

# CONNECTING INDUSTRY 4.0

## DRIVE MOTOR

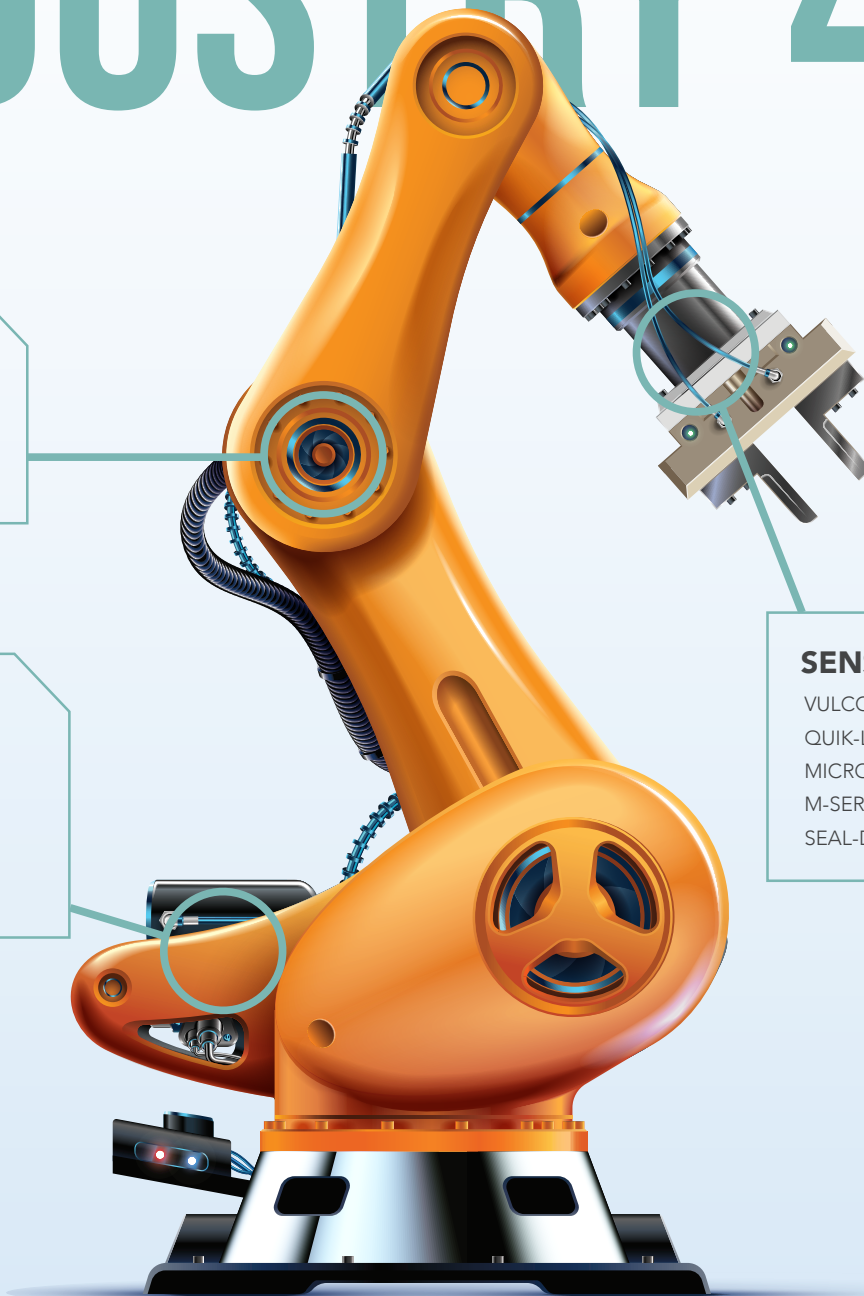
VULCON Circulars  
M-SERIES D-Sub  
SEAL-D D-Sub

## CONTROLLER

VULCON M12  
VULCON M8  
QUIK-LOK  
MICRO-D  
SEAL-D  
POWER-D & Co-Ax

## SENSOR

VULCON STEEL  
QUIK-LOQ Push Pulls  
MICRO-D  
M-SERIES  
SEAL-D



## CONNECTING INDUSTRY 4.0

# ROBOTIC WORKERS ARE NOTHING IF NOT VERSATILE

They can be rugged welding powerhouses or delicate enough to perform fine actions with precision accuracy. **At NorComp, we offer the interconnect solutions that power squadrons of industrial robots whether they pick, pack, or paint.**

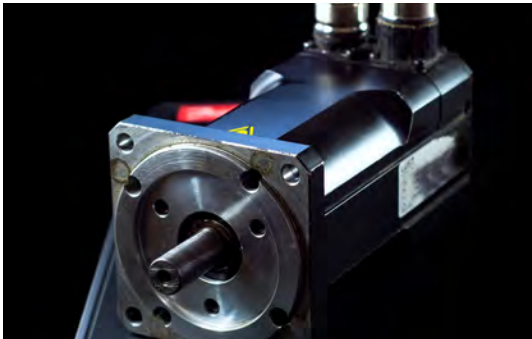
No matter their function, the right connectors are one of the vital building blocks of an industrial robotics program that reduces costs and improves efficiency—lock it in with NorComp.





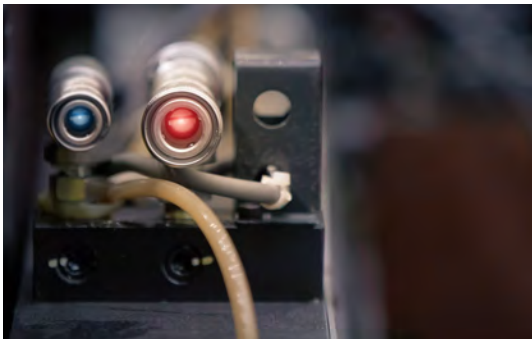
## POWER SOURCES

Explore connectors that keep power flowing without interruption. With our sealed and ruggedized IP67/IP68 interconnects, extreme temperatures, moisture, chemicals, or fumes won't disrupt floor performance.



## DRIVE MOTORS AND ACTUATORS

Robotic arms must always hit their mark. They need to move into precise positions repeatedly—even in the face of high strain and vibration. Find connectors tested extensively to withstand twists, spins, and rotations.



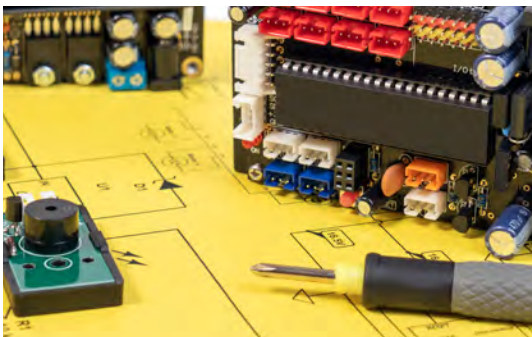
## SENSORS

Collision detection, object scans, torque, and pressure sensing. In high-stakes manufacturing environments, robotic devices need to make split-second decisions. Don't leave it up to chance—find connectors that lock in sight for the dozens of ways robots need to see their surroundings.



## COMMUNICATIONS

With the right connectors, communication lines are always open. EMI/RFI shielding protects against cross-signals so robotic devices can send and receive the signals they need to do their jobs properly.



## CONTROLLERS

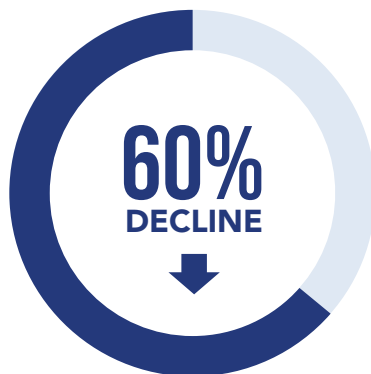
The brain of your robotics system needs powerful, reliable, and rugged connectors that fit into even the most compact controller footprints. Lightweight, space-saving designs slot into high-density configurations with ease.

# INDUSTRIAL ROBOTICS ISN'T THE FUTURE OF THE FUTURE—IT'S HAPPENING NOW

518,000

The number of industrial robots experts predict will ship in 2024

Over the last 20 years, the cost of implementing robotic automation has gone down



Smart manufacturing can boost productivity by





# 6 THINGS TO KNOW WHEN CHOOSING ROBOTICS CONNECTORS

All industries are finding new ways to use robotics to reduce costs, create more, and service customers faster than ever.

## 1. KNOW YOUR ELECTRICAL DEMANDS

List the current, frequency, and voltage they'll need to carry. Consider both digital and analog needs. From there, we'll work together to select the pin count, clearance, shielding, and material needs for your design.

## 2. UNDERSTAND YOUR DATA SPEED REQUIREMENTS

The Internet of Things relies on non-stop signals that hum at both the low end of the spectrum and sprint at ultra-high frequencies. Understanding your data speed and low-latency signal needs is critical when choosing the right connector.

## 3. CONSIDER YOUR TERMINATION NEEDS

Environmentally sealed, easy to service connectors that can mate and unmate effortlessly.

## 4. EVALUATE OPERATING CONDITIONS

Indoors, outdoors, through temperature extremes, petrol exposure, and heavy shock and vibration. Connectors in industrial environments need to withstand blisteringly harsh conditions—ensure performance with maximum IP environmental sealing.

## 5. HOW DOES YOUR ROBOT MOVE?

Cables can weave through all six axes of a robotic arm—so it's critical to make sure your connectors stay locked in. The right connectors can move with components that bend, twist, rotate, and spin day in and day out.

## 6. EVALUATE FOOTPRINT AND SIZE CONSTRAINTS

Electronics aboard robotic workers are shrinking in size. Innovative designs require increasingly smaller connectors and assemblies.

# CONNECTING BOLD INNOVATIONS IN INDUSTRIAL ROBOTICS



## INDUSTRIAL-STRENGTH CLEANING ROBOTICS

When you're ready with an idea that will change the state of your company, you don't have time to dawdle on the drawing board. It's time to move fast.

**Three months**—that was the total time from the moment we received details on this project to the delivery of an approved connector. Two years later, other participating companies are still awaiting approval on their designs. A testament to our speed, agility, and total dedication to helping you fast forward your Industry 4.0 initiatives.

# GROCERY DISTRIBUTION ROBOTICS

A company working on last-mile delivery needed a ruggedized interconnect assembly fit for outdoor use. The catch? It couldn't be any larger than non-waterproof models. Their robot design was in its final phases, but other companies told them to get what they needed, they had to go back to the drawing board.

**Enter the team at NorComp.** We were able to serve a fully ruggedized, IP-68 interconnect without adding any extra bulk. This grocery robotics company was able to stick with their existing design—no modifications needed.





# ROBOTICS WILL CHANGE THE WAY YOUR BUSINESS OPERATES. YOU'LL NEED CONNECTORS YOU CAN TRUST FOR THE LONG RUN.

You might have a detailed plan in place. Maybe your concept is still in the early stages. Whether you know exactly what you need or aren't sure of the next step, finding the right connector can catapult your robotics initiative into a thriving existence.



VULCON STEEL - 4 PIN D-CODE

#### VULCON CIRCULAR

- Ruggedized and waterproof to stand up against harsh environments
- Available in 3 sizes (M5, M8, and M12)
- Pin counts ranging from 2 to 12 positions
- IP67/IP68 when mated or unmated
- Up to 5 AMP contact rating / -40°C to +85°C



180-M SERIES: SOLDER CUP HIGH DENSITY D-SUB

#### M-SERIES D-SUBS

- Available in 10 standard and high-density sizes
- Screw-machined contacts for high mating cycles
- 5 amp contact rating / -55°C to +105°C



15 PIN HD - 781M SERIES

#### SEAL-D D-SUBS

- No need to redesign enclosures when upgrading to IP67/IP68
- Internally sealed without any added bulk over standard D-Sub
- IP67/IP68 rating
- 4 Power Options
- Operating temp: 55°C to +105°C



821 K SERIES POWER CONNECTOR CABLE MOUNT

#### QUIK-LOQ CONNECTORS

- Quick connect and disconnect latching
- Tested to withstand 5,000+ mating cycles
- IP67/IP68
- Full EMI/RFI protection
- Operating temp: -20°C to +120°C



15 PIN 580 SERIES PANEL MOUNT

#### MICRO-D CONNECTORS

- Robust shielding in a compact footprint
- Less than 1/3 the size of a standard D-Sub
- 9, 15 & 25 pin sizes
- 1 AMP contact rating / -55°C to +85°C
- Machined contacts for increased reliability

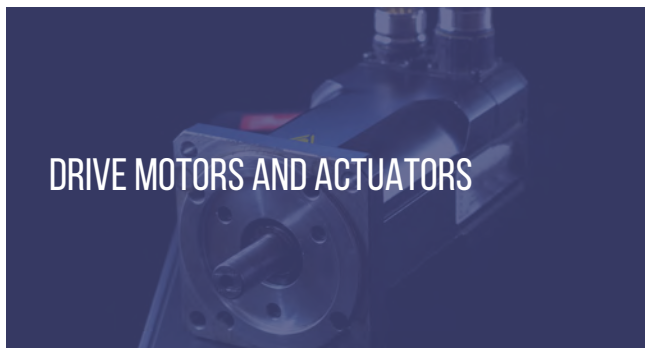
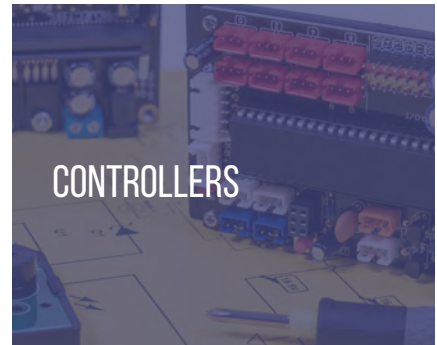
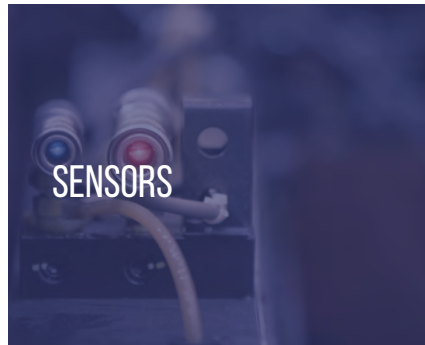
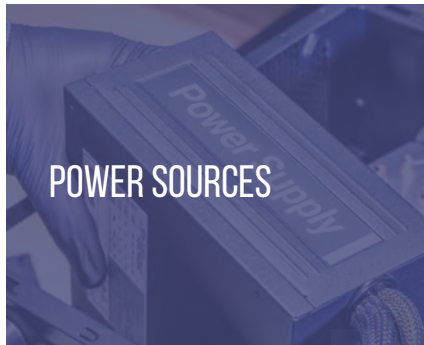


7W2 684S SERIES BOARD MOUNT

#### POWER-D & COMBO-D D-SUB

- Mix contacts in the same reliable D-Sub shell
- 13 contact configurations
- 20A & 40A power contacts

# WHERE OUR PRODUCTS ARE USED



## POWER SOURCES

- POWER QUIK-LOQ
- Combo D-Sub
- VULCON Circular
- M-SERIES D-Sub
- SEAL-D D-Sub

## DRIVE MOTORS AND ACTUATORS

- VULCON Circular
- M-SERIES D-Subs
- SEAL-D D-Subs

## SENSORS

- VULCON Circular
- QUIK-LOQ Connectors
- MICRO-D Connectors
- M-SERIES D-Sub
- SEAL-D

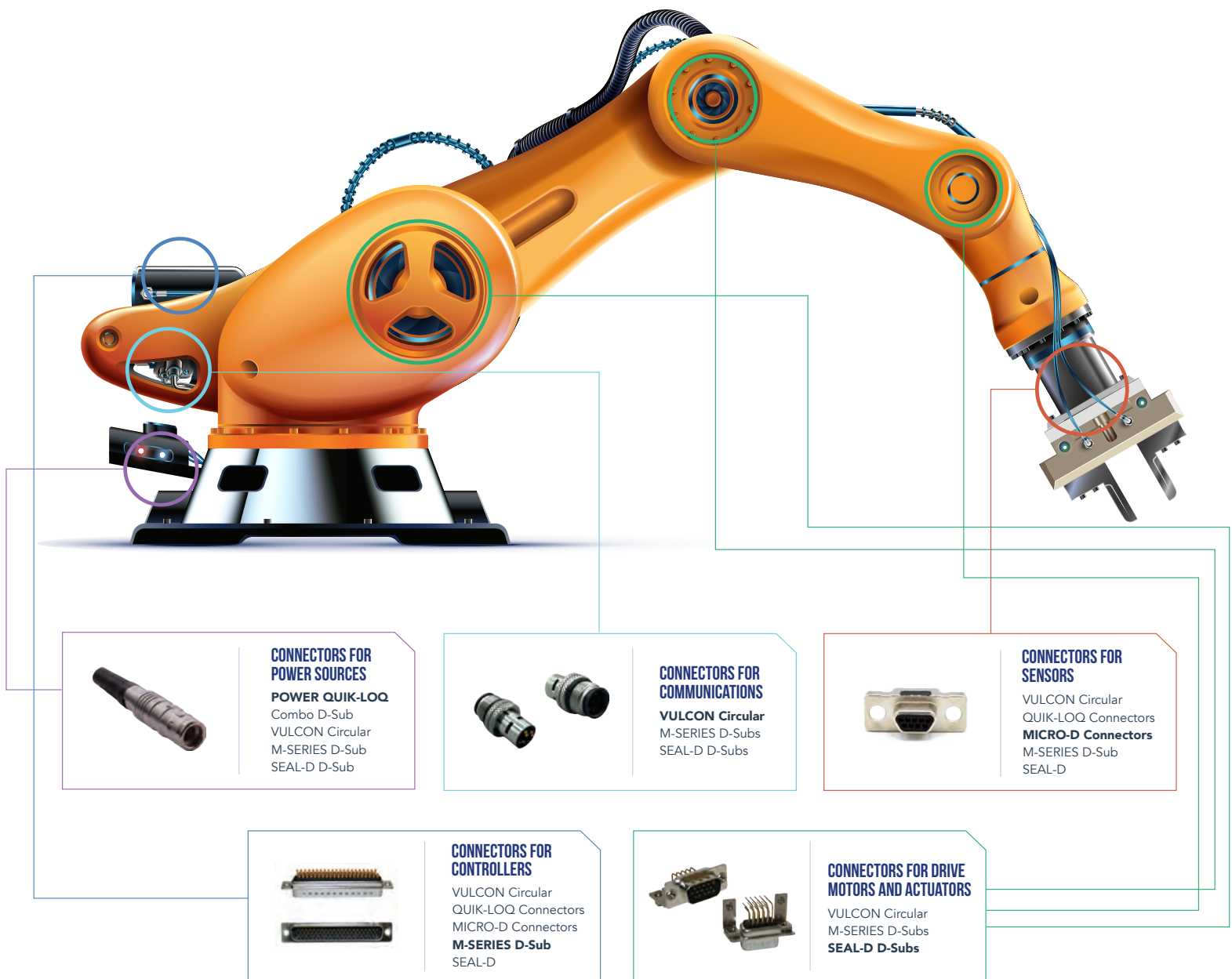
## COMMUNICATIONS

- VULCON Circular
- M-SERIES D-Subs
- SEAL-D D-Subs

## CONTROLLERS

- VULCON Circular
- QUIK-LOQ Connectors
- MICRO-D Connectors
- M-SERIES D-Sub
- SEAL-D

# FINDING THE RIGHT CONNECTOR CAN CATAPULT YOUR ROBOTICS INITIATIVE INTO A THRIVING EXISTENCE.





**NORCOMP**  
CONNECTING INDUSTRY 4.0



Customer Service & Sales: [sales@norcomp.net](mailto:sales@norcomp.net)

3810 Shutterfly Rd. Suite #200 Charlotte, N.C. 28217

800-849-4450 (Toll Free) | 704-424-5448 (Local) | 704-424-5648 (Fax)

[www.NORCOMP.net](http://www.NORCOMP.net)