

# KOURIKI cable, the solution to broken wires of FA and robots!

## Features of KOURIKI copper-alloy

KOURIKI, an alloy of oxygen-free copper and some elements (iron, phosphorus, and indium), is provided with excellent electrical conductivity, superior tensile and continuous bending strength. Utilizing KOURIKI copper-alloy for conductor, TATSUTA's unique KOURIKI cable is far superior in durability than other annealed copper or copper-tin cables.

### Characteristics for comparison

	material	tensile strength (kgf/mm <sup>2</sup> )	ratio	electro conductivity (%ACS)
1	annealed-copper	23	1.0	98%
2	tin-copper alloy	34	1.5	60%
3	<b>KOURIKI</b>	<b>52</b>	<b>2.2</b>	<b>80%</b>

### conductor size

AWG	28	26	25	23	21	19	17	15	13
Nominal cross-sectional area of conductor (mm <sup>2</sup> )	0.1	0.15	0.2	0.3	0.5	0.75	1.25	2	3.5
Construction of conductor	20/0.08	30/0.08	40/0.08	60/0.08	3/33/0.08	3/50/0.08	7/33/0.08	7/57/0.08	7/3/33/0.08



## Features of KOURIKI

In tough industrial environments, required continuous, high-speed, and complicated movements of FA or robots, KOURIKI cable shows excellent durability. By combining a variety of materials for insulation and sheath, "Standard" KOURIKI promises waitless delivery. "Ultra-Tough" KOURIKI offers outstanding durability in severe environment. Moreover, we can offer "Custom" KOURIKI to meet client's specific demands.

### KOURIKI line-up

	Type	model name	types of conductors	insulation	sheath	the number of bending test (to breaking all wires)	ratio
Others	—	—	annealed-copper	PVC	PVC	111,870	1.0
Others	—	—	annealed-copper	ETFE	PVC	156,610	1.4
Others	—	—	tin-copper alloy	PVC	PVC	230,725	2.0
KOURIKI	Standard	UL2854 OHFR-PCPV	KOURIKI copper-alloy	PVC	PVC	503,390	4.5
KOURIKI	Ultra-Tough	UL2854 OHFR-PCPTV	KOURIKI copper-alloy	ETFE	PVC	1,051,530	9.4
KOURIKI	Custom	UL2854 OHFR-PCPCV	KOURIKI copper-alloy	XLPE	PVC	559,330	5.0
KOURIKI	Special	PCPTU	KOURIKI copper-alloy	ETFE	polyurethane	2,483,400	22.2

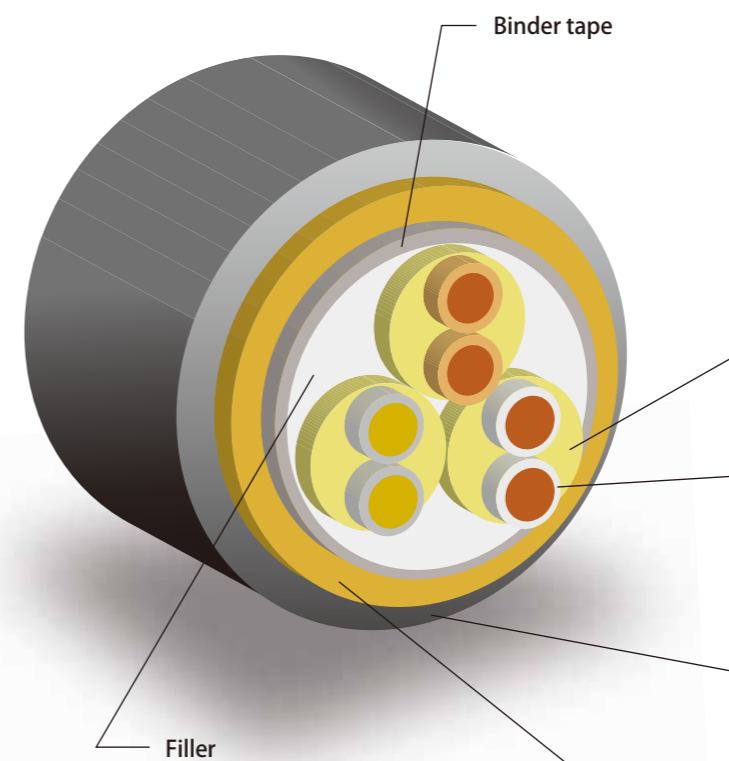
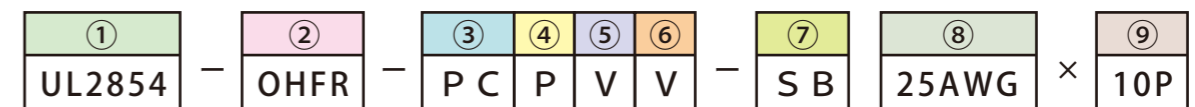
※method of testing: bending the cable continuously from side to side at a 90° angle each  
 ※test sample: 0.2mm<sup>2</sup> X 4pair ※counting by 1 after bending the cable from side to side

## Recommendation

Environment	Type
Lead wires for sensor, FA, moving parts, cable carrier systems	Standard
Tougher environment than above	Ultra-Tough
Severe environment	Special Page
Particular environment or needs for assembly	Custom

## Model name and structure

Ex. Standard UL2854 KOURIKI cable PVC insulated PVC sheath with braided shield 25AWG X 10 pairs



① UL style No.	Rating temperature and voltage	
	UL2854	80°C 30V
	UL2464	80°C 300V
	UL2501	105°C 600V

② Sheath (PVC only)	Model name	特性
	OHR	Oil and Heat resistant
	OHFR	Oil and Heat resistant with low-Friction
	HSR	Heat and Spatter resistant
	O...Oil F...Friction S...Spatter H...Heat R...Resistant	

③ PC	Process Control
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④ Structure of core	no name ... core
	P ... Pair

⑤ Insulation	Model name	materialtype	Type
	V	heatproof PVC	Standard
	T	ETFE (fluorine resin)	Ultra-Tough
	C	XLPE (cross-linked polyethylene)	Custom
Q	flame-retardant and halogen-free cross-linked polyolefin	green product	

⑥ Sheath	Model name	materialtype	Type
	V	PVC	Standard
	U	polyurethane	Custom
	E	polyethylene	Custom
Q	flame-retardant and halogen-free cross-linked polyolefin	green product	

⑦ Shield	Model name	materialtype	Type
	none	none-shield	—
	SB	braided shield	Standard
	SW	served shield	Custom
	SBH	braided shield made by strings of copper foil	Custom
	SWH	served shield made by strings of copper foil	Custom
KS	shielding each pairs	Custom	

⑧ Size of conductor.	Please see the left page
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⑨ numbers of wires C	Model name	
	C	cores
P	pairs	