Wiring material for the wiring of moving parts inside devices

ORP-I series

Fixed | Swinging bending | Sliding bending

UL758 Style 11502 105˚C 600 V

These insulated wires feature a special elastomer insulator with proven performance track record in the "ORP Cable Series" and are suitable for the wiring of moving parts inside devices.

Features

- These wires are thinner than cables and allow a smaller bending radius, making them suitable for wiring in confined spaces.
- These wires use proprietary special elastomer insulator for excellent movability and excellent cost performance.
- These wires feature a small diameter while supporting 600 V rated voltage.
- Custom specifications including twisted pair cables, spiral processing and connector installation are also available based on customer requirements.

Specifications

Material/configuration

Conductor	Tin-plated annealed copper twisted-pair cables
Insulator	Special elastomer (Color: Red, Black, Blue, White, Yellow, Green, Yellow/Green with spiral mark)

Usage environment

Application	Fixed and moving parts indoor and inside devices
Operation temperature range	-10 to 105˚C

Applicable standards

UL758 Style 11502 (Rating: 105˚C, 600 V)

Note 1. UL-compliant but no surface printing.

Mobility

Mode	Performance	Test conditions
Swinging bending	1 million times or more	Bending radius R: Approx. 15-fold of outer insulation radius Bending angle: ±90° Load: 4.9 N Bend speed: 40 times per minute Count: one round trip is one count

Note 2. Under Oki test conditions and methods. For details, see page 3.
These values are for reference only and are not guaranteed values.

Line-up

Display of product name

- ORP-I (1) (11502) (2)

(1): Conductor sq. mm (mm^2)
(2): Insulator color symbol Red: R, Black:K, Blue:B, White:W, Gray: S, Green: G, Yellow/Green with spiral mark: Y/G

Construction

sq. mm	AWG size	Conductor configuration piece(s) / piece(s) / mm	Outer diameter of conductor mm	Outer diameter of insulator mm	Conductor resistance Ω /km (20˚C)	Insulator resistance MΩ-km (20˚C)	Withstand voltage V·1 minute interval	Approximate weight kg/km	Minimum bending radius* mm	Permitted electric current** A (30˚C)
0.2	25	40/0.08	0.58	1.00	98 or less	100	AC2000	3	6	6.3
0.3	23	60/0.08	0.75	1.25	66 or less			4	8	8.4
0.5	21	100/0.08	0.92	1.52	40 or less			7	9	12.0
0.75	19	150/0.08	1.13	1.73	26 or less			9	11	15.5
1.25	17	7/36/0.08	1.50	2.20	16 or less			15	13	22.5
2	15	7/57/0.08	1.90	2.60	9.3 or less			22	16	30.5
3.5	12	7/64/0.1	2.60	3.40	5.7 or less			38	21	46.0
5.5	10	7/100/0.1	3.35	4.15	3.6 or less			58	25	63.3

*The minimum bending radius is a recommended value to ensure safe operation.
**The allowable current is a value calculated based on midair single-cable wiring at ambient temperature of 30˚C, not a guaranteed value. When binding electrical wires, calculate the value using the following formula:
Allowable current value when bound (30˚C) = Allowable current value per wire (30˚C) × (the number of bound wires)$^{-0.3623}$