BALCRANK QUALITY AND LEADERSHIP

BALCRANK TODAY

2021 marks the 115th anniversary of Balcrank Corporation. Balcrank is one of the oldest manufacturers of automotive lubrication products. Since its beginning, we have been providing our customers with the best products for the ever changing Automotive Commercial and Industrial markets. Our products service automotive quick lubes, dealerships, fleet, and commercial vehicle centers. Our product line has expanded, encompassing the heavy-duty market, which includes trucking, municipalities, railroad, marine, industrial and mining. Our new line of Lion pumps, large hose reels and high-volume control handles allows us to dispense oil products up to 32 gal/min and grease up to 88 lb/min. 115 years later, Balcrank Corporation provides system solutions for all types of vehicle maintenance facilities and industrial manufacturing. Our goal is to continue our traditions and evolve in markets and applications that make sense for our continued growth.

MANUFACTURING

Balcrank's headquarters are in Weaverville, North Carolina where we manufacture and assemble many Balcrank branded products including the Panther pump, Classic hose reel and used fluid capture and storage equipment. Product quality is second to none.

DISTRIBUTION

Balcrank sells its product through a network of established Authorized distributors in North and South America. These distributors are trained on proper equipment system design and installation with inventory availability in local markets. Balcrank also has "Authorized Balcrank Installers" (ABI) that have been trained on troubleshooting, repair, and proper installation of our products.

FIC EXPERTISE

Balcrank has been marketing Fluid Inventory Control systems for decades beginning with the Director Senior system first commissioned in 1968. Today Balcrank offers these products from entry-level basic to our flagship system; NEX·U·®. Our sales personal can design the proper system for any vehicle maintenance shop from small operations to very large shops with hundreds of dispense points.

North America Offices
Weaverville, NC

You need to control your fluids

It is more than likely that your stock control for parts and consumables is well established,
with charges for those items passed to customers as a matter of course.
But can you reconcile your oil purchases with oil sales and usage?
Do you know where every drop of oil is used?
Do you know how much just "disappears"?

**Lost inventory equals lost profit.
With today's high oil prices,
Inventory Control
eliminates that concern.**

Why NEX·U·®

NEX·U·® provides you with the control and the information you require to make your operation more profitable. You will be able to account for every drop of lubricant and other service fluids used.

Efficient inventory control, with automatic alerts and fluid reordering when needed, eliminates downtime.

For almost any lubricant usage or shop size, with today's high cost for these fluids, **NEX·U·®** quickly pays for itself. Once it is paid for, savings go right to the operation's bottom line in the form of profit; profit previously lost.

NEX·U·® adapts to your way of working.

NEX·U·® is a hybrid system that brings you all the advantages of wireless flexibility and hard-wired reliability:

Wireless flexibility
• Data can be transmitted wirelessly among the different system components, eliminating long and expensive cable runs.
• Easily adds new components when required as your needs grow.
• System uses existing Wi-Fi® networks, simplifying its installation. No need for special, custom made, network components.

Hard-wired reliability
• A constant and reliable power source is always present to power the solenoid valves that control fluid delivery.
• No uncharged batteries to let you down.
• Hard-wired data transmission to avoid interferences and other obstacles which might interfere with wireless data transmission.

inventory

NEX·U·® combines the Latin word "NEXUS", which means connection to wireless or hard-wired connected system components, with "U" (You), the system User, the Human.

NEX·U·® has been conceived with the user in mind, making fluid management and fluid inventory control an easy and trouble free activity.

NEX·U·® contributes to increase productivity in vehicle service operations:

- Provides total control and record of every fluid dispensed.
- Secures fluid access to authorized technicians only.
- Provides accurate, real time fluid inventory information.

NEXUS + YOU = NEX·U·®
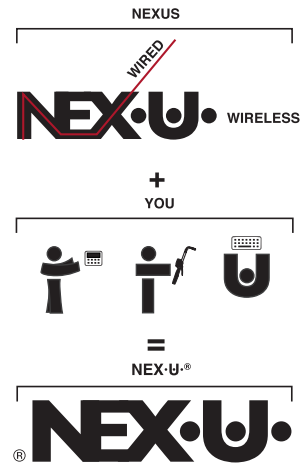
Main components

U·net	U·track	U·dat	U·vision⁺	U·valve	U·tank
NEX·U·® Central Processing Unit. Controls and manages all functions and communications, wired or wireless.	NEX·U·® software. Included together with the U·net. It is the interface between the user and the system. Generates useful reports, keeps control of inventory and can communicate with multiple DMS.	System keypad. With a touchable colored screen and a full QWERTY keypad provides full access to NEX·U·® and U·track.	Hand-held display with access keypad.	All-in-one flow control unit. Includes pulse meter, solenoid valve, filter and electronic board for operation control and communication with other system components.	Provides real-time inventory control and manages different alarm signals.

U·net: NEX·U·®
System Central Processing Unit

U·net is the key NEX·U·® component. It is the central processing unit that controls the system communications and houses the U·track software.

U·net includes a powerful 2.4 GHz processor and 4 GB RAM. It controls the system functions and it manages the wired and wireless communication between the NEX·U·® components.

It has two CAN BUS ports (in/out) for wired communications with other NEX·U·® components and an ethernet port that allows U·net to connect to the shop LAN.
*BALCRANK may deploy a dedicated network with an additional Wi-Fi® router (U·net is not a router), contact BALCRANK for further information.

Unet

U·net specifications:

- Intel 2,4 GHz processor
- 4 GB RAM memory
- 64 GB storage capacity
- One Ethernet connection, one HDMI, four USB and two CAN BUS communication ports
- 110-240V AC - 5V DC transformer included.

6"
1.6"
3.8"
1.2"
6.3"

2 x CAN BUS

Power 110-240 V   HDMI   Ethernet   4 x USB
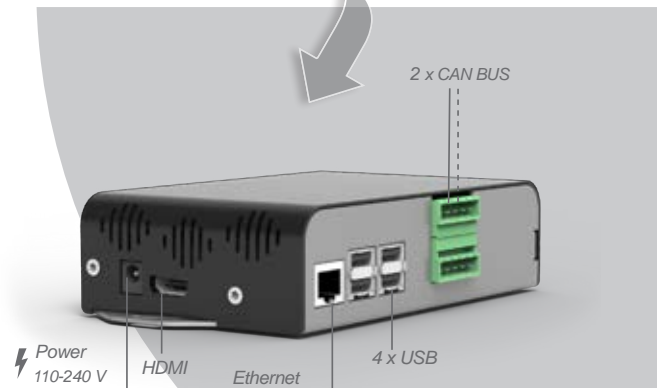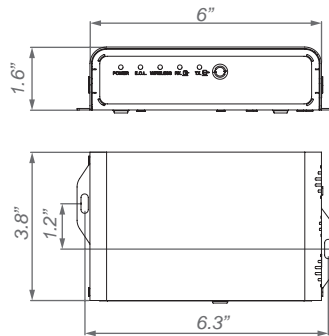
U·net also includes the U·track software.

U·track is a powerful web based software package that gives you full control of fluid usage and inventory. It is a web based software that allows multi-user applications. All PCs or tablets in the same network and in the same location can have access to U·track. U·track can work using any web browser.
Compatible with: Chrome, Firefox, and Microsoft Edge.

Thanks to U·track you will be able to:

- Simple and intuitive system set-up.
- Simplified system maintenance (manage users, fluid inventory, etc.).
- Manage all the system hard-wired and wireless communication.
- Generate a wide variety of reports, which can be easily exported to CSV and txt formats.
- Record and manage Validated Preset Transactions (required for operating with U·Vision+)
- Transform any PC terminal in the workshop into a NEX·U·® virtual keypad license required.

U·track also contributes to increase your operations efficiency and profitability:

- Keeps control of the quantity of fluid dispensed in the system.
- Improves inventory accuracy, generating automatic warnings and email notifications for reorders at critical predefined inventory levels.
- Generates a variety of reports, to help you track dispense information such as date and time, technician, work order, fluid dispensed, volume delivered, etc.

U·track: NEX·U·® Software

Utrack

U·track system is a web based application accessible through any electronic device connected to the same network as U·net. A virtual keypad license converts any device connected to NEX·U·® into a virtual keypad that allows dispensing fluids.

U·track dashboard screen.
Provides information at a glance about inventory and fluid usage just by clicking on any tank.

Transactions can be followed and monitored on a real-time basis if required. Thanks to U·track, each PC terminal or tablet connected to the same network used by NEX·U·® is converted into an access keypad to the NEX·U·® system (additional licenses may be required).
U·track can also generate different reports that can be exported easily into CSV format.

ORDERING INFORMATION

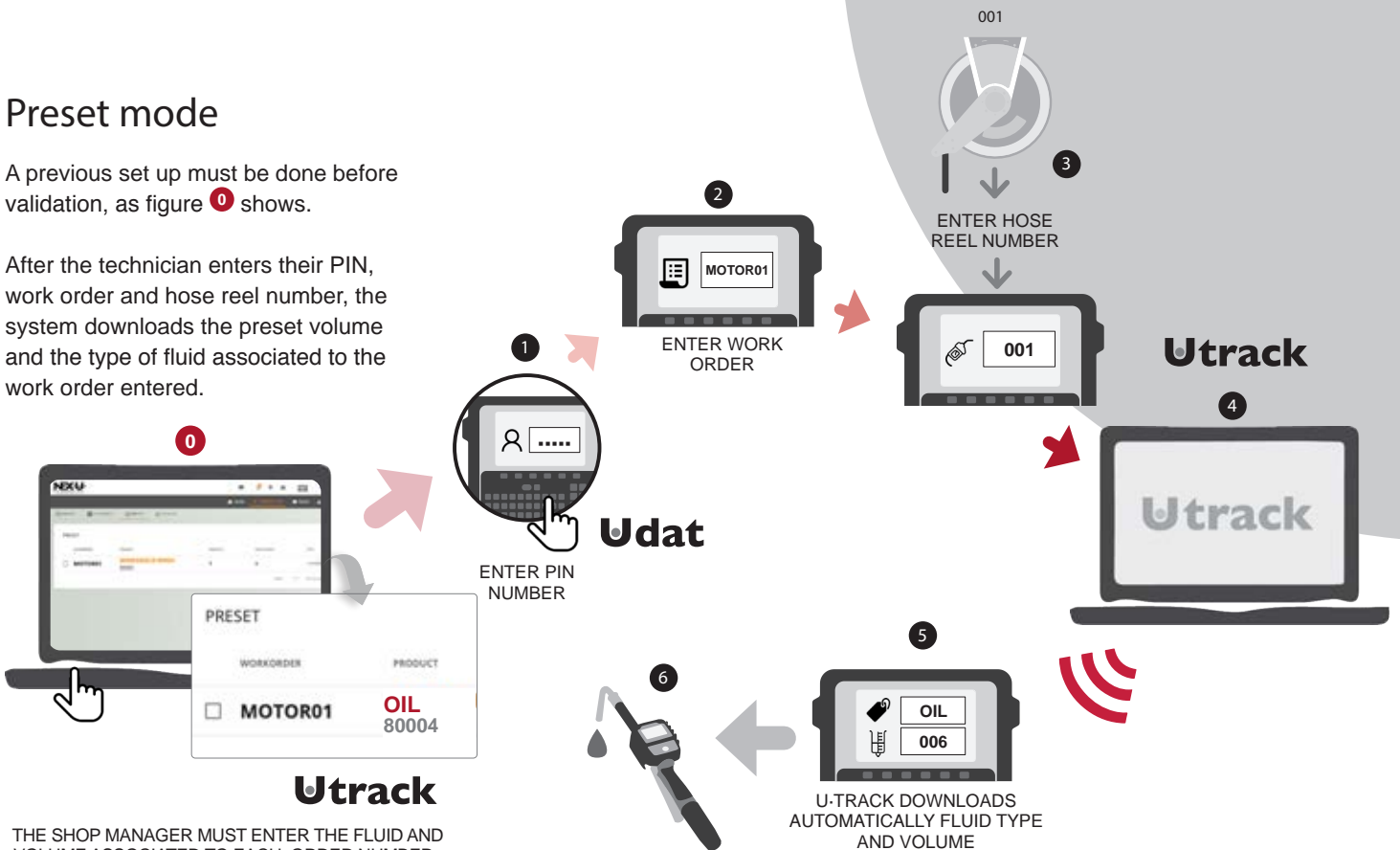| Part No.	Description
3110-110	U·net central processing unit. Includes U·track software.
3110-133	Virtual Keypad license. Converts any terminal (PC, laptop, tablet or smartphone) into a NEX·U·® access Keypad. Contact BALCRANK for further information regarding the virtual keypad license.

Dispensing mode options

Standard mode

After entering their PIN and work order number, the technician must enter the type of fluid to deliver, the hose reel number that will be used, and the volume to deliver.

1 ENTER PIN NUMBER

2 MOTOR01 — ENTER WORK ORDER

3 OIL — TYPE FLUID

001

4 ENTER HOSE REEL NUMBER — 001

5 006 — ENTER VOLUME TO DELIVER

6
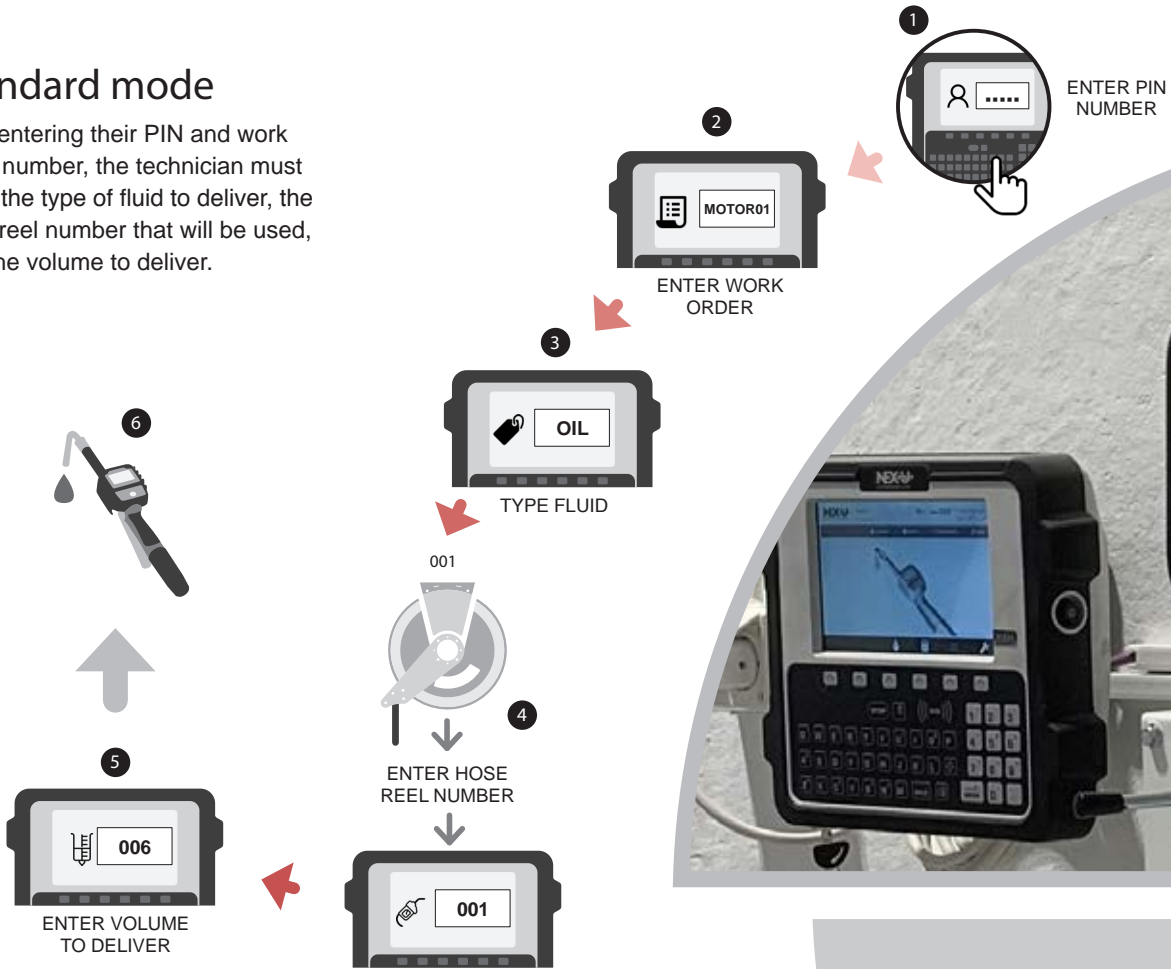
Preset mode

A previous set up must be done before validation, as figure **0** shows.

After the technician enters their PIN, work order and hose reel number, the system downloads the preset volume and the type of fluid associated to the work order entered.

0 PRESET
Udat

WORKORDER	PRODUCT
☐ MOTOR01	OIL 80004

Utrack

THE SHOP MANAGER MUST ENTER THE FLUID AND VOLUME ASSOCIATED TO EACH ORDER NUMBER.

1 ENTER PIN NUMBER — Udat

2 MOTOR01 — ENTER WORK ORDER

001

3 ENTER HOSE REEL NUMBER — 001 — Utrack

4 Utrack

5 OIL / 006 — U·TRACK DOWNLOADS AUTOMATICALLY FLUID TYPE AND VOLUME

6

DMS - Dealer Management System Interface

NEX·U·® can interface with most popular DMS on the market, offering an efficient bidirectional communication to integrate the transaction information workshop DMS.

Features

- Easy to use: quick and effective.
  - Enhanced security: work orders are checked and validated before fluid is dispensed.
    - Automation: simplifies data entering as it can be automatically downloaded from the DMS.

Contact your BALCRANK Distributor who will assist you with the license software you need.

ORDERING INFORMATION

Part No.	Description
3110-137	CDK - Activation fee for integrating with NEX·U·®
3110-138	CDK - Monthly fee for integrating with NEX·U·®

Udat

ENTER PIN
NUMBER

Unet

U·NET SENDS
DATA TO DMS

DMS

CHECKS AND VALIDATES
THE INFORMATION

The Interface

A bidirectional communication is established through web service. The user enters their PIN number and the work order. DMS will prompt a message whether this information exists or not.
NEX·U· offers multiple operating modes depending on the customer needs.
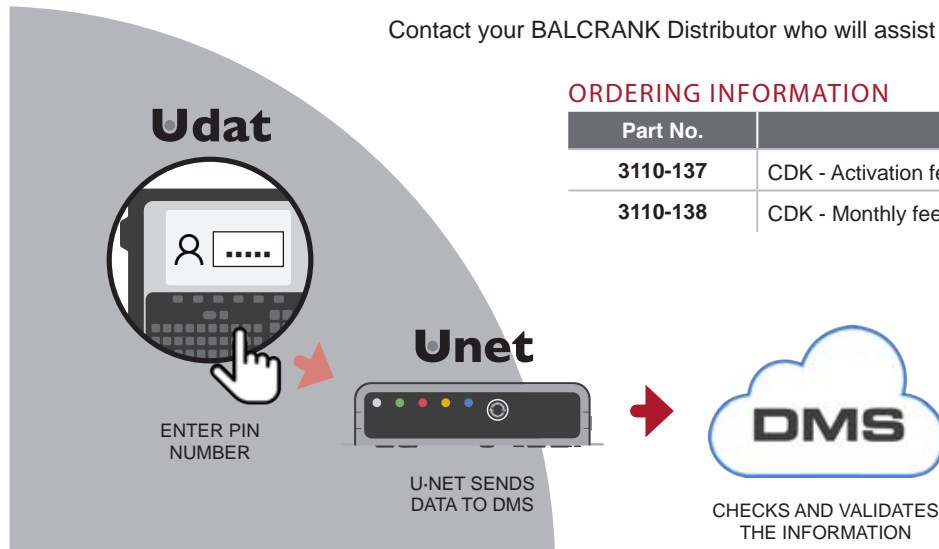
Bidirectional integration with CDK

For other DMS suppliers contact your dealer.

KARMAK

CDKGlobal.
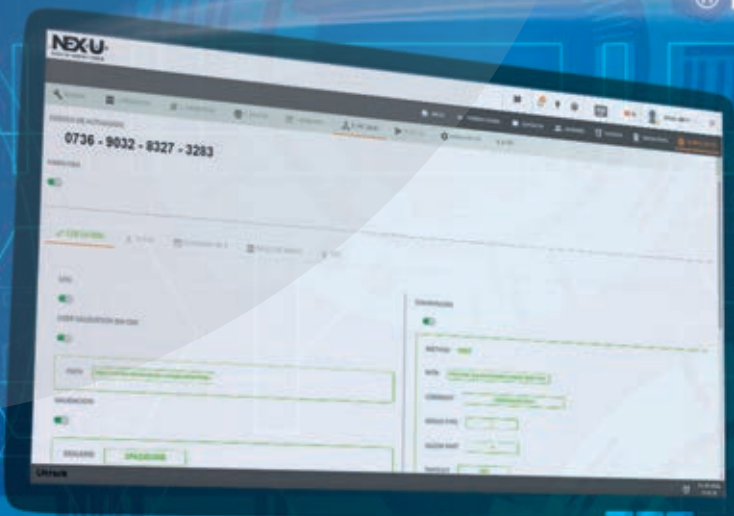
NEX·U·

System access:
## Multiple Possibilities

NEX·U·® adapts to the way you work and it offers multiple possibilities for accessing the system.

Technicians can access NEX·U·® via:

- U·dat: System access keypad.
- U·vision⁺.
- Any device connected to the same network as U·net (laptop, smartphone or tablet).

Udat
Udat power ⁺

U·dat: Access Keypad

USB

RS-232

110 - 240 V

BUS IN - DATA ONLY

BUS OUT - DATA ONLY

CAN BUS OUT - DATA & POWER
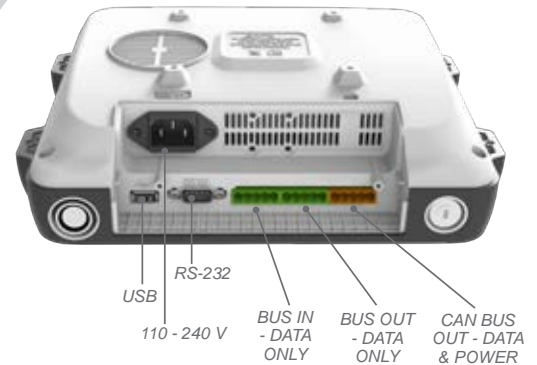
U·dat connection panel

All wired connections can be quickly and easily done without opening the U·dat. It is possible to connect a printer, an external RFID reader or a barcode reader to the RS-232 port.
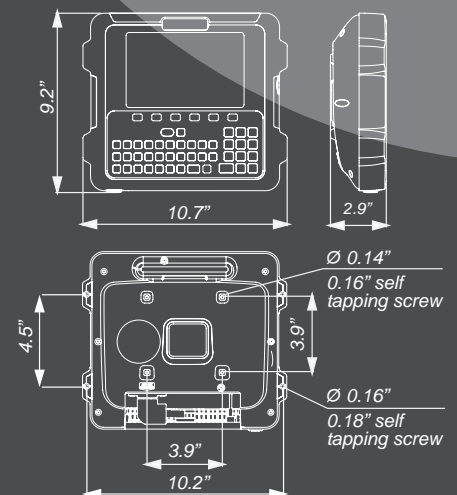
U·dat:

- 110 - 240 V AC
- CAN BUS in/out

System Access Keypad. U·dat allows system access to technicians either through a PIN code or using a RFID card.

- U·dat includes a 7" full colored graphics display and a complete QWERTY keypad.
- U·dat supports CAN BUS cable communications that carry data and power to open the solenoid valves in the system. "Plug-and-play" connectors make cabling easy.
- U·dat includes the transformer required to simultaneously open up to 8 solenoid valves.
- U·dat requires 110 - 240 V power supply.
- Optional Bluetooth printer (see accessories).

9.2"

10.7"

2.9"

4.5"

3.9"

3.9"

10.2"

Ø 0.14"
0.16" self tapping screw

Ø 0.16"
0.18" self tapping screw

ORDERING INFORMATION

Part No.	Description
3110-100	**U·dat power⁺ keypad** NEX·U·® access keypad with 7" colour screen and QWERTY keypad. One USB, one RS232 and in/out CAN BUS ports. 110 - 240 V AC, with a 320 W transformer to open 8 solenoid valves, supports CAN BUS communications.
3110-104	**U·dat keypad** Same as above, but with a 75 W transformer to open 2 solenoid valves.

# U·vision⁺: Hand-held display and keypad module

U·vision⁺ includes a six-button keypad and it can replace the U·dat keypad for data entry in the system as it allows the following operations:

- User access through PIN entry.
- Scroll through existing open job orders to select the one corresponding to each operation or enter the job order number (digits only).
- Enter the volume of fluid to be dispensed.
- Confirm fluid type and transaction.

U·vision⁺ has a backlight display connected using Bluetooth® with a U·valve, U·meter⁺ or U·count and it displays the following parameters:

U·vision⁺ is powered with 4 "AA" 1.5 V alkaline batteries.

Uvision⁺
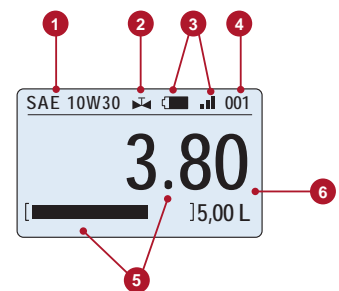
1 Fluid dispensed type
2 Solenoid valve open or closed
3 Battery life and Bluetooth® signal
4 Hose reel / fluid outlet number
5 Volume delivered and operation progress
6 Preset volume

Two possible dispensing modes: Standard and Preset

Enter button

Four scroll / navigation buttons

Enter technician PIN number

STANDARD MODE

Enter / select job order number

Enter volume to deliver

PRESET MODE

Select transaction

U·vision⁺ adapts to any BALCRANK oil control handle and transforms the handle into a hand-held display and keypad for access to the NEX·U·® system.

ORDERING INFORMATION

Part No.	Description
3110-113	U·vision⁺ hand-held keypad and display module. (Oil gun not included).

Product specifications are subject to change without prior notice.

Volume Meters

NEX·U·® obtains dispensed volume information from oval gear meters. These meters transmit a pulse per each fraction of volume that goes through them. **NEX·U·®** recognizes and processes these pulses to shut down the corresponding solenoid valve, once the preset volume is reached and to maintain inventory control and pump operation.

Pulse meters are placed in the dispense line, so they are not subject to accidental damage and cannot be omitted or tampered with. They effectively count every fluid drop.

There are different meter models to meet the needs of each application.

Component	Pulse meter	Solenoid valve	Communication module	Bluetooth®	Wi-Fi®	Materials and Inlet / outlet ports available
U·valve	Yes	Yes	Yes	Yes	-	Aluminium 1/2"
U·valve⁺	Yes	Yes	Yes	Yes	Yes	
U·meter	Yes	-	Yes	-	-	Aluminium 1/2" and 3/4"
U·meter⁺	Yes	-	Yes	Yes	-	
U·pulser	Yes	-	-	-	-	PVC & SS 1/2"
U·count	-	-	Yes	Yes	-	N/A

U·valve

U·valve is a compact unit combining a high accuracy pulse meter, a solenoid valve and a large cleanable fluid screen filter with an electronic module. This module is required to control the meter and valve operation and to communicate with other system components.

- Reduces installation time and eliminates the risk of leaks when using separate components.
- It has a large, high visibility LED display which shows the U·valve number assigned in the system and the U·valve operation.

- Four different LED lights that show the U·valve operation for diagnosis and two buttons for system configuration.
- U·valve supports CAN BUS cable communication that transmits data and the electric power required to open the solenoid valve and Bluetooth® connection to a U·vision or a U·vision+ fluid handle with display.

- U·valve+ includes Wi-Fi® communications for data transmission to other system components. (Requires U·power or U·power+ power supply units).
- U·valve and U·valve+ require 24 V DC supplied by a U·dat or a U·power module.
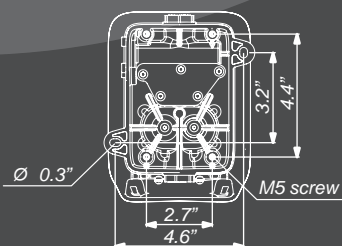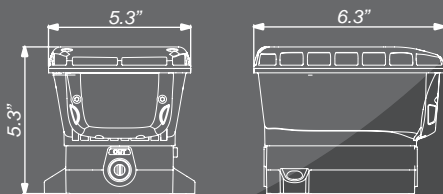
U valve
U valve+

Product specifications	
Wetted parts	Aluminium, NBR, stainless steel, acetal
Applications	Lubricants, antifreeze solutions * if fluid additives are used, it is recommended to install stainless steel pulse meter and stainless steel solenoid valve
Connection threads	1/2" NPT(F)
Flow range	1-32 qt/min (1-30 l/min)
Pulses per quart	310 ppq (328 ppl)
Accuracy	+/- 0.5 %
Maximum working pressure	1,450 psi (100 bar)
Solenoid valve	24 V DC
Communication	CAN BUS, Bluetooth®, Wi-Fi® (U·valve+ only)

U·valve and U·valve+ wired connections use fast connection in/out CAN BUS terminals.

U·valve cable connectors are not included (see accessories).

5.3"   6.3"

5.3"

3.2"   4.4"

Ø 0.3"   M5 screw

2.7"
4.6"

ORDERING INFORMATION

Part No.	Description
3110-115	U·valve meter, solenoid valve and electronic module. Includes Bluetooth® communication for connecting to a U·vision or U·vision+.
3110-114	U·valve+ meter, solenoid valve and electronic module. Includes Bluetooth® connection to a U·vision or U·vision+ and Wi-Fi® for data transmission to other components in the system.

U·meter

High accuracy, compact pulse meter including the electronic module required to control the meter and valve operation and to communicate with other system components through CAN BUS.

- The meter has an LED display showing the U·meter number assigned in the system, four different LED lights that show the U·meter operation for diagnosis and two buttons for system configuration.
- Equipped with fast connection in/out CAN BUS terminals.

- Available in different materials and sizes to match different applications.

 **U·meter⁺ includes Bluetooth® connection to a U·vision or a U·vision⁺ module.**

Umeter
Umeter⁺

3110-117

3110-118

U·meter+ includes Bluetooth® for connecting to a U·vision or U·vision⁺.

U·meter Part No.	3110-139	3110-122	3110-120	3110-118
Wetted parts	Aluminium, NBR, stainless steel, acetal	Aluminium, NBR, stainless steel, acetal	PVC, Vectra®, stainless steel, Viton®	Stainless steel, Vectra®, Viton®
Applications	Lubricants	Lubricants, diesel	DEF, windshield wash and antifreeze solutions	DEF, windshield wash and antifreeze solutions
Connection threads	1/2" NTP(F)	3/4" NTP(F)	1/2" NTP(F)	1/2" NTP(F)
Flow range	1 - 32 qt/min (1 - 30 l/min)	8.4 - 84.4 qt/min (8 - 80 l/min)	1 - 52.8 qt/min (1 - 50 l/min)	1 - 52.8 qt/min (1 - 50 l/min)
Pulses per quart	310 ppq (328 ppl)	103 ppq (109 ppl)	303 ppq (320 ppl)	303 ppq (320 ppl)
Accuracy	+/- 0.5 %	+/- 0.5 %	+/- 0.5%	+/- 0.5%
Maximum working pressure	1,450 psi (100 bar)	1,450 psi (100 bar)	435 psi (30 bar)	1,450 psi (100 bar)
Communications	CAN BUS	CAN BUS	CAN BUS	CAN BUS
U·meter⁺, models with Bluetooth® Part No.	3110-117	3110-123	3110-121	3110-119

Only for connection with U·dat, U·valve, or an adjacent U·meter. Requires a 24 V DC solenoid valve.
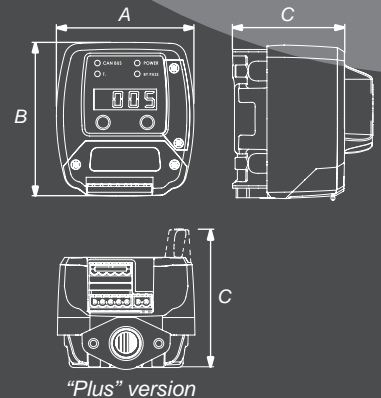
|	3110-139	3110-117	3110-122	3110-123	3110-120	3110-121	3110-118	3110-119
A (in)	3.4"	3.4"	3.4"	3.4"	3.4"	3.4"	3.4"	3.4"
B (in)	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"
C (in)	2.8"	3.4"	4"	4.6"	2.9"	3.4"	2.8"	3.4"

"Plus" version

U·count
U·pulser

Ucount

Upulser

U·count fluid control module includes a high visibility LED display and the software required to function with the rest of the NEX·U·® system components.

The LED display shows the number assigned in the system and four different LED lights show the operation of the valve for diagnosis and two buttons for system configuration. U·count supports CAN BUS hard-wired communication that transmits data and power required to open the solenoid valve, for data communication with other system components and Bluetooth® to communicate with a U·Vision or U·Vision+ handle.

U·count dimensions:

5.7"
7.6"
2.5"
5.5"
4.3"
7.3"
Ø 0.14"
0.16"self tapping screw
Ø 0.14"
0.16" self tapping screw
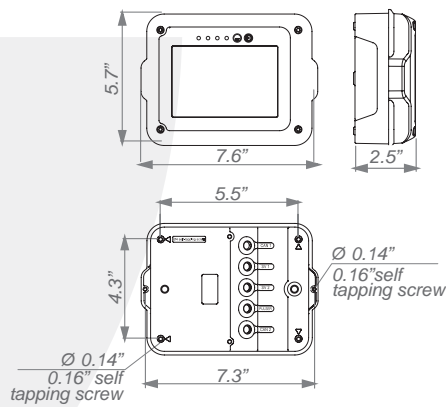
U·pulser high accuracy in-line pulse meter. Equipped with connection terminal and valve open indication light. Only for connection to a U·count module. This meter does not have a display or function buttons and requires a 24 V DC solenoid valve.

ORDERING INFORMATION

U·count	3110-135				
Description	Fluid meter and solenoid valve controller includes Bluetooth®, CAN BUS communications.				
U·pulser meter	3120-114	3120-014	3120-013	3120-227	3120-228
Wetted parts	Aluminium, NBR, stainless steel, acetal	Aluminium, NBR, stainless steel, acetal	PVC, Vectra®, stainless steel, Viton®	Stainless steel, Vectra®, Viton®	Aluminium, acetal, NBR, Stainless steel
Applications	Lubricants, antifreeze solutions	Oil, glycol, coolant solutions, diesel	DEF, windshield wash and antifreeze solutions	DEF, windshield wash and antifreeze solutions	Oil, glycol, antifreeze solutions, diesel
Connection threads	1/2" NPT(F)	3/4" NPT(F)	1/2" NPT(F)	1/2" NPT(F)	1" NPT(F)
Flow range	1-32 qt/min (1-30 l/min)	8.4-84.4 qt/min (8-80 l/min)	1-52.8 qt/min (1-50 l/min)	1-52.8 qt/min (1-50 l/min)	10.4-84.4 qt/min (10-80 l/min)
Pulses per quart	310 ppq (328 ppl)	104 ppq (110 ppl)	303 ppq (320 ppl)	303 ppq (320 ppl)	104 ppq (110 ppl)
Accuracy	+/- 0.5%	+/- 0.5%	+/- 0.5%	+/- 0.5%	+/- 0.5%
Maximum working pressure	1,450 psi (100 bar)	1,450 psi (100 bar)	435 psi (30 bar)	1,450 psi (100 bar)	1,450 psi (100 bar)

NEX·U·® Compact

NEX·U·® also offers solutions to smaller workshops where web based software is not needed. NEX·U·® COMPACT is a simple system based in a special U·dat keypad that is able to control a maximum of 8 dispensing points.

The Keypad includes a 7" colored screen and a simplified version of the U·track software. The software included provides workshops with:

• Full control of bulk stored fluid usage.
• Inventory control using declining balance method. NEX·U·® COMPACT will give a warning signal once a certain inventory is reached, and restricts access to those outlets that have run out of inventory.
• Ability to generate full reports in CSV format that can provide useful management information.

NEX·U·® COMPACT can work with any NEX·U·® fluid meter: U·valve; U·meter or U·meter⁺ with solenoid valve and filter. A U·vision hand held display can be connected to each U·valve or U·meter⁺.

NEX·U·® COMPACT has 64 GB storage capacity that provides virtually an unlimited capacity for storing transactions.

NEX·U·® COMPACT does not support working within a network or PC connection.

ORDERING INFORMATION

Part No.	Description
3110-101	NEX·U·® COMPACT 75. With a 75 W transformer for opening up to 2 solenoid valves.
3110-103	NEX·U·® COMPACT 320. With a 320 W transformer for opening up to 8 solenoid valves.

3110-109

110 - 240 V
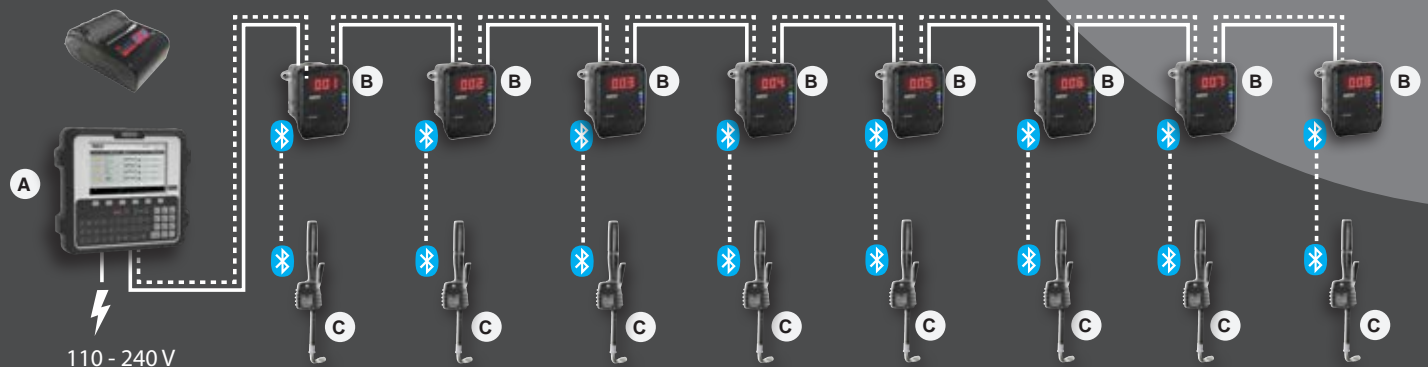
NEX·U·® COMPACT keypad Ⓐ can control 8 dispensing points (model with 320 W transformer) or 2 dispense point (model with 75 W transformer).
Each dispensing point Ⓑ can include a U·valve, a U·meter or U·meter⁺ with solenoid valve combination.
A U·vision hand held display Ⓒ can be connected to each fluid outlet using Bluetooth® communications.
It is possible to include a Bluetooth printer to provide a ticket for the transactions.

Configuration has to be done through a pc.

NEX·U·® Mobile

Fluids in service trucks require similar controls to those in any service center.

**NEX·U·® MOBILE allows fluid inventory and usage control in mobile service trucks.**

A special U·dat keypad module, which includes the software required for an autonomous operation, can control up to a maximum of 8 fluid outlets. Completed transactions can be saved to a USB memory stick in an Excel format.

NEX·U·® MOBILE can work with any NEX·U·® fluid meter: U·valve; U·meter or U·meter+ with 24V DC solenoid valve and filter.
Standard U·count and U·pulser solenoid valve are compatible with NEX·U·® MOBILE as long as they are connected to a 24 V DC solenoid valve.

ORDERING INFORMATION

Part No.	Description
3110-102	NEX·U· MOBILE keypad
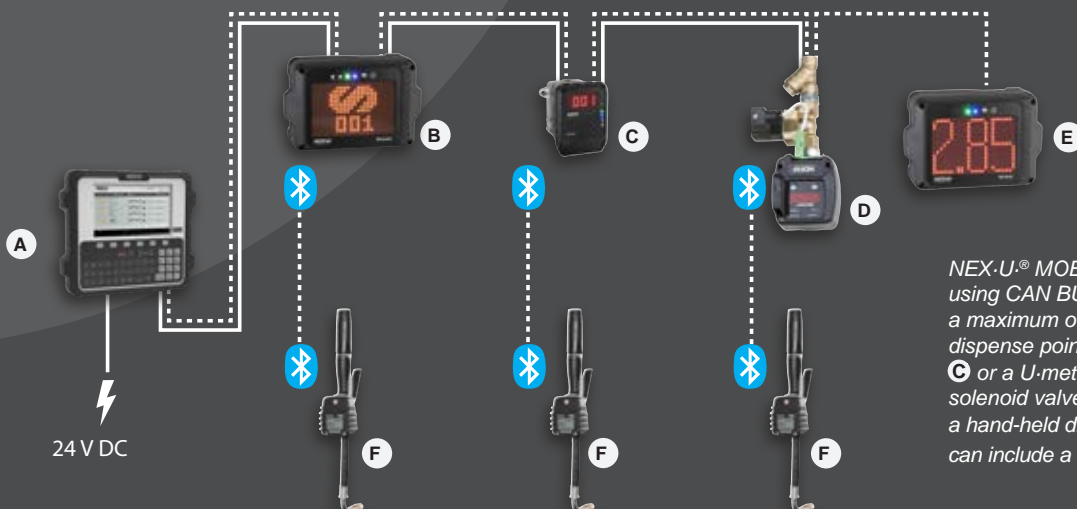
NEX·U·® MOBILE keypad Ⓐ, connects using CAN BUS cable (power and data) to a maximum of 8 dispensing points. Each dispense point can have a U·count Ⓑ, U·valve Ⓒ or a U·meter+ or U·meter Ⓓ with a 24 V DC solenoid valve. Each dispense point can have a hand-held display U·vision Ⓕ and the system can include a remote display U·view Ⓔ.

24 V DC

NEX·U·® Remote Displays

U·vision
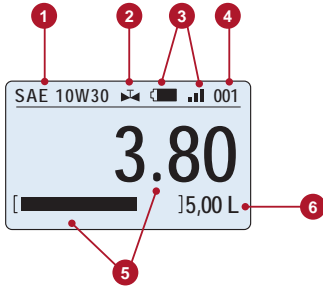
Uvision

Hand-held display module to fit a BALCRANK oil control handle. Includes a backlight display connected via Bluetooth® with a U·valve, U·meter+ or U·count module and it displays the following parameters:

• Hose reel (fluid outlet number and fluid dispensed type).
• Battery life and Bluetooth® signal strength.
• Volume delivered and operation progress.
• Solenoid valve open or closed.

1 Fluid dispensed type
2 Solenoid valve open or closed
3 Battery life and Bluetooth® signal
4 Hose reel / fluid outlet number
5 Volume delivered and operation progress
6 Preset Volume

ORDERING INFORMATION

| Part No.	Description
3110-112	U·vision hand-held display module.

Uview

U·view

Remote, high visibility, LED display that shows the volume delivered through various U·valves (no simultaneous operation supported). U·view supports Wi-Fi® and hard-wired communication.
U·view requires hard-wired connection (data and power) to a U·dat keypad or to a 110 - 240 V AC power supply using a 24 V DC external transformer (U·power or U·power+).

ORDERING INFORMATION

Part No.	Description
3110-134	U·view remote display module.

5.7"
7.6"
2.5"

5.9"
4.3"
7.3"

Ø 0.14"
0.16" self tapping screw

Ø 0.14"
0.16" self tapping screw
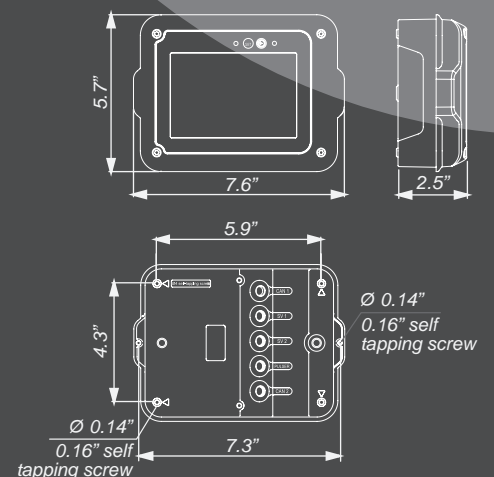
Tank Level Monitor Module

Provides real-time inventory control, reducing concerns about running out of inventory or used fluid tanks overflow.
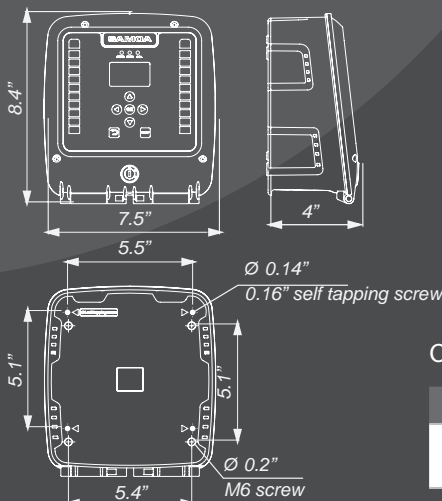
Utank

The number of input and output ports are:
- One analog input per tank for a pressure probe with 4-20 mA or 0-10V.
- Three digital inputs per tank for a low, intermediate or high-level probe [1].
- One output per tank for a solenoid valve to control air supply to each pump.

- One output per tank for an electro-pneumatic valve to prevent tank overfill.
- One output for controlling an air solenoid valve to stop the air supply to all pumps when the workshop is closed.
- One output per tank for controlling a flash warning light or an acoustic alarm.

U·tank supports CAN BUS wired communication with other NEX·U·® system components. It requires a 110 -240 V AC supply.

[1] *The use of digital probes does not allow real-time inventory monitoring. NEX·U·® will use declining balance for inventory control and will require manual inventory adjustment when fluid is supplied to the tank.*

It is a monitor module capable of controlling two tanks using digital or analog level gauges. Can be connected to solenoid valves to control pump operation, and to external warning devices.

U·tank has two independent graphic displays and level bars where the inventory available in each tank can be checked. It also has a set-up keypad for inventory adjustment if required.[1]

8.4"

7.5"

4"

5.5"

5.1"

5.1"

Ø 0.14"
0.16" self tapping screw

Ø 0.2"
M6 screw

5.4"

ORDERING INFORMATION

Part No.	Description
3110-105	U·tank tank monitoring module. Can control up to two tanks. Supports CAN BUS communications. 110 - 240 V

U·meter and solenoid valve kits

Umeter

U·meter and solenoid valve kits include a high precision U·meter or U·meter+ meter, a solenoid valve and a Y-strainer.

Part No	Application	Pulse meter	Solenoid valve	Y-strainer
3110-125	Lubricants, antifreeze solutions	U·meter 3110-139	3120-217	3120-211
3110-126	Lubricants, antifreeze solutions	U·meter+ 3110-117	3120-217	3120-211
3110-127	High delivery lubricants, antifreeze solutions	U·meter 3110-122	3120-218	3120-212
3110-128	High delivery lubricants, antifreeze solutions	U·meter+ 3110-123	3120-218	3120-212
3110-130	DEF, windshield wash (low pressure)	U·meter 3110-120	3120-226	3120-211
3110-131	DEF, windshield wash (low pressure)	U·meter+ 3110-121	3120-226	3120-211

SOLENOID VALVES

NEX·U·® requires 24 V DC, normally closed solenoid valves to operate. U·valve and U·valve+ include a solenoid valve. For other metering elements, a solenoid valve compatible with the fluid and the application requirements must be used.

2130-217

3120-218

Part No.	Application and wetted materials	Connection threads	Voltage	Type	Max. Working pressure
SOLENOID VALVES FOR FLUIDS					
3120-217 [1]	Oil and antifreeze solutions. Brass and NBR	1/2" NPT(F)	24 V DC	N.C.	725 PSI (50 bar)
3120-218	Coolant, diesel, water,oil. Brass and NBR	3/4" NPT(F)	24 V DC	N.C.	725 PSI (50 bar)
3120-226	DEF; antifreeze and windshield wash solutions, stainless steel and EPDM	1/2" NPT(F)	24 V DC	N.C.	145 PSI (10 bar)
SOLENOID VALVES FOR COMPRESSED AIR – PUMP CONTROL					
3120-033	Compressed air. Brass and NBR	1/2" NPT(F)	24V AC	N.C.	145 PSI (10 bar)
3120-225	Compressed air. Brass and NBR	1/2" NPT(F)	24 V DC	N.O.	145 PSI (10 bar)

N.C.= Normally closed.
N.O.= Normally open.
(1) for use in standard delivery applications, with a 1/2" U·meter.
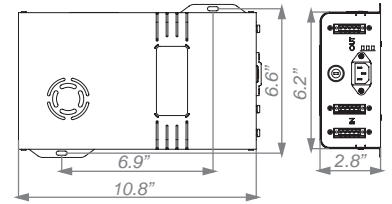
Upower⁺
Upower

3110-146

3110-106 & 3110-108

3110-145

Power supply to solenoid valves and other system components. U·power connects using CAN BUS cable to a U·valve, U·valve⁺, U·meter, U·meter⁺, U·count or U·view whenever the power supplied by a U·dat keypad is not present.

Part No.	Description
3110-106	U·power⁺. Power supply unit with a 320 W transformer for use with 8 solenoid valves. Two CAN BUS ports (one input/one output)
3110-108	U·power. Power supply unit with a 75 W transformer for use with 2 solenoid valves. Two CAN BUS ports (one input/one output)
3110-146	U·power⁺. Power supply unit with a 320 W transformer for use with 8 solenoid valves. Three CAN BUS ports (one input/two output)

CAN BUS TO WIFI CONVERTER

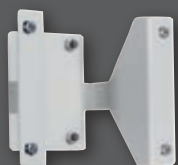| Part No.	Description
3110-145	Allows wireless communication among the different components of the system. Equipped with an external antenna, it allows for extended signal coverage. It can be configured from a Windows or Android application.

BLUETOOTH PRINTER

3110-109

Part No.	Description
3110-109	Optional printer for use with NEX·U·® COMPACT, connected via Bluetooth to the U·dat.

BAR CODE READER

3110-140

Part No.	Description
3110-140	Bar code laser reader. Reads any one dimensional code. For use with a U·dat, U·dat Power⁺ and U·dat for NEX·U·® molbile and compact systems.

U·valve BRACKETS

2230-040

Part No.	Description
2230-040	Allow fixing U·valve on top of a hose reel stand (2230-291).

NEX·U·®
Accessories

CABLE

3082A 15/18AWG communication and power CAN BUS cable.

Part No.	Description
3130-110	100' CAN BUS communication cable
3130-500	500' CAN BUS communication cable
3130-100	1,000' CAN BUS communication cable

3130-100

Part No.	Description
3110-143	Jumper cable. 1.6' (0.5 m) cable with pre-wired connectors 33110-141 for connecting adjacent elements with a CAN BUS cable.

3110-143

Part No.	Description
3110-141	In/out electrical connectors. For use with U·meter, U·meter+.

3110-141

U·valve Connectors:

Part No.	Description
3110-136	Allows wiring connection between U·valves.

3110-136
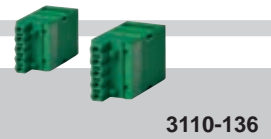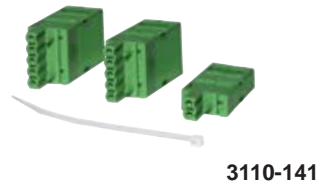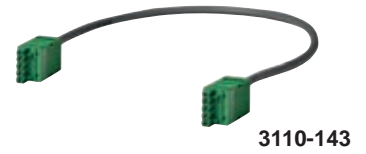
TANK MONITORING ACCESSORIES

Part No.	Description
3120-084	Tank level pressure gauge. Allows real-time monitoring of the volume in a tank. Maximum tank depth 11 1/2" (350 cm).

3120-084

Part No.	Description
3120-079	Digital level gauge. Detects minimum, intermediate or maximum volume in a tank. Does not allow real-time monitoring. Adjustable height, includes 16' (5 m) cable.

3120-079

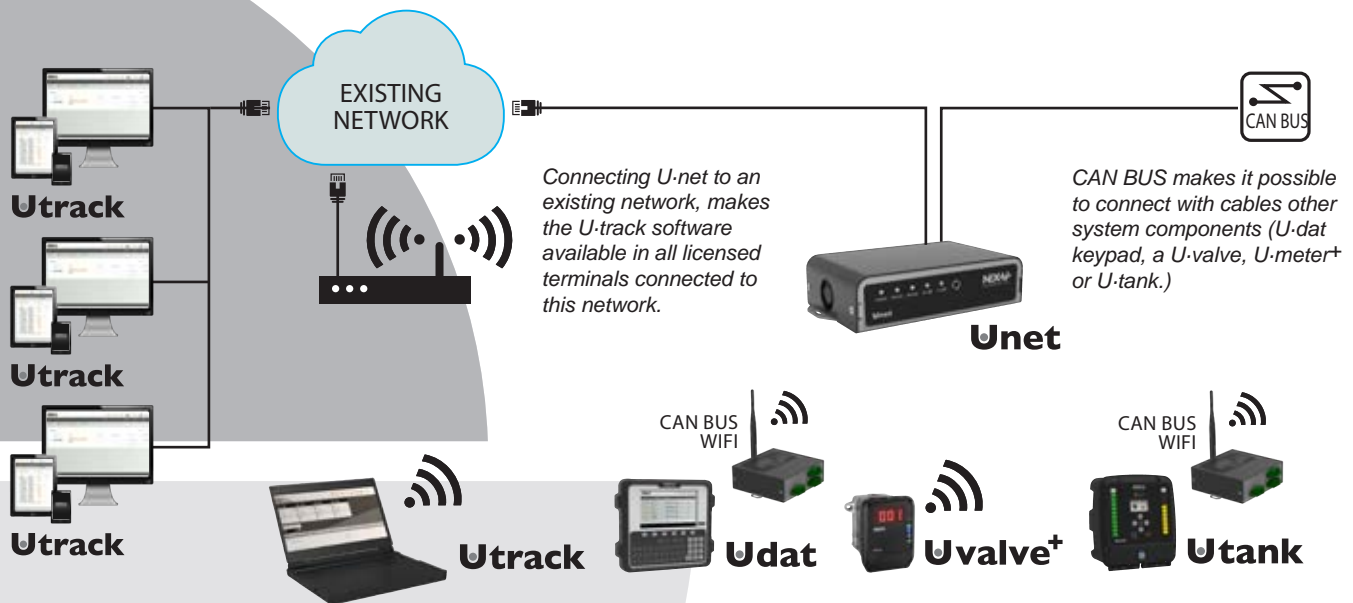| Part No.	Description
3120-029	Remote flash and acoustic alarm.
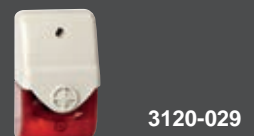
3120-029

Product specifications are subject to change without prior notice

Creating a
Wireless Network

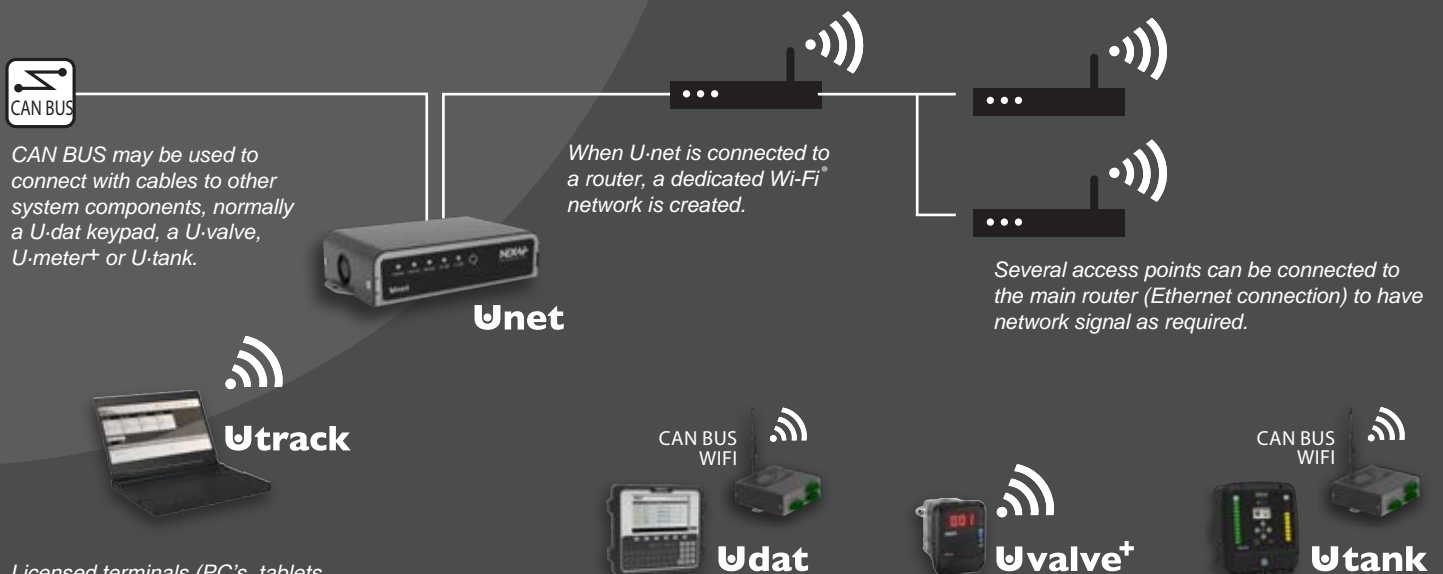There are two ways to create a wireless network:

• Using an existing Wi-Fi ® network- requires access to existing wireless network credentials.
• Creating a dedicated Wi-Fi® network- new wireless credentials are created for this network.
In both cases IP addresses, network and default gateway are required. The key component is U·net.

USING AN EXISTING NETWORK

EXISTING NETWORK

Connecting U·net to an existing network, makes the U·track software available in all licensed terminals connected to this network.

CAN BUS makes it possible to connect with cables other system components (U·dat keypad, a U·valve, U·meter+ or U·tank.)

Utrack

Utrack

Utrack

CAN BUS

Unet

CAN BUS WIFI

CAN BUS WIFI

Utrack

Udat

Uvalve+

Utank

If the network uses Wi-Fi® , NEX·U·® components with Wi-Fi® can connect to the network via Wi-Fi®. Additionally, other licensed terminals (laptops, tablets, Smartphones) can have access to U·track.

CREATING A NEW NETWORK

CAN BUS

CAN BUS may be used to connect with cables to other system components, normally a U·dat keypad, a U·valve, U·meter+ or U·tank.

When U·net is connected to a router, a dedicated Wi-Fi® network is created.

Several access points can be connected to the main router (Ethernet connection) to have network signal as required.

Unet

Utrack

Licensed terminals (PC's, tablets, Smartphones) can connect to the NEX·U·® network and have access to the NEX·U·® system through U·track.

CAN BUS WIFI

Udat

Uvalve+

CAN BUS WIFI

Utank

NEX·U·® components can connect to the NEX·U·® wireless network for data communication among them.

INSTALLATION EXAMPLES

NEX·U·® provides maximum flexibility in the way the user interacts with the system, the most effective connection method and enhanced reporting capability.
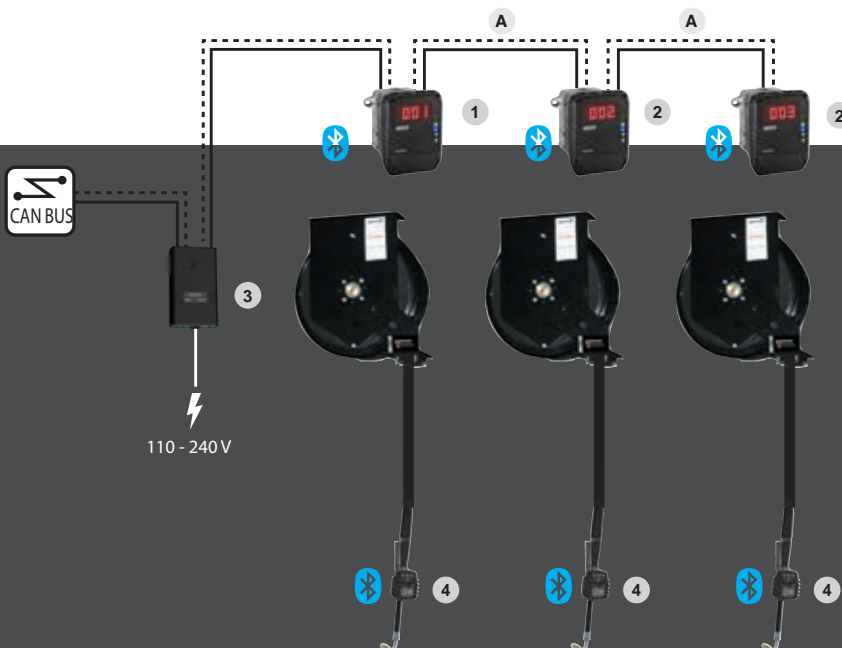
ACCESS THROUGH U·dat

CAN BUS
WIFI

CAN BUS

110 - 240 V
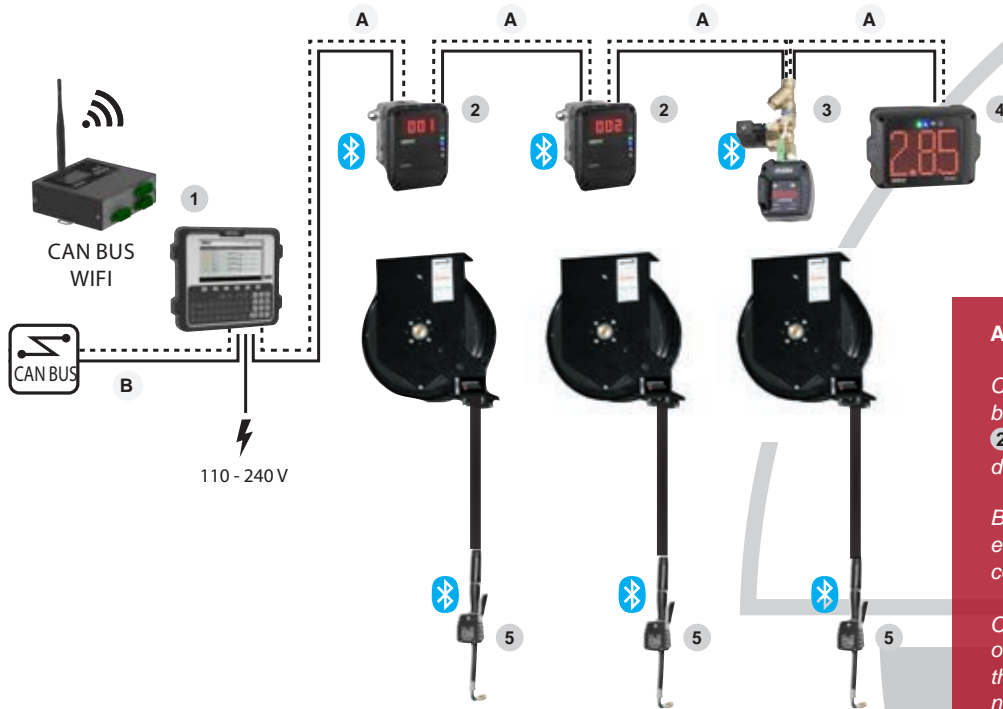
Access through U·dat

CAN BUS cable **A**, *transmits power and data between the U·dat keypad* **1**, *the U·valves* **2**, *the U·meter*+ **3** *and the U·view remote display* **4**.

Bluetooth® *connection is used to communicate each U·valve* **2** *and U·meter*+ **3** *with its corresponding U·vision* **5** *hand-held display.*

CAN BUS cable **B** *communicates with other NEX·U·® components. Alternatively, if the keypad* **1**, *is connected to the wireless network, data can be transmitted wirelessly to other NEX·U·® components.*
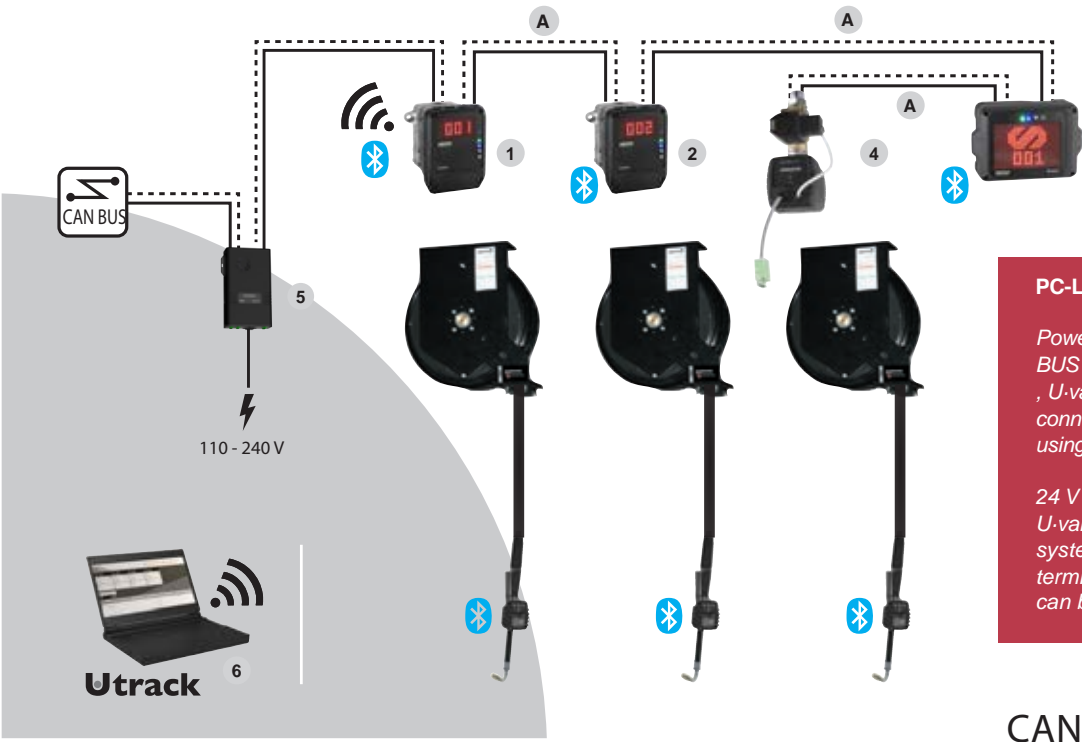
CAN BUS

110 - 240 V

Access through U·vision+

Power and data are transmited using CAN BUS cable **A** *between the U·valve*+ **1** *and the other U·valves* **2**. *Power to energize the solenoid valves is supplied by the U·power* **3**, *connected to U·valve*+ **1**.

Each U·valve+ **1** *and U·valve* **2** *is connected to its corresponding U·vision*+ **4**, *hand-held display and systems access Keypad.*

Wireless data transmission is done by U·valve+ **1**.

PC - LAPTOP CONNECTION

CAN BUS

110 - 240 V

Utrack

PC-Laptop connection

Power and data are transmitted using CAN BUS cable Ⓐ between the U·valve+ ❶ , U·valve ❷ and U·count ❸. U·count ❸ is connected to U·pulser solenoid valve ❹ also using CAN BUS connection.

24 V DC power is supplied by U·power ❺ to U·valve+ ❶ connecting using Wi-Fi® with all system components, including any licensed terminal ❻ that is connected to U·track and can be used as a virtual access keypad.

CAN BUS FAST CONNECTION
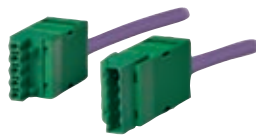
U·dat, U·valve, U·meter, U·count, U·tank and U·net use in/out CAN BUS fast connectors that make cabling easier, quicker and prevent disconnections.

TANK MONITORING

110 - 240 V

CAN BUS

CAN BUS WIFI
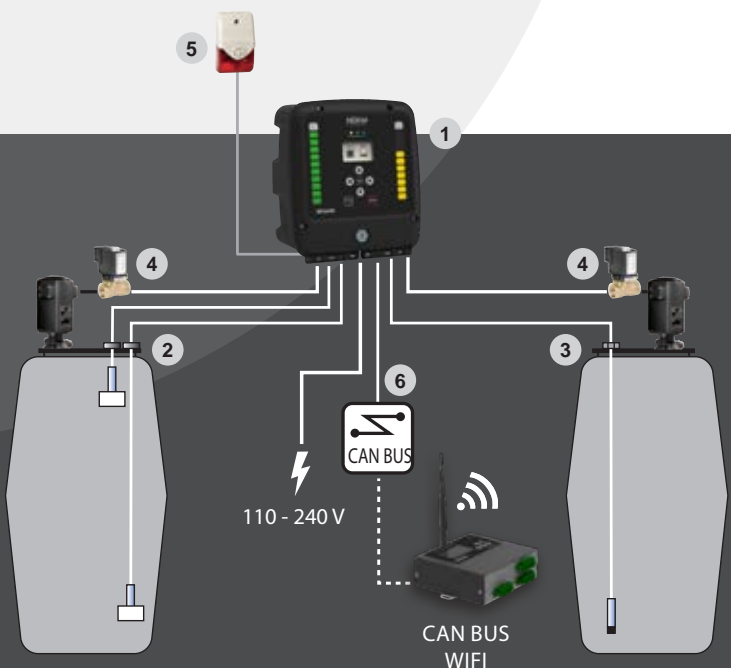
U·tank ❶ can monitor up to two tanks. Each tank can be fitted with low and high level sensors ❷ or with a pressure gauge ❸ for real-time control of the inventory in the tank. U·tank ❶ can also control pump operation opening or closing an air solenoid valve ❹ that prevents pump from running dry or air entering the oil distribution lines if there is no oil in the tanks.

U·tank ❶ can also control a remote flash light or siren ❺ to warn when any tank is empty. U·tank ❶ can communicate with other NEX·U·® elements using Wi-Fi® or through CAN BUS ❻ wired connection.