



## **TMC-1 WR Switch Machine**

- **Submersible Design**
- **Compact Mechanical Switch & Lock Movement**
- **Low Height Profile**
- **Wayside or Mid-Track Mounting**
- **Dual Switch Point Indication Available**
- **Competitively Priced**
- **Made in the U.S.A.**



Certificate # 2380/00

PDS 4623-16 B

**TWINCO MFG. CO., INC.**

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# Introduction

The Twinco TMC-1 WR Submersible Switch Machine was conceived, designed and manufactured to address the most demanding requirements of today's rail and transit operations.

Chief among these needs is resiliency to uncontrolled climatic events such as flooding and extreme temperature variations. Controlling intrusion of all phases of water, be it gas, liquid or solid (i.e. moisture, rain or snow) into the machine, is essential to maintain serviceability under these conditions. To accomplish this we have employed proven sealing technologies used in other industries to control all electrical and mechanical inputs and outputs to the machine. In addition to the machine as a whole being rated IP68, all interior electrical connections and components are sealed to a minimum of IP66 to provide safety and redundancy.

Reliability and serviceability under normal conditions is also critical in today's economic environment. Simplicity and modularity of a design are fundamental hallmarks of any well conceived machine. To this end we have created an electrical-mechanical switch machine with the fewest parts of any machine on the market while employing as many modular components as possible. This compact and low profile height switch machine can be readily adapted to customer specific requirements such as trailable vs. non-trailable or between the gauge or beside the rail.

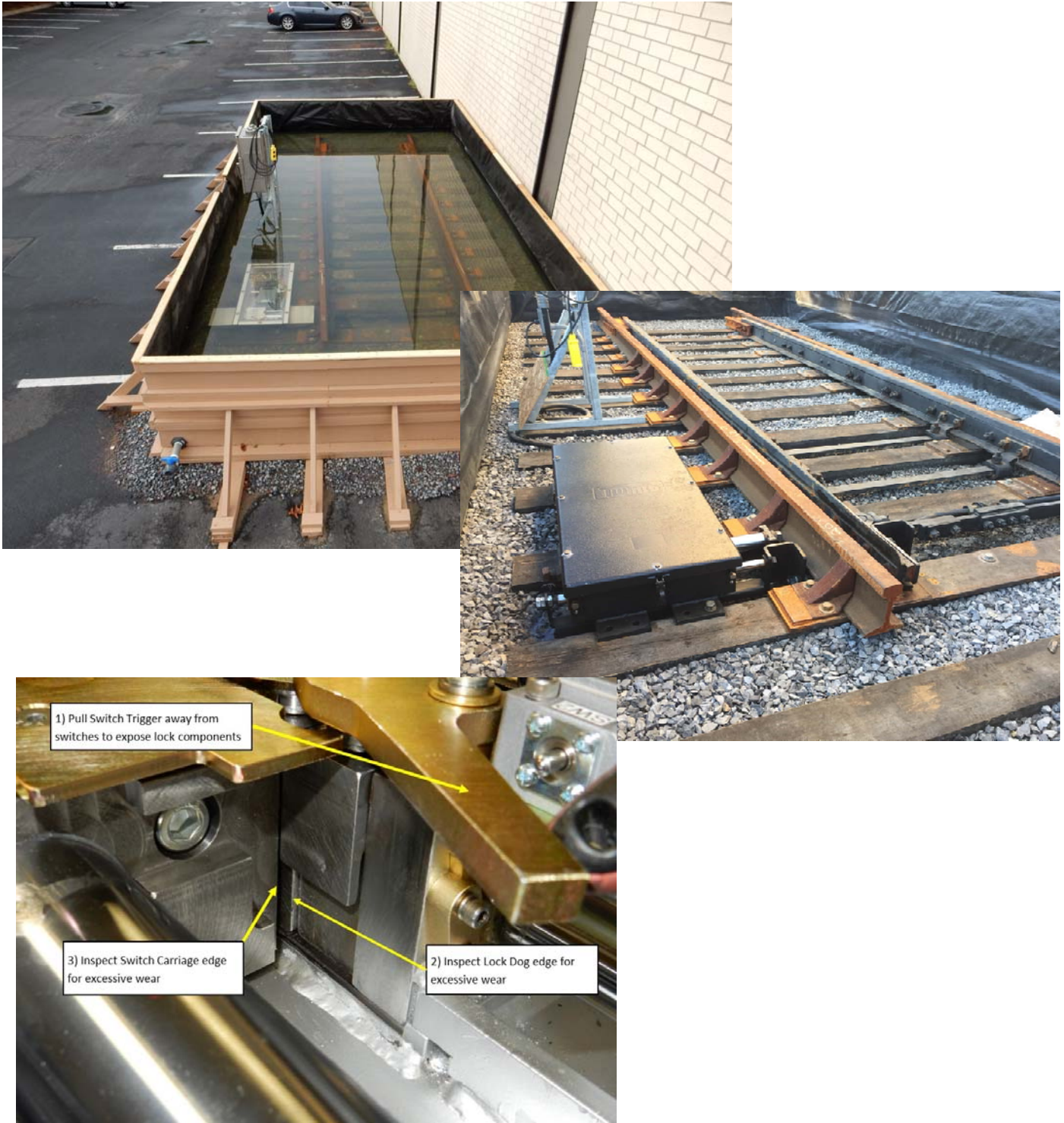
Most importantly, quality and competitive pricing is built in by design and execution of manufacturing by a company that has been serving our industry for over 50 years. Our skilled team members use premium materials, the latest CAD design software and manufacturing technologies such as:

- fiber-optic laser cutting
- CNC synchronized hydraulic bending
- Robotic welding
- Laser probed CNC machining
- 3D printing

This allows us to custom tailor the TMC-1 to any customer specific needs, and do it better and faster than others.



# Submersible Turnout Test Bed



Cycle testing at Twinco allows us to continuously evaluate and improve our product offering.

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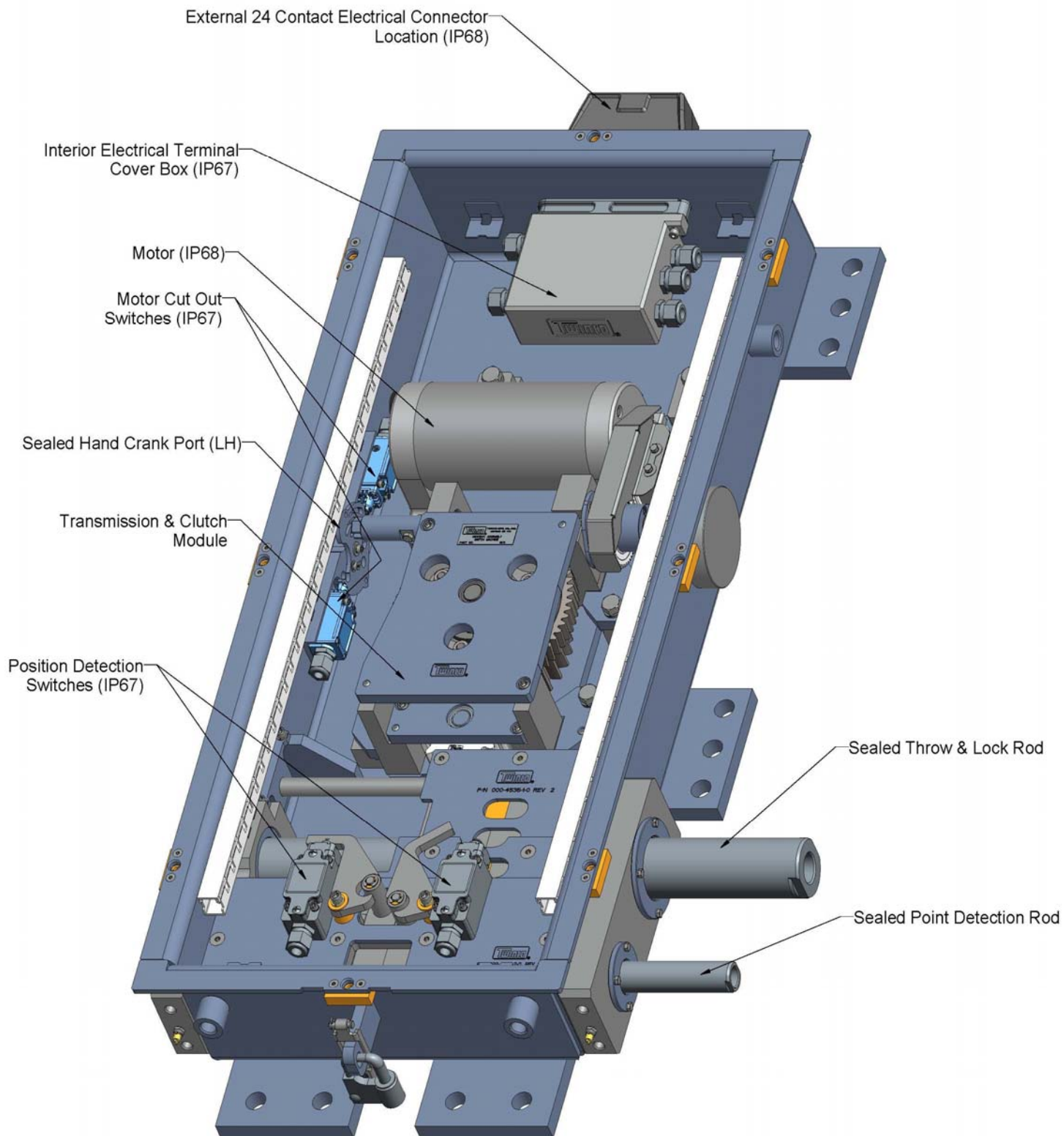
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## **Technical Data**

The data listed below are the standard data for the TMC-1 WR Switch Machine. Order-specific modifications are included in the documents of the order. Specific (measured) data of the switch machine are on the inspection label of each machine.

### **Overall system**

Designation of the machine:	TMC-1
For switches:	Track gauge 56.5 inches (1432 mm)
Installation position:	Outside or Inside between switch points:
Principal dimensions (L x W x H):	47 x 20.25 x 7.63 inches
Weight:	600 lbs.
Travel:	6-5/16" Max.
Switching time:	< 2 s
Protection class:	IP 68
Noise level (L <sub>PA</sub> )	< 70 dB (A)

### **Operating conditions**

Temperature:	- 40°F* to + 185 °F	* Internal heater required
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### **Electrical connection data:**

Nominal motor voltage:	110 VDC or AC
Rated current:	< 8 A
Motor protection class:	IP 68
Control voltage:	As specified by Customer
Cable resistance:	< 30 Ohm per strand
Hi-pot Voltage:	2,500 V, 60 Hz, 1 s

### **Note:**

For reliability and serviceability purposes it is recommended that all machine electrical control configuration components be mounted in an enclosure (IP68) separate from the machine.

