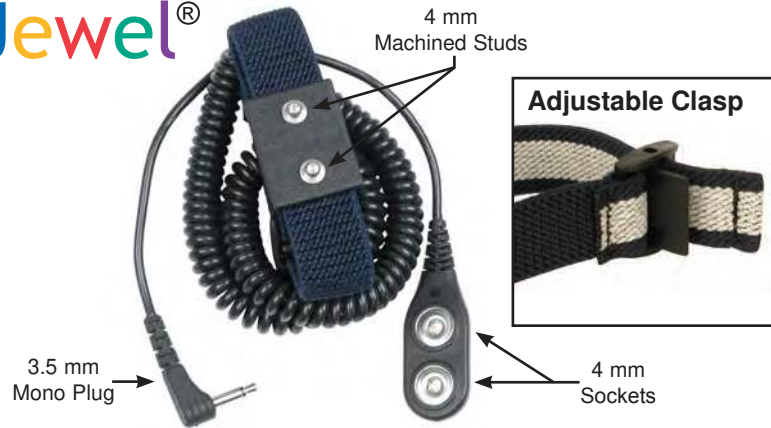


**Jewel**<sup>®</sup>



Dual Wire Wrist Strap provides redundancy; even if one dual wire wrist strap conductor is severed, operator has reliable path-to-ground with other wire.



- Used with resistive loop technology continuous monitor, continuously verifies the proper resistance to ground of the operator
- Comfortable adjustable wrist band made of silver suffused monofilament conductive interior
- 304 stainless steel back plate
- Woven Silveron™ fabric infused with silver monofilament conductive fiber is comfortable and hypo-allergenic
- Patented\* dual wire technology
- Superior warranty - See details of 1 year Limited Warranty <http://www.Desco.com/LimitedJewelWarranty.aspx>
- Superior quality product Made in America at our Chino CA facility
- UL listed

“If any part of the loop should open (become disconnected or have out of limit resistance), the circuit will go into the alarm state” [ref TR20.20], nonetheless, due to the redundancy inherent in the dual wire wrist strap design, the operator will continue to be grounded via the second intact wire.

Per ESD Handbook TR20.20 section 5.3.9.2.2 Dual Conductor Resistance Continuous Monitors, “This type of monitor is used with a two wire (dual conductor) wrist strap. The wrist strap assembly consists of a two-wire ground cord and a wristband that has two isolated halves. When a person is wearing the wrist strap properly, the monitor measures the loop resistance consisting of one wire of the ground cord, one-half of the wristband, the person’s skin, the second half of the wristband, and a second wire in the ground cord. If any part of the loop should open (become disconnected or have out of limit resistance), the circuit will go into the alarm state.

ESD Handbook TR 20.20 paragraph 5.3.2.4.4 Test Frequency “Because wrist straps have a finite life, it is important to develop a test frequency that will guarantee integrity of the system. Typical test programs recommend that wrist straps that are used daily should be tested daily. However, if the products that are being produced are of such value that knowledge of a continuous, reliable ground is needed, and then continuous monitoring should be considered or even required”

Continuous Monitors pay for themselves improving quality, productivity, eliminating wrist strap daily testing and test result logging. Per ESD-S1.1 paragraph 6.1.3 Frequency of Functional Testing “Daily [Wrist Strap] testing may be omitted if constant monitoring is used.”

Improve wrist strap contact with Reztore™ ESD Hand Lotion

\*U.S. Patents 6,052,053 and 6,205,408



Made in America

Unless otherwise noted, tolerance ±10%

**Cleaning**

For proper operation, the wrist strap, especially the wrist band, must be kept clean. All wrist band should be cleaned with a mild detergent on a periodic basis.

Use patented\* Dual Wire Wrist Strap with Desco’s Dual Wire Continuous Monitor, 3M monitors, or other brands which use 3.5 mm mono plug.

Item	Description	Minimum Circumference	Maximum Circumference
<a href="#">19691</a>	ADJ. Wristband only, 4mm male snaps	4.5 in	12 in
<a href="#">09163</a>	ADJ. Wrist Strap, 4mm male snaps, w/ 6' coil cord	4.5 in	12 in
<a href="#">09164</a>	ADJ. Wrist Strap, 4mm male snaps, w/ 12' coil cord	4.5 in	12 in

See drawing [09160](#) for details on the Jewel® coil cords.

Thermoplastic elastomer strain relief molded on. Flex life average >11,700,000 cycles (per ESD S1.1 Bending Life Test, greatly exceeding the 16,000 average cycle requirement). Break load average 30 pounds.

Meets ESD S1.1 breakaway force requirement >1 pound <five pound

**JEWEL<sup>®</sup> ADJUSTABLE ELASTIC, WRIST STRAP, DUAL WIRE**

**DESCO**

DESCO WEST: 3651 WALNUT AVE., CHINO, CA 91710 WEB SITE: Desco.com  
PHONE (909) 627-8178 FAX (909) 627-7449  
DESCO EAST: ONE COLGATE WAY, CANTON, MA 02021-1407  
PHONE (781) 821-8370 FAX (781) 575-0172

**DRAWING NUMBER**  
09163

**DATE:**  
February 2011