OMNTEC
Advanced Tank Monitoring & Leak Detection

DataCheck®

PROTEUS X WIRELESS (Supplement)

INSTALLATION INSTRUCTIONS

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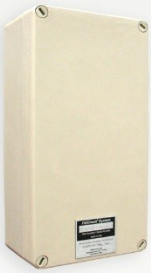
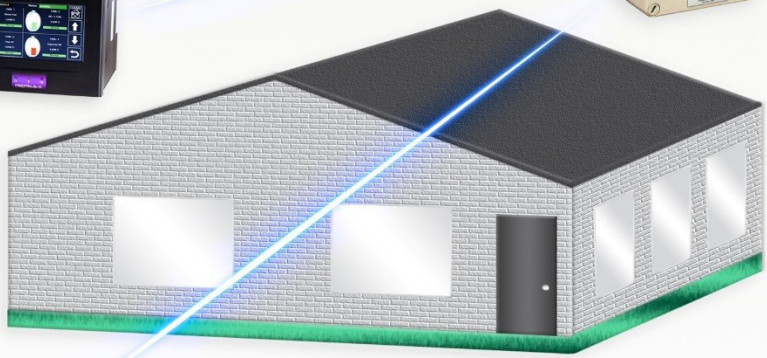
DataCheck® with PROTEUS®X Basics

Wireless
Tank Gauging System
N P M R C S Q+V
OEL8000IIIXP
(mounted indoors)

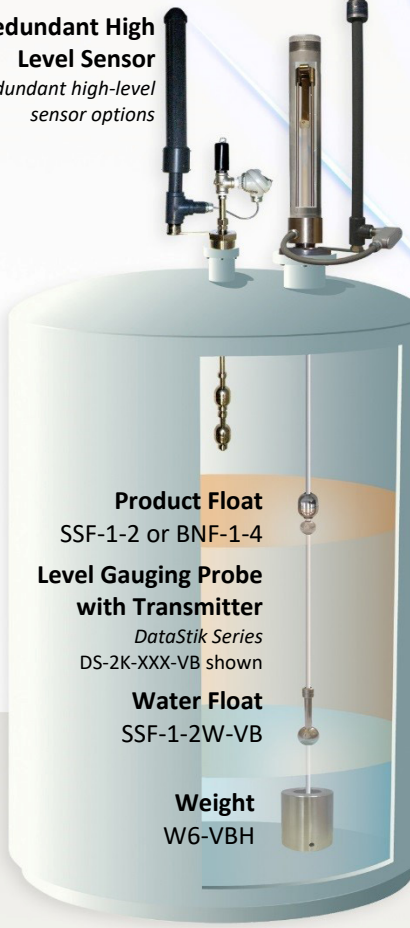
Receiver
DC-RX-SR-O-S3
(mounted outdoors)



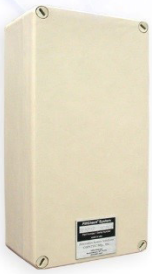


Transmitter
(Included)

Redundant High Level Sensor
***redundant high-level sensor options*



Junction Box
U-JBK-1



Repeater
DC-RP-12-S3
*****OPTIONAL*****
(May not be necessary in all applications)

PROTEUS Wireless Tank Gauging Basics for AST's with Redundant Overfill	
OEL8000IIIXP	**N P M R C S Q® V** Tank Gauging Controller with 7" color touch screen, printer, (1) RS-232 port, & Ethernet. Accepts up to 44 DataStik Series inventory probes and 48 float sensor inputs. *
DataStik Series: DS-1S-XXX DS-2S-XXX DS-1K-XXXV DS-2K-XXX-VB	Continuous, wireless, battery powered level gauging probe with transmitter: Stainless steel construction (single float) Stainless steel construction (two float) Flexible PVDF construction (single float) Flexible PVDF construction, fixed bottom for low water detection (two float)
FI-NM-MONO-D**	**MonoCheck**™ Single Level 2" Float Switch w/*MagLift™* Checking Mechanism, up to 96" Long, NO, All SS, Delrin J-Box, with mounting bracket
FI-NM-DC-D**	**DuoCheck**™ Dual Level (Hi & Hi-Hi) 2" Float Switch w/*MagLift™* Checking Mechanism, up to 6' Long, All SS, Delrin J-Box with mounting bracket
FI-NM-V2-M-160"**	**VersaLevel-02-Adjustable**™ Dual Level (Hi & Hi-Hi), 2" Float, w/*MagLift*™ Checking Mechanism, 160" Long, All SS, Metal J-Box, with mounting bracket
8160102FP**	**VersaLevel-X1**™ Single Level 3.5" Switch, 70" Long, All SS
DC-RP-12-S3	Repeater, S3 Style, with 12 Hr. Backup Battery, NEMA-4X Non-Metallic Enclosure, 5' fiberglass mounting mast
DC-RX-SR-O-S3	Serial Receiver, S3 Style, Outdoor in NEMA-4X Enclosure, 5' fiberglass mounting mast and Serial Cable included *(50' maximum cable length)*
SSF-1-2	Single 316 Stainless Steel Product Float, 1.83" diameter
SSF-2	Dual 316 Stainless Steel product/water float, 1.83" diameter
SSF-1-2W-VB	2" Stainless Steel Water Float for low water detection applications (specify product)
BNF-1-4	Single Buna N Product Float, 3.85" diameter
BNF-4	Dual Buna N product/water floats 3.85" diameter
SFS	Stainless steel float spacer required on probe lengths 288" or greater
W6-VBH	5.75" (dia.) X 7" (H) hollowed out weight for fixed bottom probes for low water detection
W2-*	2" diameter stainless steel weight *(*length based on probe size)*
U-JBK-1	Universal junction box kit for probes and sensors

Note: *Each item listed above is sold separately. Content subject to change without notice; verify with manufacturer.*
****Capable of up to 64 FillChecks with 40 DataStik Series inventory probes.***

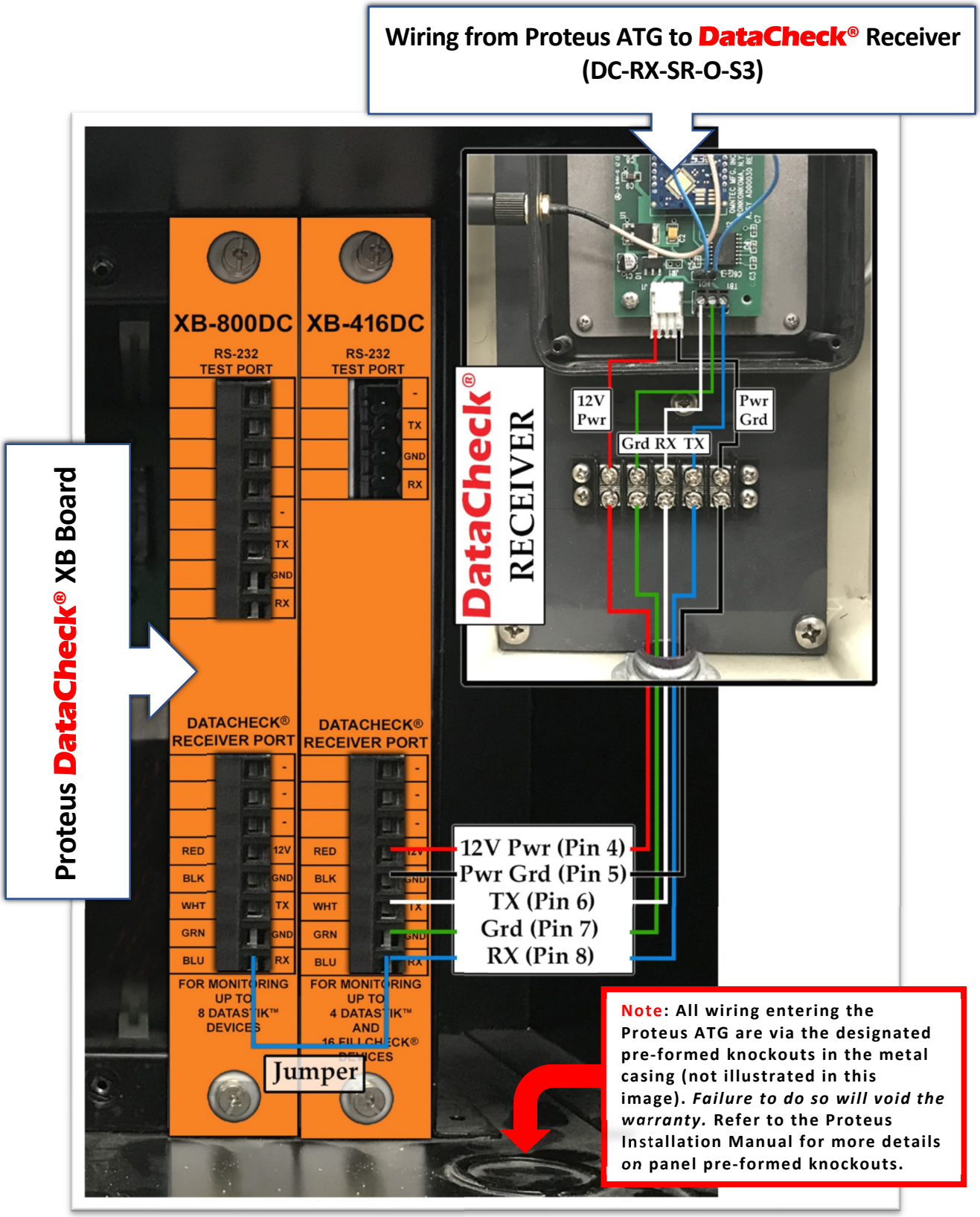

Wiring from Proteus ATG to DataCheck® Receiver (DC-RX-SR-O-S3)
Proteus DataCheck® XB Board
XB-800DC
RS-232 TEST PORT
XB-416DC
RS-232 TEST PORT
TX
GND
RX
DATACHECK® RECEIVER PORT
DATACHECK® RECEIVER PORT
RED
BLK
WHT
GRN
BLU
12V
GND
TX
GND
RX
FOR MONITORING UP TO 8 DATASTIK™ DEVICES
FOR MONITORING UP TO 4 DATASTIK™ AND 16 FILLCHECK® DEVICES
Jumper
DataCheck® RECEIVER
12V Pwr
Pwr Grd
Grd RX TX
12V Pwr (Pin 4)
Pwr Grd (Pin 5)
TX (Pin 6)
Grd (Pin 7)
RX (Pin 8)
Note: All wiring entering the Proteus ATG are via the designated pre-formed knockouts in the metal casing (not illustrated in this image). Failure to do so will void the warranty. Refer to the Proteus Installation Manual for more details on panel pre-formed knockouts.

Figure 1.0

The Receiver comes in a NEMA 4X fiberglass enclosure and is supplied with 50 feet of cable. (Longer cable lengths can be used with shielded, low-capacitance cable.) This cable is wired to a 5-pin terminal block. Each wire is connected by color and should follow the label on the inside of the Receiver. Be certain to properly secure each wire with a screw through the ring terminal connectors. The following explains the wiring configuration:

RS-232 COMMUNICATION (AT ATG)

WHITE (Pin 6):	TX
GREEN (Pin 7):	GROUND
BLUE (Pin 8):	RX

POWER (DC)

RED (Pin 4):	+12 VOLTS
BLACK (Pin 5):	GROUND

Repeater (DC-RP-12-S3)

AC Wiring and Battery Installation

The Repeater is housed in a NEMA 4X fiberglass enclosure, powered by 120 VAC, and comes supplied with a battery back-up which must be installed once ready for use. Align the binding strips and firmly press the battery onto the backplate (see Figure 3.0).

Figure 2.0

Figure 3.0

Attach the DC power cables to the battery. Red is the positive terminal, black is the negative terminal. Once the battery is installed, the red DC power light will illuminate on the power supply (see Figure 4.0). AC power is connected to the 3-pin terminal block on the bottom right of the enclosure. The following explains the pinout:

N	Neutral (white)
G	Ground (green)
L	Line (black)

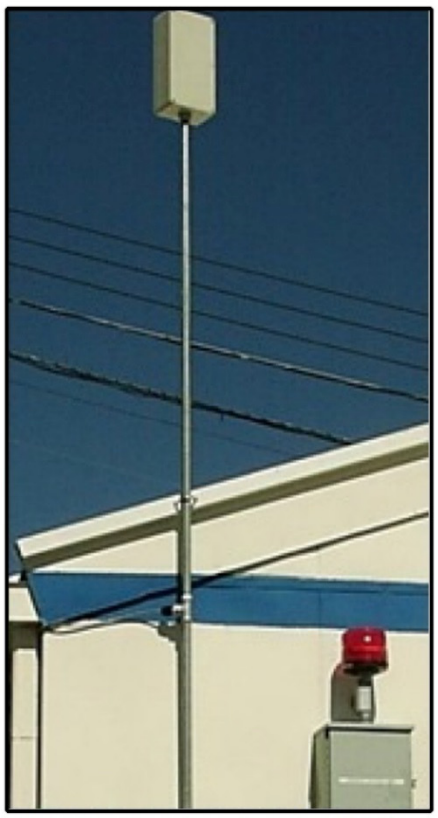
Once AC power is applied, the green light will illuminate on the power supply (see Figure 5.0). Both lights will illuminate when AC power is available. The battery will also charge when AC power becomes available.

Figure 4.0

Figure 5.0

Receiver and Repeater Mounting

The Receiver and Repeater should be mounted outdoors with direct line-of-sight to each other and the tank transmitters for optimal performance. The wiring should enter the bottom of each enclosure via the cable feedthrough and enclosed in conduit to protect it from external elements (rain, snow, sunlight, etc.). Each enclosure comes with mounting hardware and a 5-foot pole mast which can be used to raise the Receiver or Repeater above obstacles. If additional height is needed, you must supply your own extension and hardware (see Figure 6.0).



Example of Receiver Mount on Building

Figure 6.0