# **6-Axis Force Plate Robotic Arm** Multi-Axis

# **Industry: Industrial Automation**

#### **Customer Challenge**

A customer wants to measure the reaction forces of their robotic arm for safety purposes. The reaction loads occur at the robotic arm's base, therefore, they need a force measurement system at the base of the robotic arm.

# Summary

#### **Interface Solution**

Interface suggests using their force plate option to install at the base of the robotic arm. Four 3-Axis Force Load Cells are installed between two force plates, then installed at the bottom of the arm. This creates one large 6-Axis Force Plate. The sensors force data is recorded and displayed through the two BX8 Multi-Channel Bridge Amplifier and Data Acquisition Systems onto the customer's PC or laptop.

#### Results

Interface's 6-Axis Force Plate was able to successfully measure the reaction forces of the customer's robotic arm.

## **Materials**

- Four 3-Axis Force Load Cells
- Mounting Plates
- Two BX8 Multi-Channel Bridge Amplifier and Data Acquisition System with supplied software
- Robotic Arm
- Customer's PC or Laptop

### **How It Works**

1. Four 3-Axis Force Load Cells (creating one 6-Axis Force Plate) are installed between two metal plates, creating a force plate option.

2. The 6-Axis Force Plate is installed at the base of the robotic arm.

3. Reaction forces from the robotic arm are measured and recorded using the two BX8 Multi-Channel Bridge Amplifier and Data Acquisition Modules which can then be logged, graphed, and displayed on the customer's PC or laptop when connected.



