



**LiveWire & the  
new LiveWire 2  
Dualband  
2,4 & 5 GHz  
WLAN Tools**

**Durable Production Performance**

**Cordless For Safety Critical Joints**

 **LIVewire™**

**Cleco®**

The new LiveWire 2 cordless tools from Cleco

# Light, Intelligent. All The Power

LiveWire 2 offers precision torque, angle and speed control features for safety critical fastening in a new lightweight, ergonomic, wireless design.

With up to 1700 rundowns per battery charge, LiveWire tools make sure that you can complete an entire shift of tightenings.

LiveWire™ has been designed and tested to provide wireless connectivity across the harshest of machine-to-machine environments.



## Digital Audio Interface

- Operator audible alarm
- Programmable sound duration

## New Diversity Antenna System ( 2,4/5GHz )

- Improved 5GHz Performance
- Double Antenna System
- Uniband 3 support  
up to 5,825 GHz / Channel 165

## Digital Process Control

- Auto bolt sequencing
- Auto image selection
- Configurable reject management

## Electronic Intelligence

- On-board controller with power management
- Integrated servo with I/O signal handling
- Auto sensing power intelligence
- 512 cycle memory buffer



## LiveWire Memory Chip LMC

- Tool settings memory
- Regional parameter settings
- Easy and fast tool replacement





# Power. And It's Wireless.

## Platform for optional accessories

- Modular Integrated Bar Code Scanner (937240PT)  
Configurable to enable real time barcode data collection, auto parameter select, tool enable and disable.
- Optional RFID tag for use with tool location systems
- Additional modules are available to customize LiveWire tools to meet customer requirements



Scanner 937240PT (optional)



## Easy Integration in available Tightening Systems



### Operator Display

- Real-time interface
- Operator feedback
  - Green LCD = OK
  - Yellow LCD = Running
  - Red LCD = NOK / Errors
  - Green LED = OK
  - Red LED = NOK
- Configurable application buttons



One controller manages up to 16 tools simultaneously in varying combinations.

Cleco Cordless

# The Most Cost-Effective Safe

## **Up To 50 % Savings Over Traditional Systems!**

Mobility is a major advantage with wireless communications. Cleco LiveWire™ marries the freedom and flexibility of cordless tools with real-time wireless error proofing. Utilizing a 2,4 GHz/5 GHz WLAN (Wireless Local Area network) interface in conjunction with the highest security encryption and authentication levels, plus a 512-cycle tool memory buffer, LiveWire™ delivers the industry standard in wireless connectivity and performance for your safety and production critical data transmissions.



**Up To 16\*  
LiveWire Tools.  
1 Line  
Controller.**

**\*Contact Regional  
Application Center for  
requirements greater than 10.**

**LIVEWIRE™**  
**vmax™**

# Safety Critical Solution Available.

## Up To 83 % More Productivity!

Cleco LiveWire™ tools are available with Vmax™, a solution that drives tool power and speed increases up to 83 % without losing accuracy or durability. This leading innovation utilizes the same 10 tools to one line controller hardware solution with up to 50 % cost savings over traditional systems.

New Vmax™ technology auto-senses the applied power source and adjusts the maximum tool speed capability on the fly. LiveWire™ with Vmax™ combines the power you need with the most versatile wireless system available today.



FC

ETSI

## WLAN Technical Data/ Options:

Features	2,4 & 5 GHz Tools with LiveWire Memory Chip* 17B... and 47B... Series
Standard	IEEE 802.11a/b/g/h/n
Safety	<p>WEP</p> <ul style="list-style-type: none"> <li>• 64/128 bit encryption</li> </ul> <p>WPA/WPA2/802.1x 128 bit TKIP/CCMP encryption</p> <ul style="list-style-type: none"> <li>• Pre-shared key mode (PSK) LEAP, PEAP</li> <li>• 802.1x EAP authentication (LEAP, PEAP, TLS, TTLS GTC, MD5, OTP, PAP, CHAP, MSCHAP, SCHAPv2, TTLS MSCHAPv2) on request</li> </ul>
Range	Typically up to 50 m (164' 0,5")
Channels	1 – 13 (2,401 – 2,483 GHz) 36 – 165 (5,17 - 5,825 GHz)
Transmission rate (power):	15 dBm @ 5 GHz 20 dBm @ 2,4 GHz (b)
Sensitivity	-94 dBm (@ 1 Mbps) -80 dBm (@ 5 GHz)
Modulation	DSSS/OFDM

*\* All important WLAN settings and the individual MAC address is stored in the changeable LiveWire Memory Chip (LMC). Allows to run spare tools in a secure WLAN network through changing the LiveWire Memory Chip to the new tool in a fast and easy way.*



# Application versatility for



## **Cordless Power Tool for Engine Assembly**

Tightening of accessories with Cleco LiveWire Angle Tool with swivel bail hanging on a balancer.



47BAYSB35AM3-with-936400PT

## **Easy Access with the Cordless Pistol Tool**

Tightening of armrest with Cleco LiveWire Pistol Tool.



17BPYSB13Q



## **Critical Tightenings with the Cordless Angle Tool**

Tightening of mounting plate with Cleco LiveWire Angle Tool at a well-known international seat manufacturer.



47BAYSB28AM3

# cordless LiveWire Tools.



Cleco LiveWire tightening tools in use at KTM Sports Car Manufacturer in Graz/ Austria. WLAN LiveWire angle and pistol tools together with a torque wrench working with 1 tightening controller. Cordless productivity for all safety critical joints at the premium sportscar X-Bow.



## **Cleco LiveWire I-Wrench**

Easy to integrate into LiveWire systems. Works together with Cleco LiveWire tightening tools and controllers from Cleco/DGD.



# New LiveWire 2 Cordless Transducer Controlled Tool

# Cleco®

## LiveWire 2 Right Angle Series

**Torque Range**  
5,5 - 50 Nm

**Bolt Size**  
M5 - M10

- Lighter than our LiveWire
- Add-On platform
- Brushless precision
- Resolver control
- Transducer accuracy
- On-board controller with I/O signal handling and power management
- Integrated servo



### Nomenclature for LiveWire 2 Tool Series

47	B	A	Y	P	B	XXX	XXX	X	L
<b>Motor</b> 47	<b>Power</b> B – Battery/ PM48				<b>Version</b> B – 26-48 V		<b>Output Drive</b> AM3 – 3/8" Sq.Dr.		<b>Tool Series</b> L – LiveWire 2 Series
<b>Tool Style</b> A – Angle				<b>Peripherals</b> P – Accessory Platform				<b>Retainer</b> – Pin Retainer B – Ball Retainer	
<b>Data Transmission</b> Y – WLAN: Dual-Band 2,4 GHz, 5 GHz							<b>Max Torque (Nm)</b>		
							15 - 15 Nm    35 - 35 Nm		
							21 - 21 Nm    50 - 50 Nm		
							28 - 28 Nm		

Angle	Torque Range	Free Speed (RPM)			Weight Less Battery	Output Drive Size	Length with Battery	
		Batteries		PM48			26 V	44 V
Model Number	Nm	26 V*	44 V*	48 V	kg		mm	
47BAYPB15AM3L	5.5-15	538	983	983	1,83	3/8"	563	544
47BAYPB21AM3L	8-21	411	751	751	1,83	3/8"	563	544
47BAYPB28AM3L	10-28	291	532	532	1,83	3/8"	563	544
47BAYPB35AM3L	12-35	244	447	447	2,09	3/8"	595	576
47BAYPB50AM3L	18-50	168	293	293	2,11	3/8"	603	582

\*Speed with fully charged battery.

**General:** All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.

Batterie weights: 26-V Li-Ion battery 0,50 kg, 44V Li-Ion battery 0,85 kg

**Extra Equipment:** Scanner, sockets, batteries and chargers must be ordered separately.



## Cleco®

### LiveWire Right Angle Series

**Torque Range**  
5,5 - 70 Nm

**Bolt Size**  
M5 - M10

- Brushless precision
- Resolver control
- Transducer accuracy
- On-board controller with I/O signal handling and power management
- Integrated servo

47BAYSB28AM3



#### Cordless Tools Nomenclature

47	B	A	X	X	B	XXX	XXX	X
<b>Motor</b> 47	<b>Power</b> B – Battery/ PM48				<b>Version</b> B – 26–48 V		<b>Output Drive</b> AM3 – 3/8" Sq.Dr. AH4 – 1/2" Sq.Dr.	<b>Retainer</b> – Pin Retainer B – Ball Retainer
<b>Tool Style</b> A – Angle			<b>Peripherals</b> S – Barcode Scanner – None				<b>Max Torque (Nm)</b> 15 - 15 Nm    35 - 35 Nm 21 - 21 Nm    50 - 50 Nm 28 - 28 Nm    70 - 70 Nm	
<b>Data Transmission</b> Y – WLAN: Dual-Band 2,4 GHz, 5 GHz Z – Xbee: IEEE 802.15.4 (4 tools/access point)								

Angle	Torque Range	Free Speed (RPM)			Weight Less Battery	Output Drive Size	Length with Battery	
		Batteries		PM48			26 V	44 V
		26 V*	44 V*	48 V			mm	
Model Number	Nm				kg			
47BAYSB15AM3	5.5-15	538	983	983	2,20	3/8" SQ	554	535
47BAYSB21AM3	8-21	411	751	751	2,20	3/8" SQ	554	535
47BAYSB28AM3	10-28	291	532	532	2,20	3/8" SQ	568	549
47BAYSB35AM3	12-35	244	447	447	2,46	3/8" SQ	600	581
47BAYSB50AM3	18-50	168	293	293	2,48	3/8" SQ	608	589
47BAYSB70AH4	24-70	123	216	216	3,91	1/2" SQ	678	659

\*Speed with fully charged battery.

**General:** All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.

Battery weights: 26-V Li-Ion battery 0,50 kg, 44V Li-Ion battery 0,85 kg

**Extra Equipment:** Scanner, sockets, batteries and chargers must be ordered separately.

# Cordless Transducer Control – Pistol



17BPYSB13Q

(Apex u-Guard socket shown above not included)

## Cleco®

### Pistol Grip Series

**Torque Range**  
3,0 - 13 Nm

**Bolt Size**  
M5 - M6

- Brushless precision
- Resolver control
- Transducer accuracy
- On-board controller with I/O signal handling and power management
- Integrated servo



### Cordless Tools Nomenclature

<b>17</b>	<b>B</b>	<b>P</b>	<b>X</b>	<b>X</b>	<b>B</b>	<b>XX</b>	<b>Q</b>
<b>Motor</b> 17	<b>Power</b> B-Battery/ PM48				<b>Version</b> B – 26–48 V		<b>Output Drive</b> Q – Quick change
<b>Tool Style</b> P – Pistol			<b>Peripherals</b> S – Barcode Scanner – None				<b>Max Torque (Nm)</b> 0,5 - 5 Nm 0,7 - 7 Nm 0,9 - 9 Nm 13 - 13 Nm
<b>Data Transmission</b> Y – WLAN: Dual-Band 2,4 GHz, 5 GHz Z – Xbee: IEEE 802.15.4 (4 tools/access point)							

Pistol	Torque Range	Free Speed (RPM)			Weight Less Battery	Output Drive Size	Length	Height (with Battery + Scanner)	
		Batterie	PM48	PM48				26 V	44 V
Model Number	Nm	26 V*	44 V*	48 V	kg	mm	mm		
17BPYSB05Q	3-5	1639	2428	2428	1,52	1/4" Hex	220	330	318
17BPYSB07Q	3-7	1161	1721	1721	1,52	1/4" Hex	220	330	318
17BPYSB09Q	3-9	887	1314	1314	1,52	1/4" Hex	220	330	318
17BPYSB13Q	3-13	629	931	931	1,52	1/4" Hex	220	330	318

\*Speed with fully charged battery.

**General:** All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.

Batterie weights: 26-V Li-Ion battery 0,50 kg, 44V Li-Ion battery 0,85 kg

**Extra Equipment:** Sockets, batteries and chargers must be ordered separately.

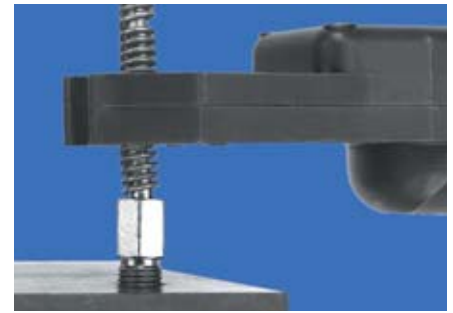
## Cleco®

### Tube Nut Series

**Torque Range**  
10 - 40 Nm

**Bolt Size**  
M6 - M8

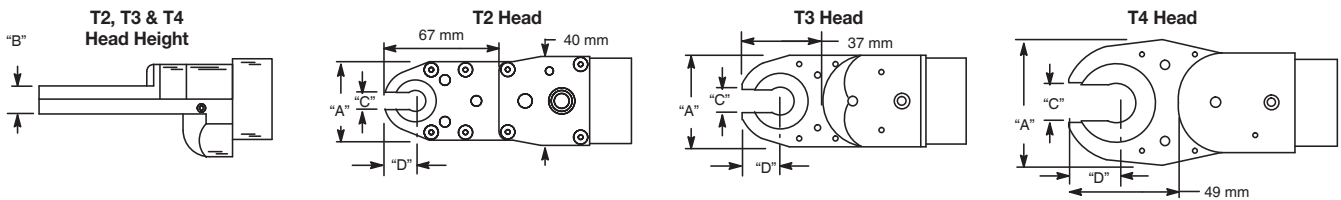
- Brushless precision
- Resolver control
- Transducer accuracy
- On-board controller with I/O signal handling and power management
- Integrated servo



The 47BT tube nut wrench alternates the direction of rotation each time the lever is actuated. When rotating in reverse, the socket will stop at the open position.



47BTYSB20T2



#### Tube Nut Tool Nomenclature

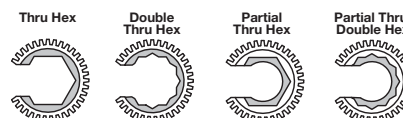
<b>47</b>	<b>B</b>	<b>T</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>XX</b>
<b>Motor</b> 47	<b>Power</b> B-Battery/ PM48					<b>Version</b> B-26 V-48 V
<b>Tool Style</b> T - Tube Nut					<b>Peripherals</b> S - Barcode Scanner - None	<b>Head Type</b> T2 - 20Nm T3 - 30Nm T4 - 40Nm
<b>Data Transmission</b> Y - WLAN: Dual-Band 2,4 GHz, 5 GHz Z - Xbee: IEEE 802.15.4 (4 tools/access point)						

#### Socket Nomenclature

<b>KSX</b>	<b>XX</b>	<b>XX</b>	<b>X</b>
<b>Head Type</b> KS2 - T2 KS3 - T3 KS4 - T4	<b>Output Type</b> 0 - Partial Thru Hex    2 - Double Thru Hex 1 - Thru Hex            3 - Partial Thru Double Hex		
<b>Extension Length</b> 0 - Flush    4 - 1/2" 2 - 1/4"    6 - 3/4"			
<b>Maximum Hex Socket Size</b> MG, EE    T2 Head Type MM, 3/4"    T3 Head Type MU, 1 1/16"    T4 Head Type 00, ## (Specials)    All Head Types			

#### Socket Sizes

EA - 1/4"	M5 - 5 mm	MH - 14 mm	MP - 22 mm
EC - 3/8"	M6 - 6 mm	MI - 15 mm	MQ - 23 mm
EE - 1/2"	MA - 7 mm	MJ - 16 mm (5/8")	MR - 24 mm (15/16")
EF - 9/16"	MB - 8 mm (5/16)	MK - 17 mm	MS - 25 mm
EH - 11/16"	MD - 10 mm	ML - 18 mm	MT - 26 mm
EJ - 13/16"	ME - 11 mm (7/16)	MM - 19 mm (3/4")	MU - 27 mm (1 1/16")
EK - 7/8"	MF - 12 mm	MN - 20 mm	
EM - 1"	MG - 13 mm	MO - 21 mm	



Tube Nut	Torque Range	Free Speed (RPM)			Weight Less Battery	Max. Drive Size	Length with Battery		Head			
		Batteries	PM48	48 V			kg	26 V	44 V	A Width	B Blade Ht.	C Opening
Model Number	Nm	26 V*	44 V*	48 V	kg	mm	mm	mm	mm	mm	mm	
47BTYSB20T2	10-20	260	455	455	2,57	1/2"	598	579	36	14	7	13
47BTYSB30T3	15-30	188	329	329	2,57	3/4"	588	569	42	15	12	19
47BTYSB40T4	20-40	141	247	247	2,93	1 1/16"	612	593	60	15	17	24

\*Speed with fully charged battery.

**General:** All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.

Battery weights: 26-V Li-Ion battery 0,50 kg, 44V Li-Ion battery 0,85 kg

**Extra Equipment:** Batteries and chargers must be ordered separately.

To order individual sockets, use a "KS" prefix. (i.e. KS2EA01 for a T2, 1/4", flush, thru hex socket.)



# Cordless Transducer Control – Crowfoot

## Cleco®

### Crowfoot Series

**Torque Range**  
10,5 - 30 Nm

**Bolt Size**  
M6 - M8

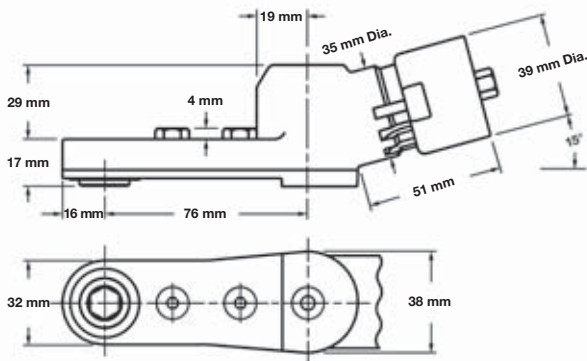
- Brushless precision
- Resolver control
- Transducer accuracy
- On-board controller with I/O signal handling and power management
- Integrated servo



47BCYSB30C1

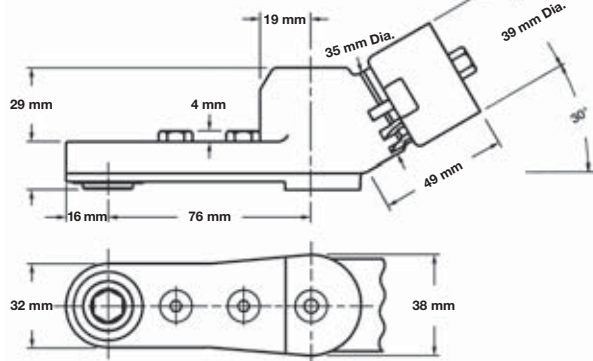
#### C1 – 15° Head (Part No. 301071)

Maximum Recommended Torque: 30 Nm

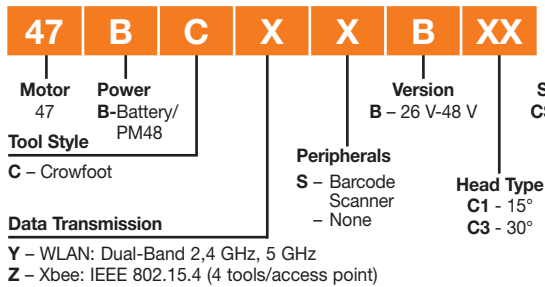


#### C3 – 30° Head (Part No. 301072)

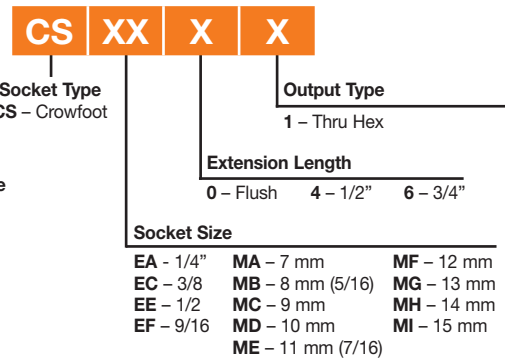
Maximum Recommended Torque: 30 Nm



#### Crowfoot Tool Nomenclature



#### Socket Nomenclature



Crowfoot	Torque Range	Free Speed (RPM)			Weight Less Battery	Max. Drive Size	Length with Battery	
		Batteries		PM48			26 V	44 V
Model Number	Nm	26 V*	44 V*	48 V	kg	mm	mm	
47BCYSB30C1	10.5-30	186	326	326	2,81	15	667	648
47BCYSB30C3	10.5-30	186	326	326	2,81	15	660	641

\*Speed with fully charged battery.

**General:** All tools must be used with an approved Cleco/DGD tightening controller or suitable PC software.  
Batterie weights: 26-V Li-Ion battery 0,50 kg, 44V Li-Ion battery 0,85 kg

**Extra Equipment:** Batteries and chargers must be ordered separately. See back page for optional accessories.

To order individual sockets, use a "CS" prefix before the required socket. (i.e. CSEE01 for a 1/2", flush, thru hex socket.)

**Cordless Freedom**

*or*

**Tethered Speed...**



**The Choice Is Yours.**



**44 V Li-Ion Battery Technology**

- Up to 83 % faster vs. 26 V battery
- Up to 1700 rundowns/charge (hard joint)
- Life > 800 charging cycles
- On-board intelligence
  - Charge level/cycles LCD
  - Diagnostics to a PC (936492PT)
- Single tab, one-hand removal

Single tab removal



936400PT

The cells and electronic balancing circuit are fixed to an internal cell holder to provide maximum durability.



5 bar on-battery display for advanced feedback

Charge Cycles – Unplugged display

Display	Charge Cycles
■ □ □ □ □	0 – 199
■ ■ □ □ □	200 – 399
■ ■ ■ □ □	400 – 599
■ ■ ■ ■ □	600 – 799
■ ■ ■ ■ ■	> 800

Charge Level – Operational display

Display	Charge Level
□ □ □ □ □	Deep Sleep Mode or Defective
■ □ □ □ □	< 20 %
■ ■ □ □ □	20 – 40 %
■ ■ ■ □ □	40 – 60 %
■ ■ ■ ■ □	60 – 80 %
■ ■ ■ ■ ■	80 – 100 %



936491PT

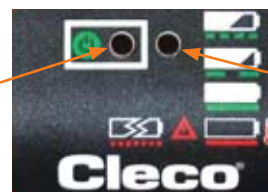
**26V/44V Charger Technology**

- Auto-sensing 26 V/44 V
- One hour charge cycle
- Auto-sensing input (85-270) VAC
- Power/Status LEDs

Charger Display for Advanced Feedback

Power Supply

LED Display	Status
●	No Main Supply
●	Main Supply OK



Red/Green LED for Charge & Error

LED Display	Status
●	No Battery
● fast green flash (1 Hz)	Charging, Level < 80 %
● slow green flash (0,5 Hz)	Charging, Level > 80 %
●	Battery 100 % Charge
●	Cell Over Temperature
● fast red flash (2 Hz)	Battery Error (Short circuit defective cell, etc.)

# Power Module, Controllers & Software



## LiveWire Power Module PM 48

- Up to 83 % faster!
- Auto sensing input – (85-275 VAC)
- Power & status LEDs
- Electronic circuit protection



### Power Module

Model No.	Weight kg	Width mm	Length mm	Depth mm
961350PT	3,1	240	120	150

2 m power cable included.

### Speed Improvement Comparison

Series	Model Number	Free Speed (RPM)		% Increase
		26 V Battery	Power Module	
Pistol	17BPYSB05Q	1639	2428	48 %
	17BPYSB07Q	1161	1721	48 %
	17BPYSB09Q	887	1314	48 %
	17BPYSB13Q	629	931	48 %
Right Angle	47BAYSB15AM3	538	983	83 %
	47BAYPB15AM3L	538	983	83 %
	47BAYSB21AM3	411	751	83 %
	47BAYPB21AM3L	411	751	83 %
	47BAYSB28AM3	291	532	83 %
	47BAYPB28AM3L	291	532	83 %
	47BAYSB35AM3	244	447	83 %
	47BAYPB35AM3L	244	447	83 %
	47BAYSB50AM3	168	293	75 %
	47BAYPB50AM3L	168	293	75 %
	47BAYSB70AH4	123	216	75 %

## mPro400GC Controller

- Up to 16 tools per controller (LiveWire + Corded + Fixtured)
- 10,4" display with wide viewing angle
- Touchscreen with alpha numeric entry
- Corded and cordless functionality
- Redundant Ethernet and Fieldbus ports
- Serial and USB connectivity
- Configurable 24 V I/O
- System bus standard
- Fieldbus optional

### mPro400GC Nomenclature

<b>M</b> PRO	<b>400</b> GC	<b>X</b>
Controller Style	Series	Type
		M – Master P – Primary



### Global Controllers

Model Number*	Description	Weight	Width	Height	Depth*
		kg	mm	mm	mm
MPRO400GC-M	Master controller, display, no servo, Fieldbus optional	10,6	267	381	336
MPRO400GC-P	Primary controller, display, STMH servo, Fieldbus optional	14	267	381	336

\*Includes mounting bracket.



Also the Tightening Controllers mPro400S / mPro400SE / mPro400SG / CPM3 / CPM6 / CPM9 and other DGD / Cleco controllers can run the LiveWire Battery Tools. We can offer you the most efficient solutions for your tightening processes.



## Batteries

Part No.	Description	Weight
		kg
935377	26 V Li-Ion	0,50
936400PT	44 V Li-Ion	0,85



## Battery Chargers

Part No.	Description
935391	26 V battery charger
936491PT	26 V/44 V charger



**vmax™**



## Vmax Power Module

Model No.	Weight		Width		Length		Depth	
	lbs.	kg	in.	mm	in.	mm	in.	mm
961350PT	6.8	3.1	9.4	240	4.7	120	5.9	150

2M power cable included.

## LiveWire 2 Scanner

Part No.	Description
937240PT	Bar Code Scanner for "L" tools



## Vmax Cables

Part Number	
Tool	Extension
961341-***	961342-***
961369-060	--

\*\*\*Length: 030=3 m, 060=6 m, 080=8 m, 100=10 m  
Note: Maximum 20 m length



## 2.4GHz to 5GHz Upgrade Kit

Upgrades are available at your local ATG Application Center to upgrade the W and X series 2.4GHz tools to a 5GHz Y series tool.

## LiveWire Communication Access Points

Part No.	Description
961390	XBEE 802.15.4 Base Station
961300	868 MHz Base Station (EU only)
544249PT	WLAN Dual Band Access Point 2.4/5GHz (US) incl. Antennas
961453PT	WLAN Dual Band Access Point 2.4/5GHz (EU) incl. Antennas

Radio Range: 30-50 meters (XBEE 30 meters max.)  
IEEE 802.11a/b/g (depending on tool)  
Max. Tools: 16



## Preventative Maintenance Diagnostics

Part No.	Description
936492PT	Battery service interface and software CD

- USB to PC Interface for 44 V battery
- Displays discharge cycles, total and per cell voltage
- Better diagnostics
- Easy to troubleshoot

Battery service interface allows cycles and cell voltages to be read via serial interface cable.



## Compact Flash Cards suitable for mPro400GC series

Part No.	Description
S961592	Compact Flash Card 1GB (blank)
S961593	Compact Flash Card 2GB (blank)



## Software

Part No.	Description
S168677	mProRemote.Net Software for Remote Programming and control of all mPro Systems



## Tool Holders

Part No.	Description
935144	Pistol tool holder w/infrared interface
935396	Pistol tool holder
935290	Angle tool holder w/infrared interface
935395	Angle tool holder
935170	Infrared interface cable
935998	70Nm RA, Crowfoot/Tubenut holder
935999	70Nm RA, Crowfoot/Tubenut holder w/infrared interface



## Tool Holder Extension Cables

Part No.	Description
935154	3m Tool holder IrDA serial extension cable
935155	6m Tool holder IrDA serial extension cable
935157	10m Tool holder IrDA serial extension cable

# Cleco Cordless Accessories

## Fieldbus Modules

Part No.	Module Description
544171PT	Fieldbus Devicenet
544172PT	Fieldbus Ethernet-IP 1 x RJ45
544278PT	Fieldbus Ethernet-IP 2 x M12
544173PT	Fieldbus Profibus DB9
544174PT	Fieldbus Profinet 2 x RJ45
544211PT	Fieldbus Modbus/TCP 1 x RJ45



## System Bus accessories

Part No.	Accessory Description
S133405	System Bus Stack Light without Buzzer
S133406	System Bus Control Box with Buzzer
S133410	System Bus 4-Position Socket Tray
S133411	System Bus 8-Position Socket Tray
S133420	System Bus Stack Light with Buzzer
S133436	System Bus 32 I/O Expander built in housing
S133437	System Bus 16 I/O Expander built in housing
S961830	System Bus 16 I/O Expander (built in module for cabinet)
960392	System Bus 32 I/O Expander (built in module for cabinet)



## LiveWire Pistol Dead Handle

Part No.	Description
301837	Reversible handle mount



## Tool Suspension Bail

Bestell-Nr.	Beschreibung
1110909	Standard Suspension Bail (not for lightweight L series)
S387983	Angle tool swivel bail for LiveWire tools (not for lightweight L series)
S387884	Angle Tool swivel bail with special holder (not for lightweight L series)



## Protective Covers

Bestell-Nr.	Beschreibung
936372	Protective Cover Angle Head 47BA..15-28AM3 Also suitable for LiveWire 2 tools.
936373	Protective Cover Angle Head 47BA..35-50AM3 Also suitable for LiveWire 2 tools.
936424PT	Protective Cover for Scanner of 47BA tools Not for LiveWire 2 tools.
937210PT	Protective Cover for Display of 47BA tools Not for LiveWire 2 tools.
936489PT	Protective Cover Pistol Tool 17BP.



## Accessory Cables

Part No.	Accessory Cable Description
960225	Ethernet Cable Patch - 2 m
960007	Serial Cable Null Modem - 3 m
935170	Serial Interface IrDA with cable 1 m
S133408-005	System Bus Cable - 0,5 m Bus
S133408-020	System Bus Cable - 2 m Bus
S133408-050	System Bus Cable - 5 m Bus
S133408-200	System Bus Cable - 20 m Bus
S133408-500	System Bus Cable - 50 m Bus
S133412	System Bus Terminator



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