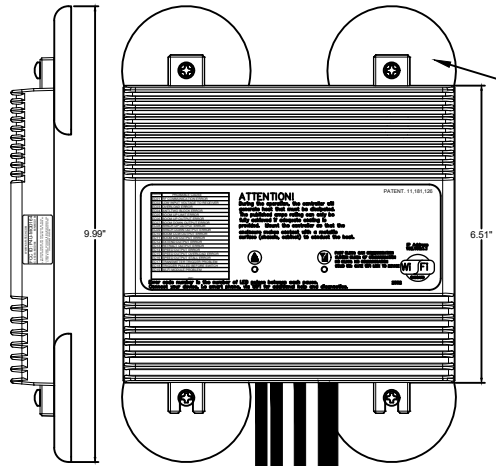
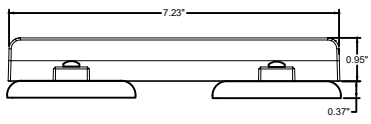
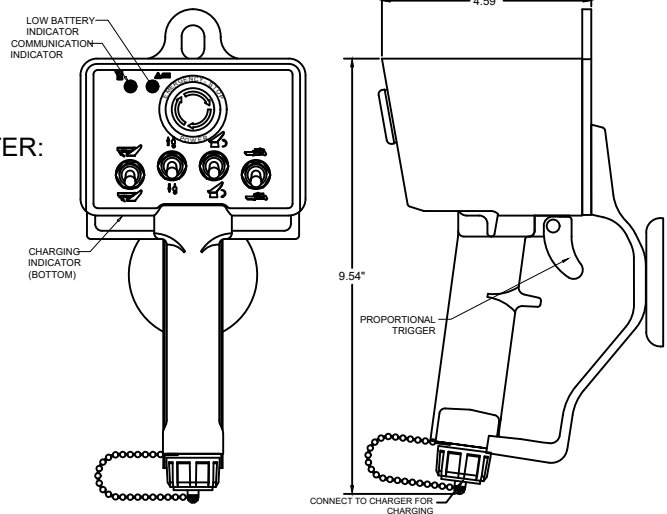
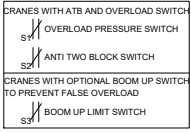
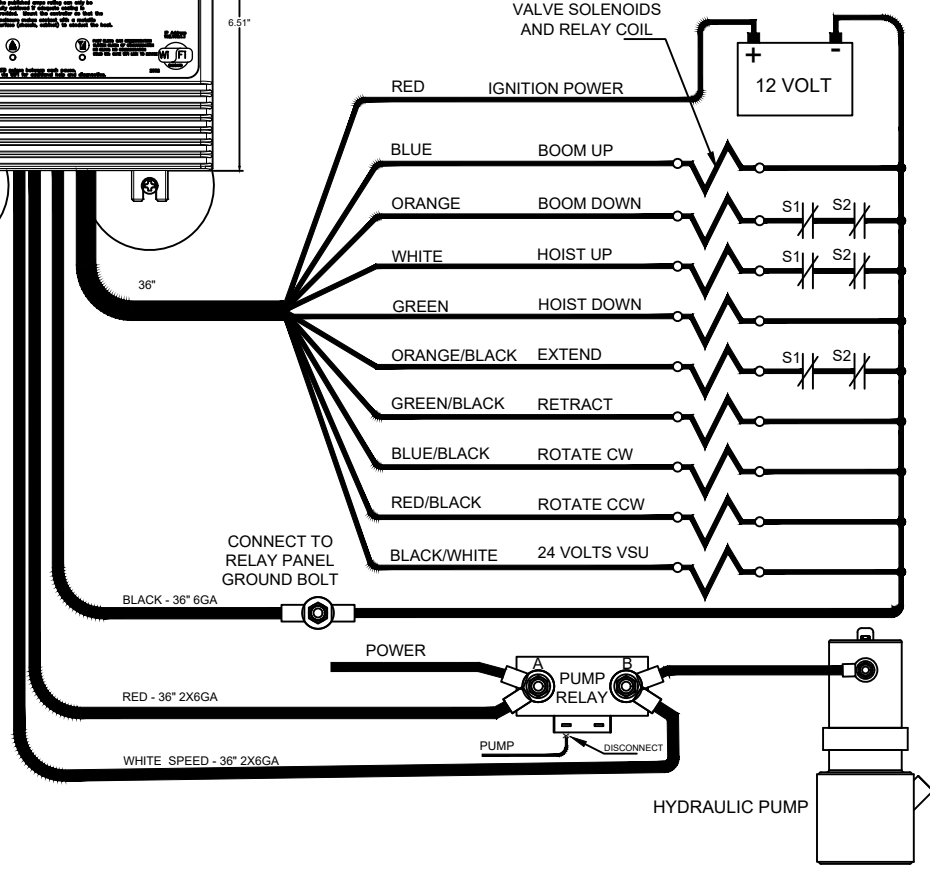


TRANSMITTER:



RECEIVER:



INSTALLATION

- Mount the receiver on the crane body using 4 mounting magnet. Do not cover receiver or install into a metal box as this will reduce radio reception range.
- Connect 6 gauge black ground wire to the relay panned Ground bolt or battery ground.
- Connect 2 X 6 gauge Red power wire to the Pump relay port A.
- Connect 2 X 6 gauge white pump output wire to the Pump relay port B.
- Disconnect Pump relay signal wire (White/Black)

OPERATION

- Power must be applied to the receiver module for the system to work.
- Releasing the E-STOP will turn on the transmitter. Pressing the E-STOP will turn off the transmitter. Pressing the E-STOP will also turn off all outputs as a safety feature. If the transmitter goes out of range for more than 2 seconds, all outputs will turn off as a safety feature.
- To operate a proportional output, toggle the switch of the desired function and pull the trigger to the level desired.
- *Please note that if the trigger is pulled before the function is selected, the proportional output will not work as a safety feature. Release the trigger and begin again in the proper sequence.**
- To save battery life, the transmitter will turn off when it is idle (no functions are used) for a period greater than 15 minutes. The user must press and release the E-STOP at this point to restore transmitter operation.

INDICATOR LED'S

- The transmitter has two indicators, the red BATTERY indicator and the green TRANSMIT indicator. The green TRANSMIT indicator blinks rapidly whenever there is communication between the transmitter and the receiver. It will double-blink when no functions are used.
- The red BATTERY indicator starts blinking once every second when the battery voltage is low and requires charging. Plug in the transmitter as soon as possible after seeing the low battery indicator. See BATTERY CHARGING below.
- The receiver module can identify problems with the system in the form of an error code. Check the red indicator or display window on the receiver to diagnose system problems. Then, refer to the ERROR CODE CHART in this manual for explanation of the error codes. The green LED indicator will blink on the receiver during active operation.
- If the ATB Input is enabled in calibration and the ATB input is driven low (no voltage), the red and green LEDs on the transmitter will blink alternately while using a switch.
- If the OVERLOAD Input is enabled in calibration and the input is driven low (no voltage), the red and green LEDs on the transmitter will blink together while using a switch.

BATTERY CHARGING

The transmitter is designed with a smart battery charger. The battery can be charged by plugging the AC wall charger or DC cigarette charger (minimum 2A @ 12.6VDC) into the port. Red and green LED indicators on the underside of the transmitter indicate the status of the charger: A red LED indicates that the battery is charging and a green LED indicates that the battery is fully charged.

IMPORTANT BATTERY INFORMATION:

- When the battery is new, the run-time of the transmitter will be shorter until it has gone through the drain/charge cycle several times. After this point, the unit's current drain should allow at least 20 hours of run-time before a recharge is needed.
- The temperature that the transmitter battery is exposed to affects performance and useful life. It is strongly recommended you keep within the following limits:
 - A. Charging: -0 degrees to +40 degrees C
 - B. Storing: -20 degrees to +50 degrees C

TRANSMITTER AND RECEIVER SYNCHRONIZATION

Each radio remote system is designed to operate with a unique radio ID code and RF channel sequence. Each receiver is programmed to respond only to the transmitter with the correct ID code/RF channel sequence for which it is set. This feature allows multiple systems to work in close proximity to one another without interference. In the event that a transmitter becomes damaged and a new one is needed, the receiver can be reprogrammed to respond to the new transmitter. To teach the ID code to the receiver, use the following procedure. ***Please note that if this procedure is interrupted before it has completed, the system may have intermittent operation:**

- Turn the transmitter and receiver off
- Press and hold the BOOM UP AND BOOM RETRACT switches
- Release the E-STOP. Wait until the green LED begins blinking
- Release the switches. Both LEDs should blink at this point
- Apply power to the receiver. The green LED should just start blinking on the transmitter
- Teach complete

SLEEP TIME

- All transmitters have the ability to change the sleep time from the default to user's preference. The transmitter is factory set to turn off (sleep) after 15 minutes. To change the time the transmitter waits before going to sleep, use the following procedure:
- With E-STOP pressed, press and hold WINCH DOWN, BOOM CCW and BOOM EXTEND.
 - Release E-STOP, keep holding the switches for >2 seconds. At this point, both lights will blink once per second. Release switches.
 - On the transmitter, press one of the following switches to adjust the sleep time:
 - a. BOOM UP = 15 minutes
 - b. BOOM DOWN = 30 minutes
 - c. WINCH UP = 60 minutes
 - d. WINCH DOWN = 2 hours
 - e. BOOM CW = sleep disabled
 - Sleep time programming complete

CLONING:

WARNING! - ONLY ONE TRANSMITTER CAN BE ON AT A TIME, THEY CANNOT BE USED SIMULTANEOUSLY - use with CAUTION! Occasionally, it is desirable to have more than one transmitter work with a single receiver. This is accomplished by a process called cloning. Cloning allows an additional transmitter (B) to have the same ID code as the original transmitter (A). If this feature is desired, use the following procedure:

- Make sure both transmitters and the receiver are off
- On Transmitter A, hold switches BOOM RAISE, BOOM RETRACT & release E-STOP and keep holding switches for couple of seconds and release. Green and red LEDs will blink together at this point
- On Transmitter B, hold switches BOOM UP, BOOM CCW, WINCH UP, release E-STOP and keep holding switches for couple of seconds and release. Green and red LEDs will blink together at this point
- Wait for few seconds until the green LED starts to blink for Transmitter B, which indicates Cloning success.
- Turn both the transmitters off
- Synchronize one of the transmitters to the receiver using SYNCHRONIZING TRANSMITTER AND RECEIVER instructions above

If the cloning feature has been invoked and is no longer desired, the ID code of one of the transmitters needs to be changed. This will unclone the transmitters. If this is desired, use the following procedure:

- Make sure the transmitter is off.
- Press and hold switches BOOM LOWER, WINCH DOWN, BOOM CW, and
- Release E-STOP and toggle switches after couple of seconds. LEDs will start toggling.
- Press any switch and release, GREEN LED should be blinking rapidly.
- ID change Sequence complete.

TRANSMITTER SPECIFICATIONS:

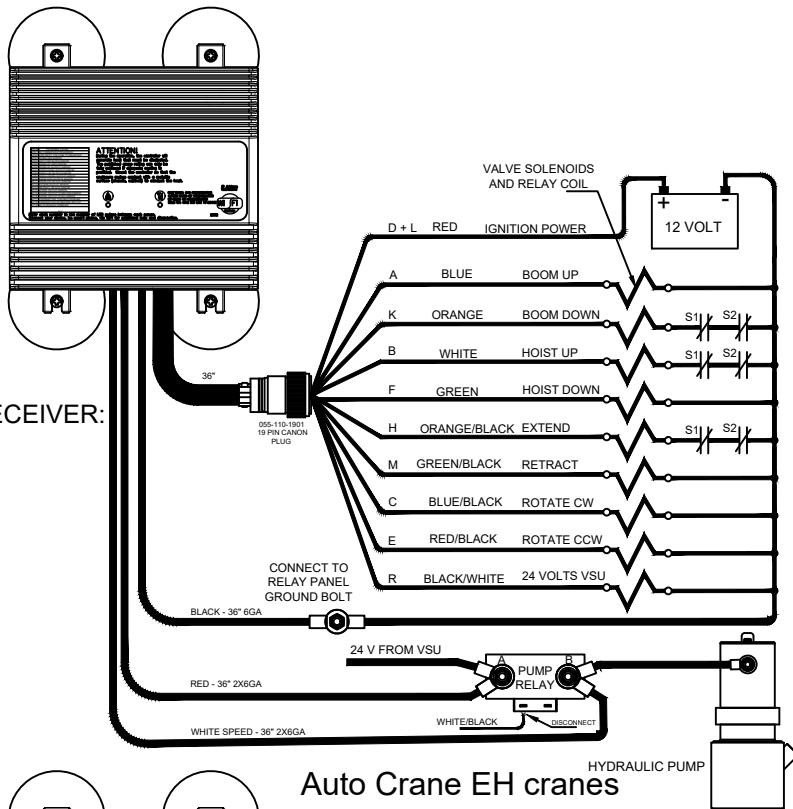
FCC ID: P4U-MOD164 IC: 4534A-MOD164
 Power supply: Rechargeable, Li-Ion battery 3.7 Volt
 Operating temperature: -20 degrees C to +50 degrees C
 Storage temperature: -20 degrees C to +50 degrees C
 RF Frequency: 902-928 MHz RF Transmitt power (EIRP): 100 mW
 Vibration: 3G to 200Hz Shock: 50G NEMA12

RECEIVER SPECIFICATIONS:

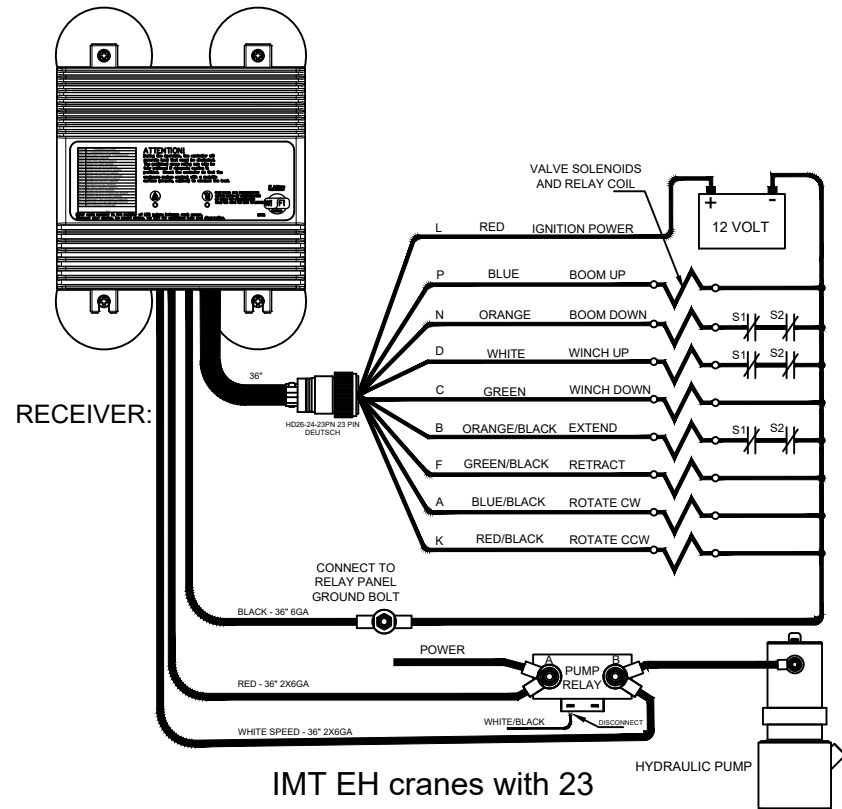
FCC ID: P4U-MOD164 IC: 4534A-MOD164
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 Operating temperature: -40 degrees C to +85 degrees C
 Storage temperature: -40 degrees C to +100 degrees C
 Outputs: 5.0A max each, sourcing
 Motor output: 200 A max
 RF Frequency: 902-928 MHz
 Vibration: 3G to 200Hz Shock: 100G NEMA4X

W/LED TELETYPE	
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XXX	C 6
XXXX	C 65
FUNCTIONAL	C 1/8
ANGLAR	C 45 deg

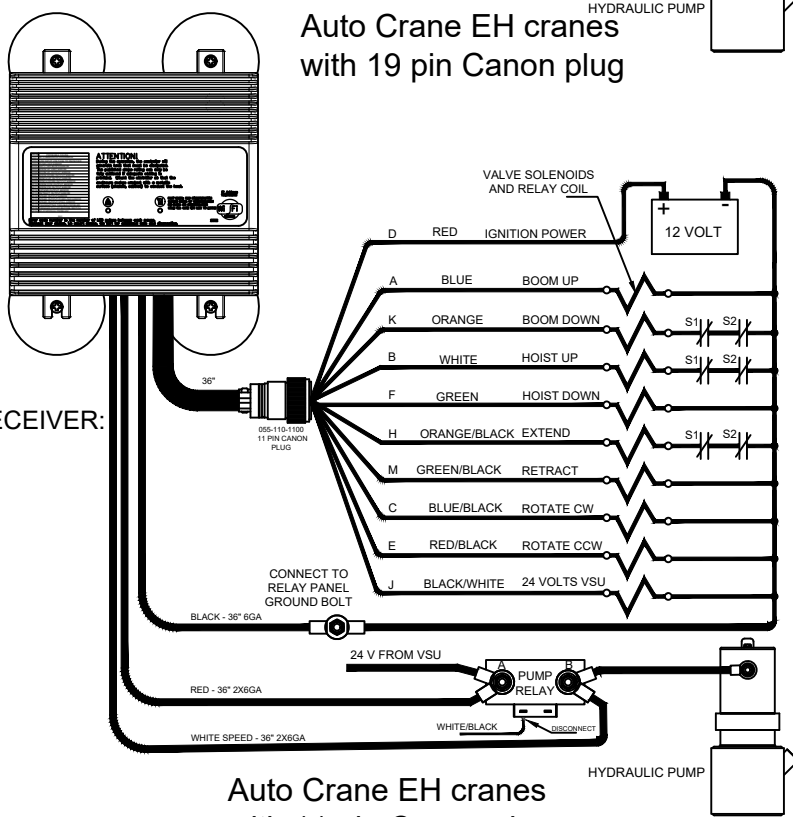
CUSTOMER/DEM	DATE	BY	CHK	REV	DESIGN	APPROV	DRAWING NO
FULL		HK		06-15-21			3B-305-1-A-3C



Auto Crane EH cranes with 19 pin Canon plug



IMT EH cranes with 23 pin Deutsch



Auto Crane EH cranes with 11 pin Canon plug