

Jewel®



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
- Black ABS plastic cap.
- 300 series stainless steel backplate (0.015" thick). Manufacturing date code is stamped into stainless steel back plate.
- 4mm snaps are machined to precision profile from 300 series stainless steel for a consistent and reliable connection.
- Premium metal expansion band. Inside links are constructed of 300 Series Stainless Steel. Width of links is 0.630".
- .002" polyphenylsulfone sheet is laminated to each link before assembly. Provides >5,000 volt RMS insulation per ASTM D149. Will not flake or peel.
- Patented* dual wire technology
- Superior warranty - See details of 1 year Limited Warranty at <http://www.esdsystems.com/limitedjewelwarranty.aspx>
- Superior quality product Made in America at our Chino CA facility
- UL listed

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

"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 ESD Hand Lotion.

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



Made in America

| ITEM | DESCRIPTION | CIRCUMEFERENCE | | WIDTH |
|-----------------------|---|----------------|---------------|--------|
| | | MIN | MAX | |
| 63535 | Jewel® Dual-Wire Metal Wrist Strap, Onyx, 6' Right Angle Coil Cord | 5.5" (139.7mm) | 9" (228.6mm) | 0.630" |
| 63536 | Jewel® Dual-Wire Metal Wrist Strap, Onyx, 6' Right Angle Coil Cord | 6" (152.4mm) | 11" (279.4mm) | 0.630" |
| 63537 | Jewel® Dual-Wire Metal Wrist Strap, Onyx, 6' Right Angle Coil Cord | 7" (177.8mm) | 12" (304.8mm) | 0.630" |
| 63538 | Jewel® Dual-Wire Metal Wrist Strap, Onyx, 12' Right Angle Coil Cord | 5.5" (139.7mm) | 9" (228.6mm) | 0.630" |
| 63539 | Jewel® Dual-Wire Metal Wrist Strap, Onyx, 12' Right Angle Coil Cord | 6" (152.4mm) | 11" (279.4mm) | 0.630" |
| 63540 | Jewel® Dual-Wire Metal Wrist Strap, Onyx, 12' Right Angle Coil Cord | 7" (177.8mm) | 12" (304.8mm) | 0.630" |
| 63162 | Jewel® Dual-Wire Metal Wristband, Onyx | 5.5" (139.7mm) | 9" (228.6mm) | 0.630" |
| 63160 | Jewel® Dual-Wire Metal Wristband, Onyx | 6" (152.4mm) | 11" (279.4mm) | 0.630" |
| 63158 | Jewel® Dual-Wire Metal Wristband, Onyx | 7" (177.8mm) | 12" (304.8mm) | 0.630" |

See [Drawing 63530](#) for details on 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
Meets ESD S1.1 cuff resistance interior =100 kilohms (1 x 10E2 ohms)
Meets ESD S1.1 cuff resistance exterior =10 megohms (1 x 10E7 ohms)

JEWEL® PREMIUM METAL EXPANSION, WRIST STRAP, DUAL WIRE, 4MM

ESD SYSTEMS.COM
432 NORTHBORO ROAD CENTRAL
MARLBORO, MA 01752 USA
TEL. (508) 485-7390 FAX (508) 480-0257



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