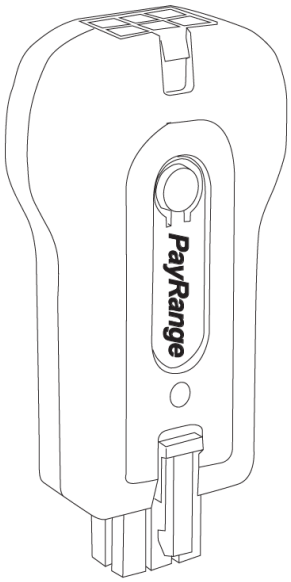
BluKey™ Pulse
RelayModule Amusement
Installation Guide

Amusement Relay Module



BluKey™ Pulse

Coin Operated Pulse-Type Equipment

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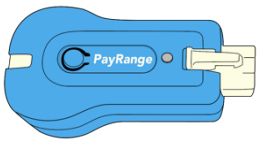
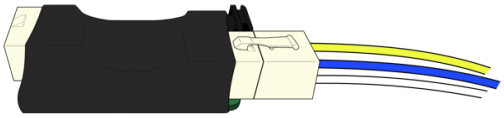
PayRange Amusement System

BluKey™ Pulse



Interface Kit

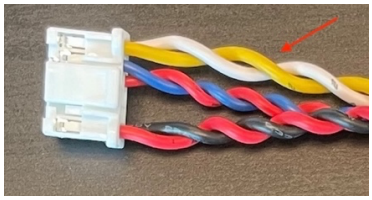
Relay Module
w/ Harness



Coin-Op Machine

BluKey device accepts payment from PayRange mobile app. Laundry Interface Kit (includes Laundry Interface Module and Cable Harnesses) connects BluKey to Laundry Machine and converts electrical signals between them.

****Note: Ignore the twisted yellow/white pair of wires located on the RelayModule Harness (these wires will not be used at this time).**



Installation Overview

The BluKey (BK) Pulse device can be installed as a cashless, mobile payment option in coin-operated appliances that use a pulse payment system. BK Pulse credits a machine by sending pulses, working the same way as if cash has been inserted. Using the RelayModule Harness Kit, the BluKey device can be connected to the coin acceptor to allow coin pulses to pass through unimpeded, while upgrading your machine to also accept mobile payments. **The machine must have a coin acceptor to be compatible with the PayRange RelayModule.**

Note: Coin acceptor must be pulse-type, RelayModule cannot interface with serial or MDB hardware.

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Installation Steps

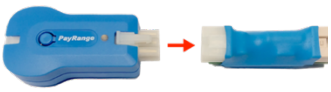
IMPORTANT: PayRange service requires data connection on a user's mobile device. Prior to installation, verify location has adequate cellular reception or a WiFi network that users can access. If mobile web browser can load a website relatively quickly, data connection should be adequate.

Step 1: Prepare Machine

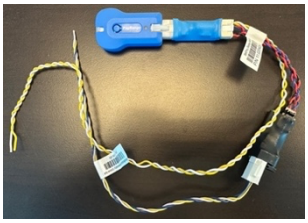
- Completely disconnect power (unplug or turn off breaker)
- Open machine door to access coin acceptor and locate a power source

Step 2:
Connect BluKey Pulse to Interface Module and harness.

1. Connect BluKey to Interface Module.



2. Connect Interface Module to RelayModule harness.



Step 3: Connect BluKey to Relay Module. (Configure Interface Module if applicable)

Switches must be set to match install scenario. Incorrect settings may cause BluKey (BK) to behave unexpectedly.

Switch 1:

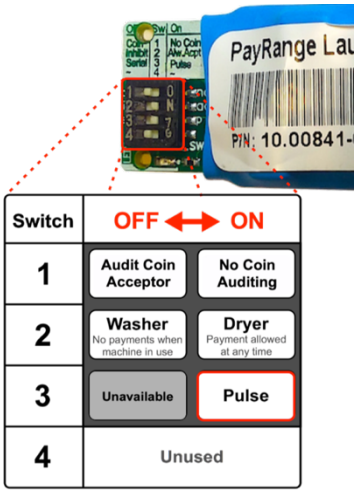
- Ensure it is set to **ON** position.

Switch 2:

- Ensure it is set to **ON** for **ALL** machines.

Switch 3: Set **ON** for all machines.

Switch 4: Unused



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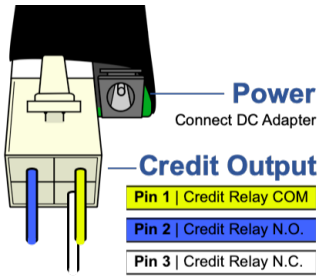
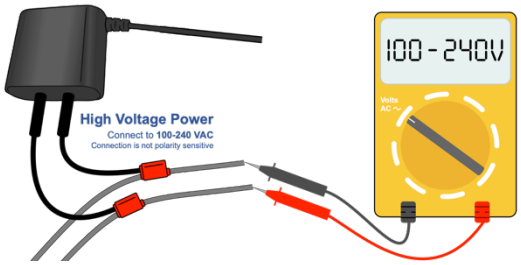
Step 4: Locate Power Source and Connect Adapter

The RelayModule is equipped with a DC jack which connects to a **High Voltage** or **Low Voltage** power adapter (included with harness). Do not attempt to modify the power connector or connect a power adapter that was not provided by PayRange.

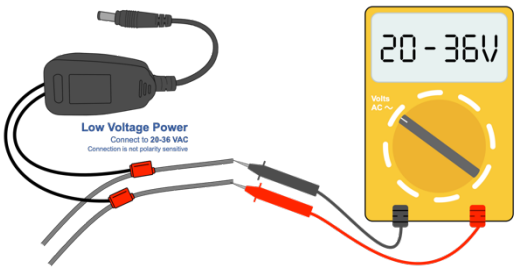


Input Range

- **Low Voltage power supply: 20-36 VAC/VDC**
- **High Voltage power supply: 100-240 VAC**
- **Wall outlet power supply: 110 VAC**

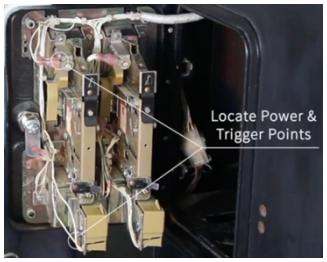


1. Use the machine wiring diagram and a voltmeter to locate a wire pair carrying constant power within the appropriate voltage range
2. Connect one input wire from the power adapter to one of the machine power supply wires
3. Connect remaining power adapter input wire to remaining power supply wire
4. Connect power adapter to Relay Module DC jack



Step 5: Identify Trigger points of Coin Mech

Microswitch: One coin inserted at a time, coin drops through chute and hits a wire lever/actuator, typically only two wire leads (there are three connection terminals, but only two are used)



The RelayModule harness has three wire leads for credit output (Blue, Yellow, and White). Only two will be used for any installation.

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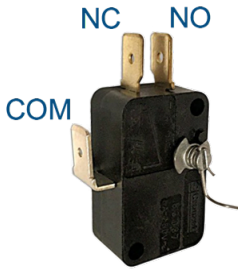
Step 6: Connecting PayRange Relay wires to Trigger points of coin mech



Microswitch Coin Acceptors

A microswitch typically has three terminal contacts but only two are used resulting in only 2 wires coming out of the microswitch. Each terminal identifier should be printed or etched on one side of the switch.

Figure 1 shows the most common pinout, but some switches have NC and NO reversed.

NO: Normally Open
NC: Normally Closed

COM: Common (always used)

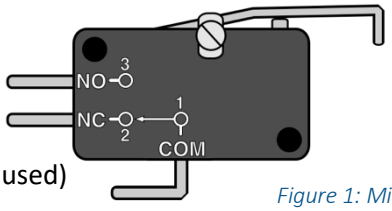


Figure 1: Microswitch

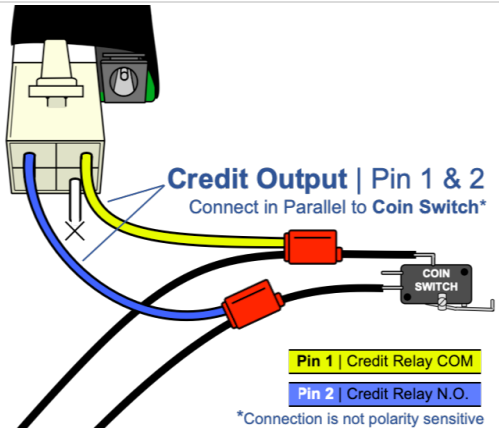
Normally Open (NO) Connection

Almost all microswitch acceptors are wired NO and use this connection method.

Sometimes microswitches are NC but work either way. If switch is wired NC, remove the wire from NC terminal and connect to NO, then insert a coin or press the switch manually to verify the machine still receives credit. If it does, use the NO connection method; if it does not, move the wire back to the NC terminal and use the NC connection method.

Normally Open (NO) Connection

1. Connect yellow wire (pin 1) to a wire connected to either COM or NO terminal
   (connection is not polarity sensitive)
2. Connect blue wire (pin 2) to a wire at opposite terminal (NO or COM)
3. Tie unused white wire (pin 3) to prevent contact with any part of the machine



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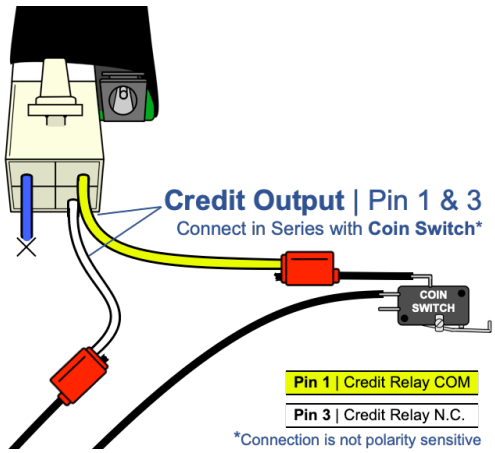
Normally Closed (NC) Connection
Not common.

1. Start by cutting either coin switch wire
2. Connect yellow wire (pin 1) to one end of cut wire (connection is not polarity sensitive)
3. Connect white wire (pin 3) to remaining end of cut wire
4. Tie unused blue wire (pin 2) to prevent contact with any part of the machine



Step 6 Affixing machine decals

- **Number Decal** – a unique number decal must be affixed to every amusement machine equipped with PayRange.
  - The decal should be placed on the machine in an area that is easily visible (near the coin slot is recommended) and that makes it obvious which machine the number is for.

- **First Purchase Free Decal** – this decal should be used only if the 'New User Program' is enabled on the operator account.
  - The New User Program allows brand new PayRange users to make a single transaction without adding funds and is a great way to incentivize mobile pay adoption.

To enable/disable feature, and set the maximum amount for transaction: login to Manage Console → select "Rewards" → select "New User Program

Step 7: Power On machine and register BluKey with PayRange App in front of machine after installation and testing after installation.

It is critical to test each BluKey device to verify proper installation, registration, and setup. Testing coin acceptor is also recommended, if applicable.

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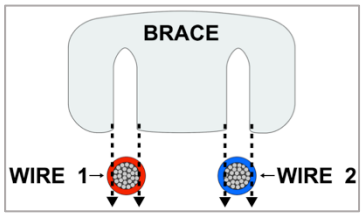
Using 3M™ Scotchlok™ IDC Tap Connectors

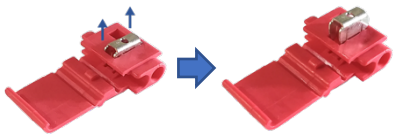
Tap splice connectors make it possible to splice anywhere along a wire without having to first cut the wire. A tap splice connector has a metal brace with two slots in it; one for each wire that goes into the connector. When the brace is crimped down it is designed to cut through the insulation only. This allows the metal brace to contact the strands of conductive wire, which connects the two wires in the connector.



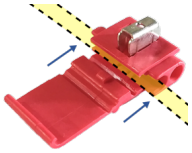
How Tap Splice Brace Connects Two Wires

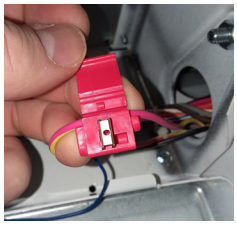
Using Included Red Tap Splice Connectors

1. Make sure brace is pulled out of splice far enough so wires can be fully inserted

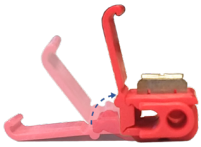


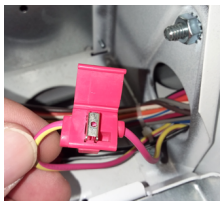
2. Insert the machine wire into the pass-through side of the connector



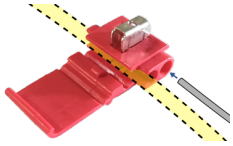


3. Close the first part of the tab

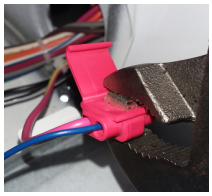




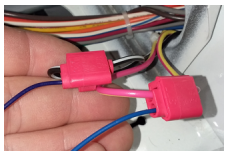
4. Insert a wire from BK Smart harness into the other slot of the splice connector. Push wire all the way in until it hits the stop



5. Crimp the metal brace all the way down until it is flush with the plastic part of the connector (crimp from the center to ensure brace crimps down straight and even)



6. Close the cover fully and check that the wire cannot be pulled out with a slight tug



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