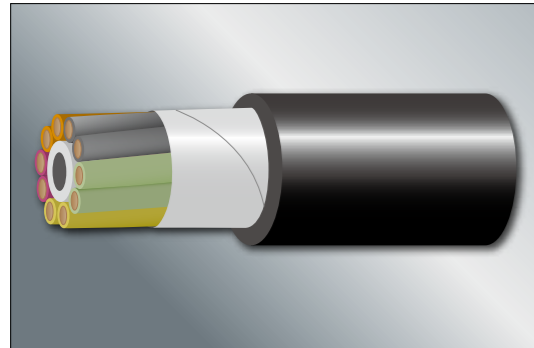


# F-CO-FHV



## Features

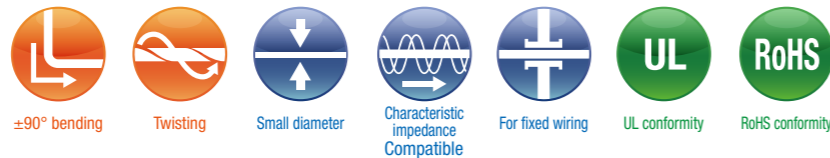
- Composites multiple power supply wires, signal wires, and an air tube into one cable.
- Applicable for both movable and fixed sections.
- Can also be adapted UL standards.

## Use

- Power supply and signal transmission for robots, machine tools, and other equipment

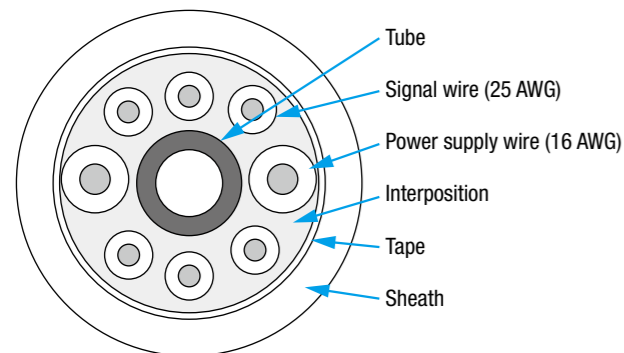
## Characteristics

- Rating temperature: 80°C
- Rating voltage: 300 V



## Cable structure and performance

Case of combining power supply wires (2 of 16 AWG), signal wires (6 of 25 AWG) and an air tube



Example of cable structure

### Example of structural specifications

Item	Unit	Standard value		
Rating	—	300V, 80°C		
Wire type	—	Signal wire	Power supply wire	Tube
No. of wire cores	—	6	2	1
Conductor	AWG size	25	16	—
	Configuration	No./mm	40/0.08	7/38/0.08
	Outer diameter (approx.)	mm	0.58	1.71
Insulator	Standard thickness	mm	0.2	
	Stranded outer diameter (approx.)	mm	0.98	2.27
Tube	Stranded outer diameter (approx.)	mm	—	4.0
Stranded outer diameter (approx.)		mm	8.6	
Finished outer diameter (max.)		mm	10.7	
Allowable bending radius		mm	65	
Max. conductor resistance (at 20°C)		Ω/km	105	16.1
Withstand voltage		—	To withstand 2,000 VAC for 1 min	

### Advantages of composite cable

- Connectors can be integrated into a single piece!
- Space for wiring can be saved!
- Total cable weight can be reduced!
- Entanglement of cables during operation is avoided!

# RA-CO-FHV



## Features

- Multiple cables or air tubes having different ratings are fused to become flat.
- Adaptable for UL standards and specifications of low dust and abrasion resistance.

## Use

- Wiring of robots and machine tools where U-shape bending is applied

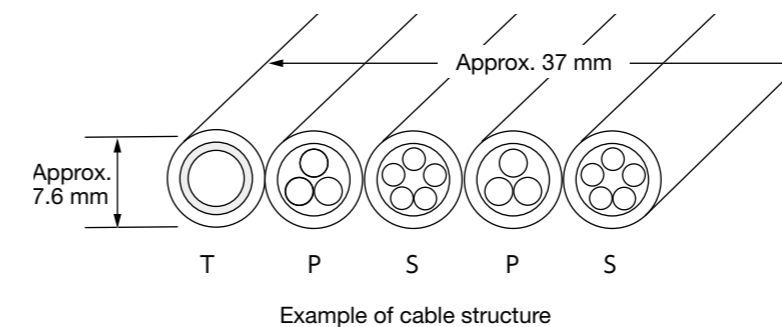
## Characteristics

- Rating temperature: 80°C
- Rating voltage: 300 V



## Cable structure and performance

Case of fusing power supply cables (2 of 3-core 16 AWG), signal transmission cables (2 of 5-pair 25 AWG), and an air tube



T: Air tube  
P: Power supply cable  
(Example: UL2570-SX (FA) 3 × 16 AWG)  
S: Signal transmission cable  
(Example: UL2464-SX(FA) 5P × 25 AWG)

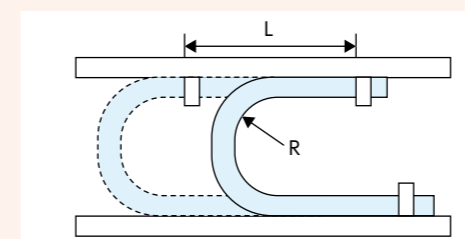
Example of cable structure

### Manufacturing conditions

- Max. number of fusible pieces (total number of pieces including cables and tubes): 20 pcs. (as a guide)
- Max. fusible width: Approx. 120 mm
- Max. outer diameter of each cable to be fused: 14 mm
- Air tube material: Soft nylon that we designate (as certain polymers like polyurethane are not fusible)

### Bending characteristics of thermally fused flat cable

⟨U-shape bending test data⟩



Cleared 10 million times  
No fault with conductor and shield  
No fault such as peeling off in between respective units

- \*Test conditions
- Bending radius R = 50 mm
  - Movement stroke L = Approx. 300 mm