

GEN IV ACE CONTROLLER



MASTER OF THE
FASTENING UNIVERSE

AcraDyne®
A Division of AIMCO



AcraDyne offers a full line of high torque, traceable, and critical bolting systems for the Energy Services sector: Wind Power, Solar, Nuclear, Mining, and more. AcraDyne's portfolio ranges from 1 – 17,000 Nm. Its cutting-edge high-torque bolting systems are specifically designed for critical high torque bolting applications that demand superior performance and durability. AcraDyne tools can handle the toughest and most important bolting jobs. The faster speed, coupled with its extreme accuracy, makes AcraDyne's bolting system an outstanding cost-effective investment. It is with great pride that the products that we manufacture are **MADE IN THE USA.**



AcraDyne's Gen IV ACE Controller platform is a single platform that commands all transducerized tools in the AIMCO portfolio

AIR | CORDLESS | ELECTRIC

The same, simple programming for all tool types, including:

AcraDyne

- DC Tools
- Cordless Battery Tools

Uryu

- Air Powered Tools
- Electric Tools
- Pulse Tools

No additional controller training needed for different platforms (tool type specific knowledge is required).

One common communication for global data collection, line controls, and Field Bus platforms.



The Gen IV ACE Controller Platform provides ultimate FLEXIBILITY and FREEDOM to command tools for every application

One common communication for your global data collection, line controls, and Field Bus platforms.



GEN IV ACE Controller Platform

Continuous Drive

Cordless



Electric



Discontinuous Drive

Pneumatic



Electric Pulse



Electric Pulse



Cordless Pulse



The AcraDyne Gen IV ACE controller platform is the culmination of more than 50 years of serving our industrial fastening customers with 20 years of manufacturing DC tools that are MADE IN THE USA. It is filled with countless advanced capabilities and features. The Gen IV ACE Controller is the core of the modular AcraDyne DC system. One controller will command any tool in the AcraDyne line from 1 Nm to 17,000 Nm.



FEATURES AND BENEFITS

- Web browser based programming. Receive data on your PC, tablet, smartphone, or any other web-capable device. You can use more than one device at a time: Be in program mode on one device while reviewing real-time curves on another, while watching tool diagnostics on a third
- Multiple fastening strategies – Program up to 256 parameters with as many as 20 steps
- Jobs capability – 99. Event log – 5,000
- Backup & restore through USB or Ethernet
- Assignable I/O (8 X 8)
- Rundown storage – 1,000,000
- Real-time curve viewing. Curve storage – 20,000

NETWORKING CAPABILITIES

- Ethernet Protocols supported: Open Protocol, ToolsNet, Ethernet/IP, Modbus TCP, PFCS, XML, FTP Client
-  **Anybus**® Field Bus connectivity: Profibus, Profinet, DeviceNet, CC-Link, CC-Link IE Field
- Data collection
- Serial protocols and string output
- Bar code scanning & printing
- Multi-spindle synchronization

System Port

- Uses standard USB Type-B cable
- Easily connect to any computer to run software, program your controller, and download data and curves



28292

Included with each Gen IV Controller is a USB 2.0 System Port Cable, A Male to B Male, 3M

Tool Connector

- Varies by tool type

USB Ports (4)

- Backup and Restore
- Update Software
- Download Data and Curves
- Expandable USB Peripherals

Illuminated On/Off Switch

Power Connector (110V / 220V)

Anybus® Field Bus Options:

- Profibus, Profinet, DeviceNET, CC-Link, CC-Link IE Field

Mounting Bracket

- Wire and Cable Routing Channels

Dual Ethernet Ports

- Enables two networks simultaneously for separate line control and data collection
- Supports any industry standard protocol
- Remote system monitoring, programming, and data download

Serial Port

- Data String Output
- Serial Protocols
- Bar Code Scanners
- Printers

24V I/O (Assignable)

- 8 In/8 Out



27348

Included with each controller is an I/O Wiring Connector - a simple module to facilitate connections to I/O



GEN IV ACE iEC Controller for all AcraDyne DC Tools



U.S. Patents
D968491
11,229,993

Model*	System Port & Removable Memory	Lights (L) LED Display (D) Graph (G)	24V I/O Assignable 8 X 8"	Serial Port with Protocols	Backup & Restore (USB)	Ethernet** Two Ports
Bottom Exit Cable						
iEC4EGV (P) (N) (D) (C) (M)	X	L/D/G	X	X	X	X
Top Exit Cable						
iEC4EGV (-T) (P-T) (N-T) (D-T) (C-T) (M-T)	X	L/D/G	X	X	X	X

* Field bus options: P = Profibus N = Profinet D = DeviceNet C = CC Link M = CC-Link IE Field Other Field bus options available upon request.

** Ethernet channel supports Open Protocol, ToolsNet, EtherNet/IP, Modbus TCP, PFCS, XML, and FTP Client.



GEN IV ACE iAC Controller for Transducerized Uryu Air Tools



Model*	System Port & Removable Memory	Lights (L) LED Display (D) Graph (G)	24V I/O Assignable 8 X 8"	Serial Port With Protocols	Backup & Restore (USB)	Solenoid Shut Off On Board	Programmable Regulator On Board	Ethernet** Two Ports
Bottom Exit Cable								
iAC4EGV (P) (N) (D) (C) (M)	X	L/D/G	X	X	X			X
iAC4ESRGV (P) (N) (D) (C)	X	L/D/G	X	X	X	X	X	X
Top Exit Cable								
iAC4EV (P-T)	X	L/D	X	X	X			X
iAC4EGV (-T) (P-T) (N-T) (D-T) (C-T)	X	L/D/G	X	X	X			X
iAC4ESRGV (-T) (P-T) (N-T) (D-T) (C-T)	X	L/D/G	X	X	X	X	X	X

* Field bus options: P = Profibus N = Profinet D = DeviceNet C = CC Link M = CC-Link IE Field Other Field bus options available upon request.

** Ethernet channel supports Open Protocol, ToolsNet, EtherNet/IP, Modbus TCP, PFCS, XML, and FTP Client.



GEN IV ACE iPC Controller for Uryu UDP Transducerized DC Pulse Tools



Model*	System Port & Removable Memory	Lights (L) LED Display (D) Graph (G)	24V I/O Assignable 8 X 8"	Serial Port with Protocols	Backup & Restore (USB)	Ethernet** Two Ports
Bottom Exit Cable						
110V Operation iPC4EGV (P1) (N1) (D1) (C1) (M1)	X	L/D/G	X	X	X	X
220V Operation iPC4EGV (P2) (N2) (D2) (C2)	X	L/D/G	X	X	X	X
Top Exit Cable						
110V Operation iPC4EGV (1-T) (P1-T) (N1-T) (D1-T) (C1-T) (M1-T)	X	L/D/G	X	X	X	X
220V Operation iPC4EGV (2-T) (P2-T) (N2-T) (D2-T) (C2-T)	X	L/D/G	X	X	X	X

* Field bus options: P = Profibus N = Profinet D = DeviceNet C = CC Link M = CC-Link IE Field Other Field bus options available upon request.

** Ethernet channel supports Open Protocol, ToolsNet, EtherNet/IP, Modbus TCP, PFCS, XML, and FTP Client.



GEN IV ACE iBC Controller for all AcraDyne Transducerized Battery Tools



Model*	System Port & Removable Memory	Lights (L) LED Display (D) Graph (G)	24V I/O Assignable 8 X 8"	Serial Port with Protocols	Backup & Restore (USB)	Ethernet** Two Ports
Connects through External WiFi Access Point (User Supplied)						
iBC4E (N)	X	L/D		X	X	X
iBC4EGV (P) (N) (D) (C)	X	L/D	X	X	X	X

* Field bus options: P = Profibus N = Profinet D = DeviceNet C = CC Link M = CC-Link IE Field Other Field bus options available upon request.

** Ethernet channel supports Open Protocol, ToolsNet, EtherNet/IP, Modbus TCP, PFCS, XML, and FTP Client.



GEN IV ACE iBC-Z Controller for Uryu UBX-AF Transducerized Battery Oil Pulse Tools



Model*	System Port & Removable Memory	Lights (L) LED Display (D) Graph (G)	24v I/O Assignable 8 X 8"	Serial Port With Protocols	Backup & Restore (USB)	Ethernet** Two Ports
Connectivity through embedded Zigbee access point						
iBC4EGV (P-Z) (N-Z) (D-Z) (C-Z) (M-Z)	X	L/D/G	X	X	X	X

* Field bus options: P = Profibus N = Profinet D = DeviceNet C = CC Link M = CC-Link IE Field Other Field bus options available upon request.

** Ethernet channel supports Open Protocol, ToolsNet, EtherNet/IP, Modbus TCP, PFCS, XML, and FTP Client.



GEN IV ACE iCC Controller for Uryu UCX-AF Transducerized DC Pulse Tools



Model*	System Port & Removable Memory	Lights (L) LED Display (D) Graph (G)	24V I/O Assignable 8 X 8"	Serial Port With Protocols	Backup & Restore (USB)	Solenoid Shut Off On Board	Programmable Regulator On Board	Ethernet** Two Ports
Bottom Exit Cable								
iCC4EGV1 (P) (N) (D) (C) (M)	X	L/D/G	X	X	X			X
Top Exit Cable								
iCC4EGV1-T (P-T) (N-T) (D-T) (C-T)	X	L/D/G	X	X	X			X

* Field bus options: P = Profibus N = Profinet D = DeviceNet C = CC Link M = CC-Link IE Field Other Field bus options available upon request.

** Ethernet channel supports Open Protocol, ToolsNet, EtherNet/IP, Modbus TCP, PFCS, XML, and FTP Client.

NETWORK CONNECTIVITY



POKA-YOKE ERROR PROOFING

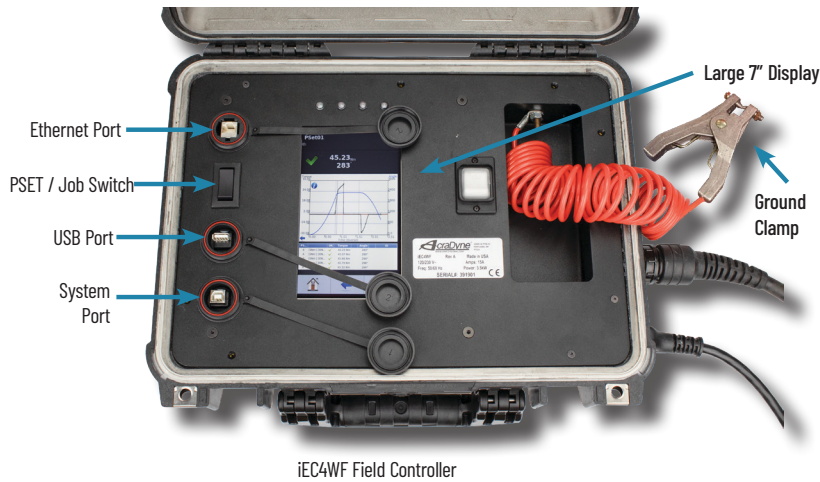
AcraDyne's Gen IV ACE Platform supports any third-party accessory to poka-yoke your process.

FEATURES AND BENEFITS

- 24V I/O inputs support the outputs of the receiver units
- Connect click wrenches, crimpers, or any poka-yoked device to your network data collection and line controls with all of the Ethernet protocols and Field Buses offered in the ACE Platform



Improved design of AcraDyne's powerful Gen IV Field Controller means increased durability, lighter weight, and quick and easy setup



iEC4WF Field Controller



Rugged, Lightweight Case

FEATURES AND BENEFITS

- Optimized for extreme duty applications >5,000 Nm
- The Gen IV Controller utilizes three tightening strategies:
 - Torque Control: Drive the tool to a pre-set Target Torque
 - Angle Control: Drive the tool to or measure a pre-set Degree of Angle
 - Yield Control: Drive the tool to the Fastener Yield Point to achieve maximum clamp load
- Multiple fastening strategies – Program up to 256 parameters with as many as 20 steps
- Jobs capability – 99
- Real-time curve viewing. Curve storage – 20,000
- Rundown storage – 1,000,000
- Event log – 5,000
- Backup & restore through USB
- Weatherproof, rugged case protects from the toughest environments
- Compact design weighs less than 20 lbs
- Ground clamp is quick and easy to set up and eliminates additional parts that are substantially heavy
- Optional tool fan kit helps prevents tool overheating
- Capable of interface with the AcraDyne series Dual-Lever tools that offer two-hand, no tie down functionality
- 110V – 220V compatible
- Single Ethernet port increases speed of connectivity, signal stability, and signal consistency
- Commands any tool in the AcraDyne line from 1 Nm to 17,000 Nm

PERQ Advantages

PRODUCTIVITY



- Replace multiple conventional tools with one flexible controlled system
- Quick and easy setup
- Fan kit reduces downtime due to tool overheating

ERGONOMICS



- Compact, rugged case with easy carry handle makes field use easy and convenient
- Lightweight for operator comfort

RELIABILITY



- Weatherproof rugged case
- Industrial touch screen

QUALITY



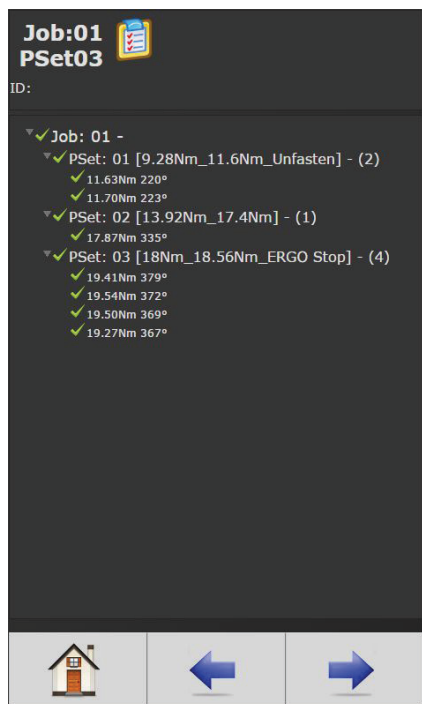
- Controlled tightening and consistent torque control improves quality
- Process controls reduce human error, and ensure no missed fasteners, stripped threads, rehits, or damaged threads
- No premature shut-off

Model	Description	Dimensions W x D x H	Weight LB KG	
iEC4WF	Field use controller for use with 110V or 220V service	16.1" x 12.8" x 6.9" 408 mm x 326 mm x 175 mm	18.5	8.4

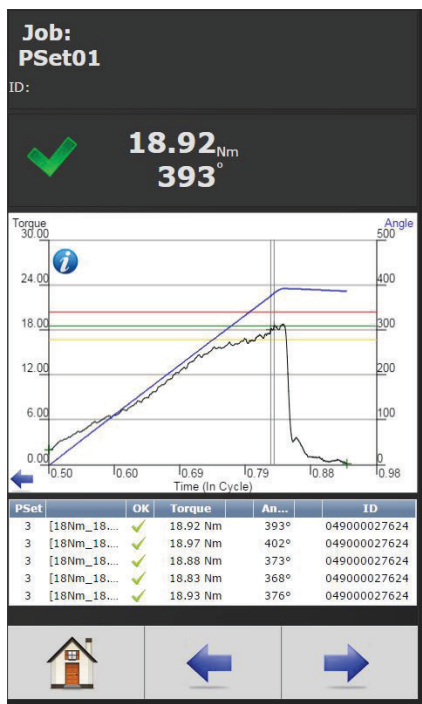
SOFTWARE

AcraDyne's software package is on-board every AcraDyne controller and is provided FREE of charge. This comprehensive, user-friendly program allows programming, analysis, and diagnostics.

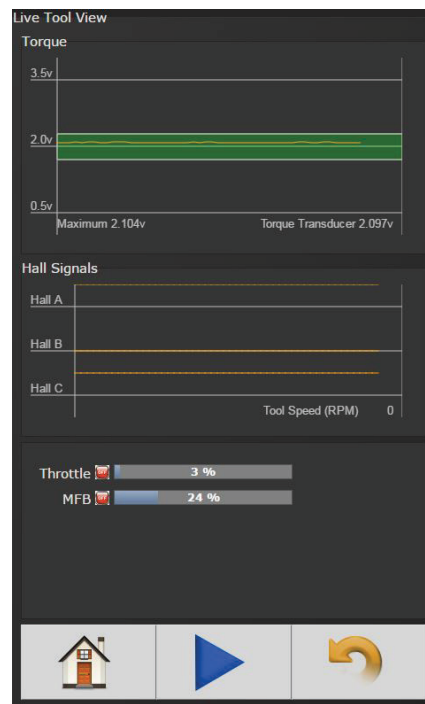
The software is based on a standard web browser, allowing you to connect the AcraDyne controller with any computer, tablet, or smart device. Connect through Ethernet, USB, or wirelessly via a network connected to both devices.



Adding and editing Parameter Sets (256) and Jobs (99) is easy and intuitive in the parameter set up function.



View curve results in real time or view stored results. As many as 20,000 curve results can be stored in memory.



Tool programming and diagnostics for repair, calibration and advanced troubleshooting.



Choose from several run screens that display easy to view, large screen indicators.

Gen IV Controller with On-Board Smart Arm Capability and Process Visualization

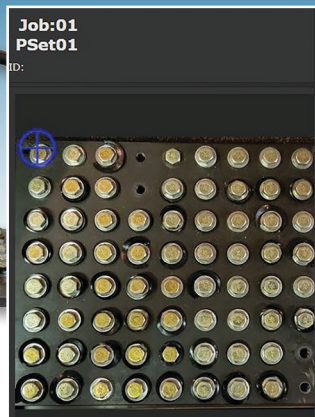
AcraDyne Gen IV Controller's smart arm capability provides an advanced error-proofing solution to ensure the quality of your fastening operation. The process requires no external PC or software – the capability is on-board every Gen IV controller.

FEATURES AND BENEFITS

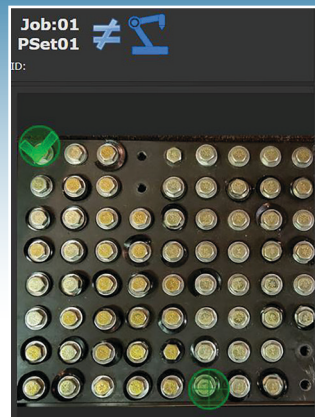
- Easy-to-follow visual guidance on the Gen IV controller graphical screen
- Easy setup – programming takes only minutes
- Once fastener locations are programmed into the Gen IV controller, the system can perform specific actions on specific fasteners
- No external PC or third-party software needed. Control the process using AcraDyne's Gen IV Controller and its integrated software, which is provided free of charge
- Low-cost solution vs. competitive offerings that require third-party PC-based control
- Modular – can be added at any time to an existing AcraDyne system using the Gen IV controller
- No guesswork! Powerful Gen IV data collection enables diagnostics and analysis
- Works with both continuous and discontinuous drive tools



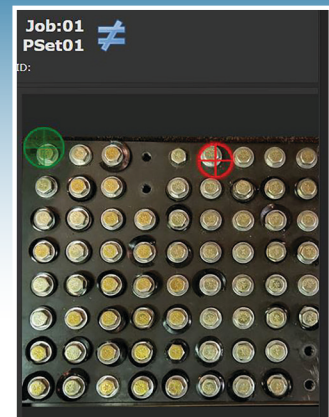
The Gen IV controller provides easy-to-follow visual guidance directly on the graphical screen.



Tool in position over Bolt 1



Bolt 1 OK
Direction to Bolt 2



Tool in wrong location



Gen IV Smart Arm System with Process Visualization

Smart Arm Accessory:

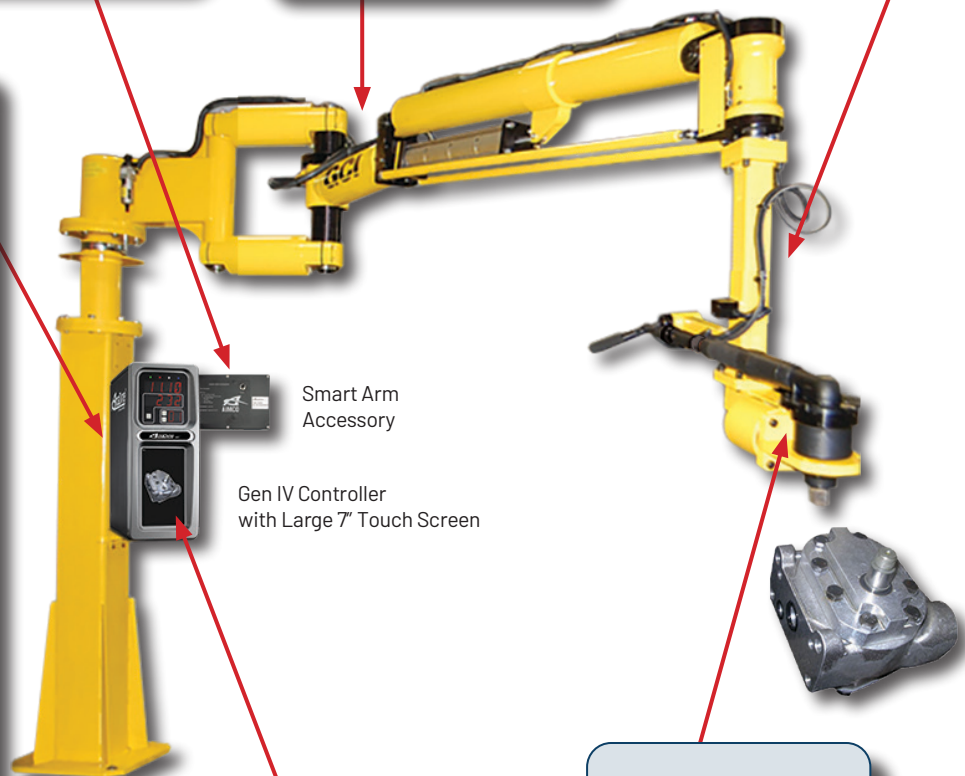
- Requires no external PC or third-party software for operation
- Gen IV Controller Software integrates with plant manufacturing execution software or allows custom programming

Encoders located at each joint of the arm.

Smart Arm guides operator in the specified torque pattern and counts fasteners required for correct assembly.

Gen IV Controller captures fastening-process data:

- Data captured and reported in real time with torque and graphing capabilities
- Curve results presented in real time or from stored results
- 20,000 curve results can be stored in memory
- Monitor, control, and report torque, angle, engineering units, fastener count, job/job sequence
- Multiple fastening strategies: 256 parameter sets with 20 stages
- Jobs capabilities – 99

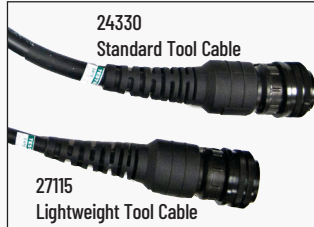


Custom image of run screen with preprogrammed fastener locations/specifications. Updates in real time.

Tool operates only when it is at the correct specified fastener location.

IEC CONTROLLER CABLES & ACCESSORIES

The AcraDyne iEC DC nutrunner tool system uses a single cable to carry all necessary conductors for superior ergonomics and durability.



- Flexible polyurethane cover for maximum durability, abrasion and transmission fluid resistant
- Quick disconnects at both ends facilitate tool changeover and troubleshooting
- The CAN data/signal is via RJ45 for products such as the KDM socket tray or computer

iEC Tool Cables

Model	Description	Length	Compatible with
iEC Tool Cables			
27110	iEC Lightweight Cable (3M) - Tool to Controller	3 M / 10 Ft	1000 & 2000 Series
27115	iEC Lightweight Cable (5M) - Tool to Controller	5 M / 16 M	1000 & 2000 Series
27122	iEC Lightweight Cable (10M) - Tool to Controller	10 M / 33 Ft	1000 & 2000 Series
24330	iEC Cable (3M) - Tool to Controller	3 M / 10 Ft	3000 - 9000 Series
25350	iEC Cable (5M) - Tool to Controller	5 M / 16 Ft	3000 - 9000 Series
24320	iEC Cable (10M) - Tool to Controller	10 M / 34 Ft	3000 - 9000 Series
iEC Extensions			
24320	Extension cable 10M	10 M / 33 Ft	Any iEC cable
25518	Extension cable 20M	20 M / 66 Ft	Any iEC cable

iEC Cable Accessories

Model	Description	Compatible With
Adapters and Connectors		
	26364 G4 Right Angle Cable Adapter	Any iEC cable
	25491 G4 Breakaway Cable Connector - Ensures disconnect of cable should stress in excess of 40 lbs. occur (see following page for details)	Any iEC cable

ICC CONTROLLER CABLES

iCC Tool Cables



Model	Description	Length	Compatible With
iCC Tool Cables			
910-727-0	iCC Cable (5M) - Tool to Controller	5 M / 16 Ft	UCX-AF Series
910-728-0	iCC Cable (10M) - Tool to Controller	10 M / 33 Ft	

iAC CONTROLLER CABLES & ACCESSORIES



EC/MCCBL-25

iAC Tool Cables

Model	Description	Length	Compatible with
iAC Tool Cables			
EC/MCCBL-10	iAC Sensor Cable Assembly (3M) - Tool to Controller	3 M / 10 Ft	UA-MC UA-SMC, UA-AMC, UXR-MC Series Tools
EC/MCCBL-25	iAC Sensor Cable Assembly (7M) - Tool to Controller	7 M / 25 Ft	
EC/MCCBL-30	iAC Sensor Cable Assembly (9M) - Tool to Controller	9 M / 30 Ft	
EC/MCCBL-35	iAC Sensor Cable Assembly (10M) - Tool to Controller	10 M / 35 Ft	
EC/MCCBL-40	iAC Sensor Cable Assembly (12M) - Tool to Controller	12 M / 40 Ft	
EC/MCCBL-45	iAC Sensor Cable Assembly (13M) - Tool to Controller	13 M / 45 Ft	
EC/MCCBL-50	iAC Sensor Cable Assembly (15M) - Tool to Controller	15 M / 50 Ft	
EC/MCCBL-55	iAC Sensor Cable Assembly (17M) - Tool to Controller	17 M / 55 Ft	



30355



30866

iAC Cable Accessories

Model	Description	Compatible With
Cable Harness		
30355	Y Cable Harness connects iAC controller and controller's I/O to tool's EC/MCCBL cable. Enables LED OK/NOK light function	UA-SMC & UA-150MC Series Tools
30866	W Cable Harness for use with iAC4EGV(T) controller. Enables LED OK/NOK light function and tool internal shut off solenoid	UXR-MC Series Tools

iPC CONTROLLER CABLES

iPC Tool Cables

Model	Description	Length	Compatible with
iPC Tool Cables			
	910-807-0 iPC Cable (5M) - Tool to Controller	5 M / 16 Ft	UDP-MC Series Tools
	910-808-0 iPC Cable (10M) - Tool to Controller	10 M / 33 Ft	

FRL ASSEMBLY KIT

For use with the iAC controller, AcraDyne's FRL assembly kit includes a regulator and solenoid. The kit attaches to the controller or can operate as a stand-alone unit.



Top view



30850 FRL Assembly Kit

CONTROLLER BRACKETS



20853



27816

Model	Description
20853	Table stand free standing platform
27816	Mounting bracket with internal wireways

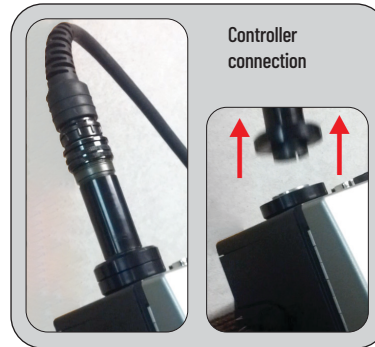
BREAKAWAY CABLE CONNECTOR

25491
Breakaway Cable
Connector



Innovative Quick Disconnect Device reduces cable damage from dropping tools or pulling cables when in use.

- Easily snaps into place, using magnetic force, at either the tool or the controller
- Adjust holding force by removing or adding magnets. Max holding force is 40 lbs / 18 kg



GEN IV CONTROLLER CHOKE ASSEMBLY

Model	Description
32400	Choke filter for the Gen IV Controller Power Cable reduces trip occurrences of sensitive GFCI breakers



LIGHT TOWER



Cost- and energy-efficient LED light tower is visible from any direction, angle, and distance

- Two built-in alarms (FB Type) with selectable sound patterns
- Adjustable Volume (Max. 85 dB at 1 m)
- Tower includes red, yellow, green, blue, and clear lenses





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