysT_V0201</li> <li>• EDS_DeviceNet_TeSysT_V0206</li> <li>• GSD_Profibus_TeSysT_V0202</li> </ul>
<b>Product identification</b>	Date Code starting from <b>WX20021</b> Packaging logistics code LTMRxxEyy CB – no change

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack9	V2.7.000	na	V1.9.000
<b>CANopen</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>DeviceNet</b>	Pack9	V2.7.000	V1.8.000	V1.9.000
<b>Profibus</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>Ethernet</b>	<b>Pack12</b>	V2.8.000	<b>V4.3.000</b>	V1.9.000

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**PACK11:** Nov 30<sup>th</sup> 2018

### Issue corrections

Function	Correction
Webpage Login	Corrected the webpage password lost issue introduced in Pack 10
EtherNet/IP Assemblies	PKW register address response byte swapped introduced in Pack 10 Monitoring Registers of Assembly 110 & 113 "not dynamic" introduced in Pack 10 Monitoring Registers of Assembly 113 existing since Pack 9

### Feature evolutions

Function	Origin	Evolution
-	-	-

<b>Configuration Software and applications</b>	<ul style="list-style-type: none"> <li>• Configuration Software: SoMove 2.6.5 + <b>TeSysDTMLibrary 2.11.0</b></li> <li>• <b>TeSys Programmer 2.1.000</b></li> <li>• LTMCU FW 2.0.000, LTMCUF FW 3.0.000</li> <li>• Landown_V1.6.0 and LTMCU_languages_1300.zip</li> <li>• Magelis XBTN410 1 to many: LTM_1T8_x_V1.03.dop</li> <li>• EDS_EtherNetIP_TeSysT_1.1.10</li> <li>• EDS_CANopen_TeSysT_V0201</li> <li>• EDS_DeviceNet_TeSysT_V0206</li> <li>• GSD_Profibus_TeSysT_V0202</li> </ul>
<b>Product identification</b>	Date Code starting from <b>WX18501</b> Packaging logistics code LTMRxxEyy <b>CB</b> – no change

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack9	V2.7.000	na	V1.9.000
<b>CANopen</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>DeviceNet</b>	Pack9	V2.7.000	V1.8.000	V1.9.000
<b>Profibus</b>	Pack9	V2.7.000	V1.4.000	V1.9.000
<b>Ethernet</b>	<b>Pack11</b>	V2.8.000	<b>V3.5.000</b>	V1.9.000

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**PACK10:** February 26<sup>th</sup> 2018

## Issue corrections

Function	Correction
Ethernet Comms Fallback	Correct the fallback timeout based on the user set value instead of the fixed value of 60 seconds
Fault 13 Internal Fault	Improved internal communications to increase robustness and data validation
Voltage Phase Reversal	Improved LTME voltage phase reversal detection during a power loss
Subnet access	Correct access to different subnet when using VLAN or VPN

## Feature evolutions

Function	Origin	Evolution
Ethernet Communication for LTMR Ethernet version	IO Scanning Performance	Improve I/O scanning performance in case of heavy communications on different ports
	Network Compatibility	Ethernet Firmware 2.7 can be used on same network as Ethernet Firmware 2.8

<b>Configuration Software and applications</b>	<ul style="list-style-type: none"> <li>• Configuration Software: SoMove 2.6.3 + <b>TeSysDTMLibrary 2.10.0</b></li> <li>• <b>TeSys Programmer 2.0.000</b></li> <li>• <b>LTMCU FW 2.0.000, LTMCUF FW 3.0.000</b></li> <li>• Landown_V1.6.0 and LTMCU_languages_1300.zip</li> <li>• Magelis XBTN410 1 to many: LTM_1T8_x_V1.03.dop</li> <li>• EDS_EtherNetIP_TeSysT_1.1.10</li> <li>• EDS_CANopen_TeSysT_V0201</li> <li>• EDS_DeviceNet_TeSysT_V0206</li> <li>• GSD_Profibus_TeSysT_V0202</li> </ul>
<b>Product identification</b>	Date Code starting from <b>WX18101</b> Packaging logistics code LTMRxxEyy CB

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack9	V2.7.000	na	<b>V1.9.000</b>
<b>CANopen</b>	Pack9	V2.7.000	V1.4.000	<b>V1.9.000</b>
<b>DeviceNet</b>	Pack9	V2.7.000	V1.8.000	<b>V1.9.000</b>
<b>Profibus</b>	Pack9	V2.7.000	V1.4.000	<b>V1.9.000</b>
<b>Ethernet</b>	<b>Pack10</b>	<b>V2.8.000</b>	<b>V3.4.000</b>	<b>V1.9.000</b>

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**PACK9**: April 27<sup>th</sup> 2015

### Issue corrections

Function	Origin	Correction
Voltage/current imbalance display	Wrong display	Correct Voltage/current imbalance display
current reversal fault reset	No reset when power is cut during current reversal	Improve the fault reset mechanism
LTMCU CT passes selection	Mismatch between screen selection and register value	Change settings by LTMCU range for CT passes from 4 to 100. No change in register.

### Feature evolutions

Function	Origin	Evolution
Ethernet Communication for LTMR Ethernet version	EtherBrick library upgrade	New Ethernet Brick library has been integrated to support EtherNet/IP, RSTP, DPWS Discovery, Storm Protection and light weight Web App server
	EtherNet/IP protocol Support	Now Modbus/TCP and EtherNet/IP communication protocol are supported → ODVA Motor Starter profile (similar to DeviceNet version) with CT 11 conformance
	RSTP protocol support	RSTP protocol for Daisy Chain Ring Application of Homogeneous devices → - 50 to 150ms reconnection time with 16 to 32 devices in Daisy chain ring for one topology change.
	Storm Protection	Broadcast packet Storm Protection provided, by default highest possible protection enabled
	Web pages	New design of web pages based on Light Weight Web app server (No Java). Additional features related to RSTP and Device Discovery are included
	Device Discovery	DPWS Device discovery feature introduced. Now device can be discovered (e.g. on Windows 7 discover service) without knowing the IP of the device and web pages can be accessed. From web page with Discover button, device can be traced with distinct LED blink pattern
	FDR Regular	Improved the FDR Regular design to withstand the delay in receiving the FDR parameter file from FDR server in big daisy chain topology. Now at the power up of Daisy chain ring in DHCP mode, if there is a delay in receiving the FDR parameter file, device will not go to default configuration mode, but wait in FDR error till file is received.
Profibus		Correct Thermal warning bit issue, and integrate fail safe option
Canopen		Optimize the "Initialize network-connection establishment mechanism of EEPROM transactions" when power cycle appears

<b>Configuration Software and applications/</b>	<ul style="list-style-type: none"> <li>Configuration Software: SoMove 1.8.2.0 + <b>TeSysDTMLibrary 2.7.6.0</b></li> <li>LTMCU FW 1.2.000</li> <li>TeSysT Programmer 1.7.000</li> <li>Landown_V1.6.0 and LTMCU_languages_1300.zip</li> <li>Magelis 1 to many: LTM_1T8_x_V1.03.dop</li> <li>EIP_EDS 1.1.10 &amp; GSD_Profibus_TeSysT_V0202</li> </ul>
<b>Product identification/</b>	Date Code from <b>WX15141</b> . The products stocks will have latest FW

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack9	<b>V2.7.000</b>	na	V1.8.000
<b>CANopen</b>	Pack9	<b>V2.7.000</b>	<b>V1.4.000</b>	V1.8.000
<b>DeviceNet</b>	Pack9	<b>V2.7.000</b>	V1.8.000	V1.8.000
<b>Profibus</b>	Pack9	<b>V2.7.000</b>	<b>V1.4.000</b>	V1.8.000
<b>Ethernet</b>	Pack9	<b>V2.7.000</b>	<b>V3.1.000</b>	V1.8.000

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**PACK8:** October 10<sup>th</sup> 2013

### Issue corrections

Function	Origin	Correction
LTMR : Operating time issue	Wrong operating time calculation.	Operating time calculation corrected.
LTMCU languages V1.200	Five missing languages in pack7	17 languages available.

<b>Configuration Software and applications/</b>	<ul style="list-style-type: none"> <li>• Configuration Software: SoMove 1.8.2.0 + <b>TeSysDTMLibrary 2.7.4.0</b></li> <li>• LTMCU FW 1.2.000</li> <li>• Landown_V1.6.0 and LTMCU_languages_1200.zip</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.03.dop</li> <li>• GSD&amp;EDS_V2.1.zip</li> </ul>
<b>Product identification/</b>	Date Code from <b>13413</b> . The products stocks will be upgraded

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack8	V2.6.000	na	V1.7.000
<b>CANopen</b>	Pack8	V2.6.000	V1.3.000	V1.7.000
<b>DeviceNet</b>	Pack8	V2.6.000	V1.8.000	V1.7.000
<b>Profibus</b>	Pack8	V2.6.000	V1.3.000	V1.7.000
<b>Ethernet</b>	Pack8	V2.6.000	V2.2.000	V1.7.000



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**PACK7:** December 17<sup>th</sup> 2012

### Issue corrections

Function	Origin	Correction
Internal fault	Zero crossing level	Add a Fw filter to decrease the frequency of zero crossing level
Current phase reversal	Wrong report of protection Trip time exceeds the range	Add the filter to improve the phase sequence detection Improve the trip time for the protection
Voltage phase reversal	Trip time exceeds the range	Improve the trip time
Watchdog issue	Generating watchdog reset randomly	Improve the Modbus protocol stack
Register 458.0 issue	Bad status reported intermittently	Fw modification to avoid the problem
LTMCU display issue	For big current	Correction of the wrong display of the current value on LTMCU screen when > 1000A
TIMER instruction issue	Signal Timed toggles every 65535s even if Timer is not activated	Fw modification to avoid the problem
Underpower fault	wrong information coming from KE, due to Zero crossing issue	Fw modification to avoid the problem
Attempt to write to Reserved Bits in 1196 does not produce exception	Writing the reserved bits without exception	Check the reserved bits of R1196
Modbus Illegal address exceptions during cyclic update between KU and DN KC	DeviceNet accessing the register 703 will return the illegal address	Change permission of register 703 does not follow the Tesys map
DeviceNet Communication Loss doesn't generate warning	No warning generated when the warning condition exists	Communication loss warning can be generated when the condition occurs
Internal fault if you select external CT for line current with a range LTMR100**	Misunderstanding for the fault code.	Add a new fault code NV_CODE_LIST_FLT_INVALID_CT_RATIO (37) to replace NV_CODE_LIST_FLT_RANGE_ERROR(66).
Loss of command if you write a reserved bit of register 704	Command will be ignored by writing reserved bit of R704.	Fw modification to avoid the problem
Able to write values exceeding Register 697's maximum	Writing the value with exceeding range cannot report exception	Add the function to check the range of the value in register 697
LTMCU displays zero for Power Factor in history	Wrong resolution and unit of the display value.	Fw modification to avoid the problem
KU: incorrect operating time	Lost expired time when KU detects the operating time.	Compensate the missing time every 1 second in Fw to avoid the problem

### Feature evolutions

Function	Origin	Evolution
Protection based on Current	Minimum current for	Change the minimum current detection to enable the current protections from 10% FLC min to 20% FLCmin → If I<20% FLCmin, report I=0, no current protections operate below with threshold
	Phase unbalance protection during Start stage	During Start stage, phase unbalance can be up to 10% on a motor Add a 0,7s timeout to inhibit the Current Phase Unbalance protection and Current Phase loss protection during Start stage
	Internal Ground protection	For the vector sum, change the validation interval with a minimum at 50% instead of 20% before → 50% < FLC min < 500% with factory setting at 50%
	Internal/external Ground fault protection	Add the possibility to enable/disable the Ground fault protection during start stage to avoid untimely Ground fault
	Over current protection	Change the minimum threshold from 20% to 30% to be in coherence with the minimum threshold of under current protection (30%)
Protection based on Voltage		When U<50% of Un and U>120% of Un: only OverVoltage and UnderVoltage protection function reports a fault. For all other Protection functions based on voltage (Voltage Phase unbalance protection and Voltage phase Loss and phase Loss) -> no fault report even in ready stage.
Custom Logic Robustness	Difficulty to create a custom logic	Embed the heart of the operating mode code and add a new command to call the embedded function

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		New interface of custom logic is simplified and clearer.
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Informations détaillées

### Corrections d'erreurs

Fautes	Origine	Correction
Faute Interne	Niveau de « Zéro Crossing »	Rajout d'un filtre pour diminuer la fréquence des "Zéro Crossing"
Inversion Courant phase	Etat de la protection erroné Tps de déclenchement en dehors de la plage	Rajout d'un filtre pour améliorer la séquence de détection. Amélioration du tps de déclenchement de la protection
Inversion Tension phase I	Tps de déclenchement en dehors de la plage	Amélioration du tps de déclenchement de la protection
Défaut Watchdog	Provoque un reset aléatoire du watchdog	Amélioration de la gestion de la pile du protocole Modbus
Défaut Registre 458.0	Mauvais état reporté aléatoirement	modification fw pour éviter le problème
Défaut affichage LTMCU	Pour les forts courants	Correction du mauvais affichage sur LTMCU pour des valeurs > 1000A
Défaut sur l'instruction TIMER	Le signal temporisé commute tous les 65535s même si minuterie n'est pas activée	modification fw pour éviter le problème
Défaut sous puissance	Mauvaise information venant du KE, à cause du défaut Zero crossing	modification fw pour éviter le problème
Tentative d'écriture de bits réservés en 1196 ne produit pas exception	Ecriture de bits réservés sans rapport d'exception	Vérification des bits réservés du registre 1196
Report Adresse Modbus erronée pendant le cycle de mise à jour en le KU et DN KC	DeviceNet retourne une adresse erronée pour le registre 703	Changement des accès au registre en conformité à la Map TeSys
Perte de Communication DeviceNet ne génère pas d'alarme	Pas d'alarme générée alors que les conditions d'alarme sont présentes	Communication loss warning can be generated when the condition occurs
Faute interne si CT externe sélectionné avec LTMR100**	Erreur sur le code de défaut.	Rajout d'un nouveau code de défaut : NV_CODE_LIST_FLT_INVALID_CT_RATIO (37) pour remplacer NV_CODE_LIST_FLT_RANGE_ERROR(66).
Perte de commande en cas d'écriture de bit réservé du registre 704	La commande est ignorée si écriture du bit réservé du registre R704.	modification fw pour éviter le problème
Possibilité d'écrire des valeurs > maximum du registre 697	Ecriture d'une valeur hors plage ne génère pas de rapport d'exception	Rajout d'une fonction pour vérifier la plage de la valeur du registre 697
LTMCU affiche 0 pour l'historique du facteur de puissance	Mauvaise résolution et unité de la valeur affichée	modification fw pour éviter le problème
Temps de fonctionnement incorrect	Perte d'unités de temps pendant le temps de fonctionnement.	Compensation interne pour éviter le problème

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### Evolutions de caractéristiques

Fonction	Origine	Evolution
Protection basées sur le courant	Minimum current for	Change the minimum current detection to enable the current protections from 10% FLC min to 20% FLCmin → If $I < 20\% \text{ FLCmin}$ , report $I=0$ , no current protections operate below with threshold
	Phase unbalance protection during Start stage	During Start stage, phase unbalance can be up to 10% on a motor Add a 0,7s timeout to inhibit the Current Phase Unbalance protection and Current Phase loss protection during Start stage
	Internal Ground protection	For the vector sum, change the validation interval with a minimum at 50% instead of 20% before → $50\% < \text{FLC min} < 500\%$ with factory setting at 50%
	Internal/external Ground fault protection	Add the possibility to enable/disable the Ground fault protection during start stage to avoid untimely Ground fault
	Over current protection	Change the minimum threshold from 20% to 30% to be in coherence with the minimum threshold of under current protection (30%)
Protection basées sur la tension		When $U < 50\%$ of $U_n$ and $U > 120\%$ of $U_n$ : only OverVoltage and UnderVoltage protection function reports a fault. For all other Protection functions based on voltage (Voltage Phase unbalance protection and Voltage phase Loss and phase Loss) -> no fault report even in ready stage.
Simplification de la logique personnalisée	Difficulté de créer une logique personnalisée	Le code du mode opératoire est encapsulée dans un sous programme. Ce sous programme est appelé par une nouvelle commande depuis le programme principal. Le programme général est ainsi simplifié et plus clair.

<b>Configuration Software and applications/</b>	<ul style="list-style-type: none"> <li>• Configuration Software: SoMove 1.5.1.0 + <b>TeSysDTMLibrary 2.5.3.0</b></li> <li>• LTMCU 1.2.000</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.03.dop</li> <li>• GSD&amp;EDS_V2.1.zip</li> <li>• Landown_V1.6.0 and LTMCU_languages_12212012.zip</li> </ul>
<b>Product identification</b>	Date Code from <b>12521</b> . No upgrade action on product stock

	Version/ Version	Application firmware/ Firmware application	Communication firmware/ Firmware communication	V40 Expansion firmware/ Firmware extension V40
<b>Modbus</b>	Pack7	V2.5.000	na	V1.7.000
<b>CANopen</b>	Pack7	V2.5.000	V1.3.000	V1.7.000
<b>DeviceNet</b>	Pack7	V2.5.000	V1.8.000	V1.7.000
<b>Profibus</b>	Pack7	V2.5.000	V1.3.000	V1.7.000
<b>Ethernet</b>	Pack7	V2.5.000	V2.2.000	V1.7.000

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## PACK6: June 1<sup>st</sup> 2010

<b>Detailed information</b>	<p><b>Ethernet :</b>          Custom logic management in FDR (Fast Device Replacement)          Web pages package          Correction of minor anomalies</p> <p><b>All versions :</b>          Correction of minor anomalies</p>
<i>Informations détaillées</i>	<p><b>Ethernet :</b>          Gestion de la logique personnalisée dans la fonction FDR (Fast Device Replacement)          Correction d'anomalies mineures</p> <p><b>Toutes versions :</b>          Correction d'anomalies mineures</p>
<b>Configuration Software and applications/ Logiciel de configuration et applications</b>	<ul style="list-style-type: none"> <li>• Configuration Software: PowerSuite V2.5 + <b>PS-patch_4.12.0.19.zip</b></li> <li>• LTMCU 1.2.000</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.01.dop</li> <li>• GSD&amp;EDS_V2.1.zip</li> <li>• Landown_V1.6.0 and LTMCU_languages_03252009.zip</li> </ul>
<b>Product identification/ Identification produit</b>	<p>Date Code from <b>xxxxx</b> . No upgrade action on product stock  <i>Date Code à partir de <b>xxxxx</b> . Pas de mise à jour de stock.</i></p>

	<b>Version/ Version</b>	<b>Application firmware/ Firmware application</b>	<b>Communication firmware/ Firmware communication</b>	<b>V40 Expansion firmware/ Firmware extension V40</b>
<b>Modbus</b>	Pack6	V2.4.000	na	V1.5.000
<b>CANopen</b>	Pack6	V2.4.000	V1.3.000	V1.5.000
<b>DeviceNet</b>	Pack6	V2.4.000	V1.8.000	V1.5.000
<b>Profibus</b>	Pack6	V2.4.000	V1.2.000	V1.5.000
<b>Ethernet</b>	Pack6	V2.4.000	V2.1.000	V1.5.000

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### PACK5: March 23<sup>rd</sup> 2009

<b>Detailed information</b>	<p><b>All versions :</b></p> <p>Expansion module Inputs in AC voltage: modification of the algorithm to secure their behaviour in case of perturbations on Control Power Supply.</p> <p>Correction of minor anomalies (error on small current imbalance, overcurrent time setting over 20s,...)</p> <p><b>DeviceNet :</b></p> <p>Integration of Idle mode</p> <p>Correction of minor anomalies (loss of parameters)</p>
<i>Informations détaillées</i>	<p><b>Toutes versions :</b></p> <p>Entrées du module d'extention en tension AC: modification de l'algorithme pour améliorer leur comportement en cas de perturbations sur l'alimentation contrôle.</p> <p>Correction d'anomalies mineures (erreur en cas de faible déséquilibre de courant, réglage du temps de Sur courant &gt; 20s,...)</p> <p><b>DeviceNet :</b></p> <p>Integration du mode Idle</p> <p>Correction d'anomalies mineures (perte des paramètres)</p>
<b>Configuration Software and applications/ Logiciel de configuration et applications</b>	<ul style="list-style-type: none"> <li>• Configuration :PowerSuite V2.5 + <b>PS-patch_4.12.0.16.zip</b></li> <li>• LTMCU 1.2.000</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.01.dop</li> <li>• GSD&amp;EDS_V2.1.zip</li> <li>• Landown_V1.6.0 and LTMCU_languages_03252009.zip</li> </ul>
<b>Product identification/ Identification produit</b>	<p>Date Code from <b>09141</b> or round yellow label sticked on product and packaging</p> <p><i>Date Code à partir de <b>09141</b> ou avec une pastille jaune collée sur le produit et sur la boîte d'emballage</i></p>

	<b>Version/ Version</b>	<b>Application firmware/ Firmware application</b>	<b>Communication firmware/ Firmware communication</b>	<b>V40 Expansion firmware/ Firmware extension V40</b>
<b>Modbus</b>	Pack5	V2.3.000	na	V1.5.000
<b>CANopen</b>	Pack5	V2.3.000	V1.3.000	V1.5.000
<b>DeviceNet</b>	Pack5	V2.3.000	V1.8.000	V1.5.000
<b>Profibus</b>	Pack5	V2.3.000	V1.2.000	V1.5.000
<b>Ethernet</b>	Pack5	V2.3.000	V1.1.000	V1.5.000

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### PACK4: July 28<sup>th</sup> 2008

<b>Detailed information</b>	<p><b>Ethernet version Launch :</b></p> <p>With the launch of this new protocol version, the Application firmware changed from V2.1 to V2.2 for all other protocol versions. Nevertheless, there are no differences between V2.1 and V2.2 for DeviceNet, CANopen, Modbus and Profibus versions. It is not necessary to upgrade the products in V2.1</p>
<i>Informations détaillées</i>	<p><b>Lancement de la version Ethernet :</b></p> <p>L'introduction de ce nouveau protocole a fait évoluer le firmware application de V2.1 à V2.2 pour l'ensemble des protocoles. Néanmoins, il n'y a pas de différences entre la V2.1 et V2.2 pour les versions DeviceNet, CANopen, Modbus et Profibus. Il n'est donc pas nécessaire de mettre à jour les produits en V2.1</p>

<b>Configuration Software and applications/</b> <i>Logiciel de configuration et applications</i>	<ul style="list-style-type: none"> <li>• Configuration :PowerSuite V2.5 + <b>PS-patch_4.12.0.14.zip</b></li> <li>• HMI: Magelis 1 to 1: : LTM_1T1_E_V1.1.dop</li> <li>• LTMCU 1.1.000</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.01.dop</li> <li>• GSD&amp;EDS_V2.1.zip</li> </ul>
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	<b>Version/</b> <i>Version</i>	<b>Application firmware/</b> <i>Firmware application</i>	<b>Communication firmware/</b> <i>Firmware communication</i>	<b>V40 Expansion firmware/</b> <i>Firmware extension V40</i>
<b>Modbus</b>	Pack4	V2.2.000	na	V1.4.000
<b>CANopen</b>	Pack4	V2.2.000	V1.3.000	V1.4.000
<b>DeviceNet</b>	Pack4	V2.2.000	V1.7.000	V1.4.000
<b>Profibus</b>	Pack4	V2.2.000	V1.2.000	V1.4.000
<b>Ethernet</b>	Pack4	V2.2.000	V1.1.000	V1.4.000

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## PACK3: May 20<sup>th</sup> 2008

<b>Detailed information</b>	<p><b><u>New features :</u></b></p> <ul style="list-style-type: none"> <li>• Integration of the new HMI LTMCU</li> </ul> <p><b><u>Evolutions:</u></b></p> <ul style="list-style-type: none"> <li>• Creation of an external fault</li> <li>• Detailed root cause of wiring fault</li> <li>• Change LI3 behaviour to match Profibus MMS profile</li> <li>• Correction of minor anomalies of PowerSuite</li> <li>• TeSyT is Atex certified</li> </ul>
<i>Informations détaillées</i>	<p><b><u>Nouvelles caractéristiques :</u></b></p> <ul style="list-style-type: none"> <li>• Intégration du nouvel IHM LTMCU</li> </ul> <p><b><u>Evolutions:</u></b></p> <ul style="list-style-type: none"> <li>• <i>Création d'un défaut externe</i></li> <li>• <i>Origine précise du défaut de câblage</i></li> <li>• <i>Changement de comportement de LI3 pour conformité au profil MMS Profibus</i></li> <li>• <i>Corrections anomalies mineures de PowerSuite</i></li> <li>• <i>TeSysT a obtenu la certification Atex</i></li> </ul>
<b>Configuration Software and applications/ Logiciel de configuration et applications</b>	<ul style="list-style-type: none"> <li>• Configuration :PowerSuite V2.5 + <b>PS-patch_4.12.0.11.zip</b></li> <li>• HMI: Magelis 1 to 1: : LTM_1T1_E_V1.1.dop</li> <li>• LTMCU 1.1.000</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.01.dop</li> <li>• GSD&amp;EDS_V2.1.zip</li> </ul>
<b>Product identification/ Identification produit</b>	<p>Date Code from <b>08201</b> or round green label sticked on product and packaging  <i>Date Code à partir de <b>08201</b> ou avec une pastille verte collée sur le produit et sur la boîte d'emballage</i></p>

	<b>Version/ Version</b>	<b>Application firmware/ Firmware application</b>	<b>Communication firmware/ Firmware communication</b>	<b>V40 Expansion firmware/ Firmware extension V40</b>
<b>Modbus</b>	Pack3	V2.1.000	na	V1.4.000
<b>CANopen</b>	Pack3	V2.1.000	V1.3.000	V1.4.000
<b>DeviceNet</b>	Pack3	V2.1.000	V1.7.000	V1.4.000
<b>Profibus</b>	Pack3	V2.1.000	V1.2.000	V1.4.000



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**PACK2:** October 15<sup>th</sup> 2007

<p><b>Detailed information</b></p>	<p><b><u>New features :</u></b></p> <ul style="list-style-type: none"> <li>• Voltage Motor Protection Function: Automatic Restart</li> <li>• Thermal Motor Protection Function: Motor Temperature Sensor - PT100</li> <li>• Local Return to Factory setting on Test/Reset button of LTMR</li> <li>• LTM E Configuration Fault and Warning: the LTM R controls the presence of the LTM E if LTME related protection functions are enabled. Its absence will generate a new System and Device Monitoring Fault.</li> </ul> <p><b><u>Evolutions:</u></b></p> <ul style="list-style-type: none"> <li>• Control transfer mode : the selection of the transfer mode (bump or bumpless) only applies to transfer from Remote to Local control. The transfer mode from Local to Remote shall always be Bumpless, regardless of the transfer mode selected.</li> <li>• Transfer of Data in Run: when the motor is in Run state, a data transfer with PowerSuite may be incomplete. In this case, a pop-up message appears at the end of the transfer. You can see which parameters were not transferred, with details given in the Output Window.</li> <li>• Transition timer: the parameter minimum wait time takes the transition timer into account for the time to restart calculation</li> <li>• The voltage phase loss detection level changed from 40% to 38% to improve the detection</li> <li>• Modbus TR Class changes from A01 to A05</li> <li>• New PowerSuite version supports new FW features and includes a new organization of setting screens</li> <li>• TeSysT on DeviceNet is now ODVA certified</li> <li>• TeSysT is CCC certified</li> </ul>
<p><i>Informations détaillées</i></p>	<p><b><u>Nouvelles caractéristiques :</u></b></p> <ul style="list-style-type: none"> <li>• Fonction de protection de la tension moteur: redémarrage automatique</li> <li>• Fonction de protection thermique du moteur: capteur de température moteur - PT100</li> <li>• Retour aux réglages usine local sur le bouton Test/Reset du LTMR</li> <li>• Alarme et défaut configuration LTM E: le LTM R contrôle la présence du LTM E. Son absence génère une nouvelle faute système et produit.</li> </ul> <p><b><u>Evolutions:</u></b></p> <ul style="list-style-type: none"> <li>• Mode transfert de contrôle : la sélection du mode de transfert (à coups ou sans à coups) s'applique seulement au transfert de contrôle distant à local. Le mode de transfert de Local à distance est toujours sans à coups , quelque soit le mode de transfert sélectionné.</li> <li>• Transfert de données en fonctionnement: lorsque le moteur est en état de marche, le transfert des données avec PowerSuite peut être incomplet. Dans ce cas, un message pop-up apparait à la fin du transfert. Vous pouvez voir quels paramètres n'ont pas été transférés avec les détails donnés dans la fenêtre de sortie.</li> <li>• Tempo de transition: le paramètre délai minimum d'attente prend en compte la tempo de transition pour le calcul du temps de redémarrage</li> <li>• Le niveau de détection de la perte de tension phase est passé de 40% à 38% pour améliorer la détection de la faute</li> <li>• La classe TR Modbus a change de A01 à A05</li> <li>• Les nouveaux paramètres de communication sont sauvés seulement après 5s d'inactivité de la communication</li> <li>• Nouvelle version de PowerSuite pour supporter les nouvelles caractéristiques et incluant aussi une rationalisation des écrans de réglage.</li> <li>• TeSysT sur DeviceNet est maintenant certifié ODVA</li> <li>• TeSysT a obtenu aussi la certification CCC</li> </ul>
<p><b>Configuration Software and applications/ Logiciel de configuration et applications</b></p>	<ul style="list-style-type: none"> <li>• Configuration :PowerSuite V2.5 + PS-patch-forFW1.8.0_V02.01.zip</li> <li>• HMI: Magelis 1 to 1: : LTM_1T1_E_V1.1.dop</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.01.dop</li> </ul>
<p><b>Product identification/ Indentification produit</b></p>	<p>Date Code from 07421 or round blue label sticked on product and packaging  <i>Date Code à partir de 07421 ou avec une pastille bleue collée sur le produit et sur la boîte d'emballage</i></p>

	<b>Version/ Version</b>	<b>Application firmware/ Firmware application</b>	<b>Communication firmware/ Firmware communication</b>	<b>V40 Expansion firmware/ Firmware extension V40</b>
<b>Modbus</b>	Pack2	V1.8.000	na	V1.4.000
<b>CANopen</b>	Pack2	V1.8.000	V1.2.000	V1.4.000
<b>DeviceNet</b>	Pack2	V1.8.000	V1.6.000	V1.4.000
<b>Profibus</b>	Pack2	V1.8.000	V1.1.000	V1.4.000

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### PACK1: April 16<sup>th</sup> 2007

<b>Detailed information</b>	Launch version
<i>Informations détaillées</i>	<i>Version de lancement</i>

<b>Configuration Software and applications/ Logiciel de configuration et applications</b>	<ul style="list-style-type: none"> <li>• Configuration :LTM CONF 2.4.0.0 or PowerSuite V2.5</li> <li>• HMI: Magelis 1 to 1: : LTM_1T1_E_V1.1.dop</li> <li>• Magelis 1 to many: LTM_1T8_x_V1.01.dop</li> </ul>
<b>Product identification/ Indentification produit</b>	Date Code 07415 or before <i>Date Code 07415 ou avant</i>

	<b>Version/ Version</b>	<b>Application firmware/ Firmware application</b>	<b>Communication firmware/ Firmware communication</b>	<b>V40 Expansion firmware/ Firmware extension V40</b>
<b>Modbus</b>	Pack1	V1.7.000	na	V1.3.000
<b>CANopen</b>	Pack1	V1.7.000	V1.1.000	V1.3.000
<b>DeviceNet</b>	Pack1	V1.7.000	V1.1.000	V1.3.000
<b>Profibus</b>	Pack1	V1.7.000	V1.1.000	V1.3.000

