

ArcSafe™, ArcSafe™-SW and MultiClutch™

Robotic Collision Protection



The ArcSafe™, MultiClutch™ and the **NEW** ArcSafe™-SW provide maximum collision protection in robotic applications.

The **AMERICAN WELDQUIP** ArcSafe and MultiClutch utilize an integrated switch designed to prevent damage to the robotic end of arm equipment and/or tooling. In the event of a “crash” situation with the end of arm equipment the switch activates the E-Stop circuit, thus stopping the robot movement.

The **NEW ArcSafe-SW** is specifically designed for use in robotic application where the crash protection is integrated into the robotic software package. Most integrated robotic collision detection software systems take time to come to a complete stop - especially with high speed movements. This is where the ArcSafe-SW offers additional protection over solid mount type devices.

The built-in spring deflection feature allows the ArcSafe-SW to deflect the end of arm equipment in the event of a crash. This additional safe guard provides the extra protection required to reduce or eliminate bent goosenecks, cracked insulating disks, and damaged tooling.

The ArcSafe, ArcSafe-SW and MultiClutch models are an inexpensive investment to protect equipment, tooling, reduce or eliminate expensive downtime and maintenance issues.

ArcSafe Features:

- **Highly Repeatable** – Resets to $\pm .001''$ ($\pm .025\text{mm}$)
- **Rugged Design** – Hardened tool steel in contact and wear points.
- **Common Work Envelope** – interchangeability when changing out competitive brands.
- **Robust E-Stop Control Cable/Connector** – Heavy control cable and robust connector mean less downtime because of cable issues.
- **Protection in Mx, My, Mz and Fz Directions**
- **Arm Mounting Post** – Hardened tool steel and flat surface for fast and precise wedge pin mounting of torch arms.
- **Quick Field Replaceable Switch Assembly**
- **Easy Sensitivity Adjustment**
- **Air Assist - Standard**
- **Quick Installation** – Only four screws with common Allen Key Wrench.
- **Protective Seal Boot** – Keeps weld spatter out of mounting screws and other critical areas for reduced downtime and maintenance.

MultiClutch Features:

- **All the ArcSafe Features** – The MultiClutch offers all the features and benefits of the ArcSafe above.
- **Tooling Mount Flange** – The MultiClutch comes configured with a tooling mounting flange. This flange allows the user to mount different types of equipment to the end of the robot arm. This might include equipment for material handling, gluing, painting, inspection etc..

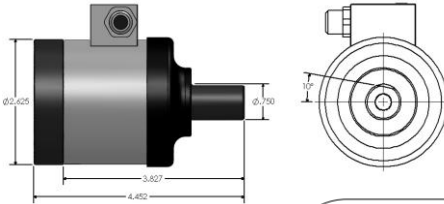
ArcSafe-SW Features:

- **Highly Repeatable** – Resets to $\pm .001''$ ($\pm .025\text{mm}$)
- **Provides added Protection in Mx, My, Mz and Fz Directions over solid mount designs.**
- **Rugged Design** – Hardened tool steel in contact and wear points.
- **Common Work Envelope** – interchangeability when changing out competitive brands.
- **Arm Mounting Post** – Hardened tool steel and flat surface for fast and precise wedge pin mounting of torch arms.
- **Air Assist - Standard**
- **Quick Installation** – Only four screws with common Allen Key Wrench.
- **Protective Seal Boot** – Keeps weld spatter out of mounting screws and other critical areas for reduced downtime and maintenance.

Technical Specifications – ArcSafe, ArcSafe-SW, MultiClutch

| | | | |
|--------------------------|---------------------------|----------------------|-------------|
| Weight – | 1lb. 9 oz. (.709 KG) | Spring Force– | |
| Repeatability - | ± .001" (± .025mm) | Mx, My = | 93 in-lbs |
| Range Of Travel - | 20° Pivot, 360° Rotation | Mz = | 168 in.lbs. |
| | .50" (12.7mm) Compression | Fz = | 172 lbs. |

Dimensional Drawings



HOW TO ORDER

| PART NUMBER | DESCRIPTION |
|-------------|--|
| AH1881 | ArcSafe Robotic Collision Sensor |
| MH3523 | MultiClutch Robotic Collision Sensor |
| ASW2000 | ArcSafe-SW for use with robotic collision detection software |
| AS-B-A | Solid Mount |

INSULATION DISKS

| PART NUMBER | DESCRIPTION |
|-------------|--|
| AS-100 | FANUC - 50IL |
| AS-300M | FANUC - S-5, JR55,SR510, S5, KUKA - KR-6, KR-15, PANASONIC - AW-005A, AW-500C, AW-500CL, AW-006A, AW010A, AW-8010,VR-005C, VR-006ALII, VR-006A, VR-006AL, VR-008A |
| AS-400M | ABB - IRB6, IRB140, IRB1400,IRB1500, IRB2000, IRB2400, FANUC - ARCMATE 100, 100i, 120i, 100iB, S-6, MOTOMAN - K6, SK6, SK16, SK20, UP6, UP20, MILLER - MRV-2, MRV-10 OTC – MRV-6, EX-V6, EX-V6L, EX-V16, DR4000, DR4200, DR4400 |
| AS-700 | NACHI – SC06F |

ADAPTOR PLATES – USE WITH MULTICLUTCH

| PART NUMBER | DESCRIPTION |
|-------------|--------------------------------------|
| 501608M | Fanuc - Arcmate Jr. and Sr. (4-40mm) |
| 501884 | 50mm Export |
| 502909M | Fanuc - Arcmate 100, 110 |
| 503191M | Motoman - K6, K10 |
| 503204M | ARC 100 Insulated Delron |