

# ÖLFLEX® SERVO FD 798 CP

## High-acceleration continuous flex encoder & resolver cable

LAPP KABEL STUTTGART ÖLFLEX® SERVO FD 798 CP



ÖLFLEX® SERVO FD 798 CP is specially designed, manufactured, and tested by LAPP for usage in modern high-acceleration cable chain applications as well as over long travel lengths. It replaces four ÖLFLEX® SERVO FD encoder/resolver cables: 760 CP/CP DESINA & 770 CP/CP DESINA. For bending cycles and operation parameters, see [www.lappusa.com/cf-rating](http://www.lappusa.com/cf-rating)

### Recommended applications

Connecting cable between servo controller and encoder/resolver; connecting cable between servo controller and speed generators, cable chains, and machine parts; transfer lines and production lines

### Approvals



Cable attributes		page 648	
OIL	OR-05	FLAME	FR-02
MOTION	CF-04A	MECH.	MP-05

Complete the installation	
	EPIC® SIGNAL M23 page 446

ÖLFLEX® CONNECT solution	
	ÖLFLEX® CONNECT SERVO page 607

### Construction

**Conductors:** extra fine tinned copper

**Pairs:** twisted and bundled; shielded (see chart)

**Insulation:** polypropylene

**Shielding:** tinned copper braid (85% coverage)

**Jacket:** polyurethane; green

### Application advantage

- High dynamic performance in cable chains:
  - Acceleration up to 50 m/s<sup>2</sup>
  - Travel speed up to 5 m/s
  - Travel lengths up to 100 m
- Abrasion-, cut-, and oil-resistant; abrasion-resistant, halogen-free, flame retardant, flexes at low temperatures

### Technical data

#### Minimum bend radius:

- for continuous flexing: 7.5 x cable diameter
- for installation: 4 x cable diameter

#### Temperature range:

- for stationary use: -50°C to +80°C
- for continuous flexing: -40°C to +80°C

#### Nominal voltage:

30V

#### Test voltage:

- conductor/conductor: 1500V
- conductor/shield: 750V

#### Conductor stranding:

extra fine wire

#### Color code:

see following color chart

#### Approvals:

UL: AWM 20236  
 Attributes: VW-1  
 Canada: CSA AWM I/II A/B FT1  
 Additional: RoHS  
 MUD acc. to IEC 61892-4 Annex D

Part number	Conductor description			Nominal outer diameter		Copper weight lbs/mft	Approx. weight lbs/mft	EPIC® SIGNAL M23 # of contacts
	power conductors	+	control pairs	in	mm			
<b>Power conductors + control pairs</b>								
0036910	20 AWG/4c	+	22 AWG/4pr	0.350	8.9	53	84	12
0036911	2 x (20 AWG/1c)	+	3 x (26 AWG/1pr)	0.350	8.9	47	81	8+1
0036912	26 AWG/4c	+	3 x (26 AWG/1pr) + 20 AWG/1pr	0.346	8.8	46	74	12
0036913	26 AWG/4c + 24 AWG/4c	+	3 x (26 AWG/1pr) + 20 AWG/1pr	0.370	9.4	54	87	16
0036914	20 AWG/9c		–	0.346	8.8	48	74	9
0036915	18 AWG/2c	+	24 AWG/4pr	0.346	8.8	42	73	12
0036916	20 AWG/2c	+	24 AWG/6pr	0.406	10.3	45	81	16
0036917	26 AWG/10c	+	20 AWG/1pr	0.303	7.7	28	55	12
0036918	26 AWG/10c + 20 AWG/4c		–	0.319	8.1	36	66	16
0036920	20 AWG/4c	+	26 AWG/4pr	0.323	8.2	34	64	12
0036921	–		24 AWG/4pr	0.299	7.6	26	50	9
0036923	–		26 AWG/8pr	0.307	7.8	34	57	16
0036924	–		26 AWG/4pr	0.252	6.4	20	35	8+1
0036926	24 AWG/12c		–	0.272	6.9	30	49	12
0036927	20 AWG/2c	+	24 AWG/4pr	0.335	8.5	42	66	12
0036928	20 AWG/4c + (26 AWG/4c)	+	26 AWG/2pr + 2 x (26 AWG/1pr)	0.358	9.1	53	91	16
0036929	20 AWG/2c	+	2 x (24 AWG/1pr)	0.343	8.7	31	66	6
0036930	20 AWG/2c	+	24 AWG/2pr	0.287	7.3	26	48	6

( ) = shielded

Recommended SKINTOP® assumes minimal OD variance. Additional configurations are available; please see our SKINTOP® section. If not otherwise specified, all values relating to the product are nominal values. Photographs are not to scale and are not true representations of the products in question.

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color code chart

Part number	Power conductors		Control pairs	
	Size	Color code & shielding	Size	Color code & shielding
0036910	20 AWG 4c	blue/white • black/white red/white • yellow/white	22 AWG 4pr	black & brown • red & orange yellow & green • blue & violet
0036911	20 AWG 2c	white • brown <u>indiv. shield</u> : wrapped with tinned copper wires <u>covering</u> : polyolefin	26 AWG 3pr	yellow & green • red & blue • gray & pink <u>indiv. pair shield</u> : drain wire of tinned copper wire strands <u>overall shield</u> : tinned copper wires <u>covering</u> : polyolefin
0036912	26 AWG 4c	4-conductor bundle: gray • blue • white/yellow • white/black	26 AWG 3pr	yellow & green • black & brown • red & orange <u>pair shield</u> : drain wire of tinned copper wire strands, wrapped with tinned copper wires
			20 AWG 1pr	brown/red & brown/blue
0036913	26 AWG 4c	4-conductor bundle: gray • blue • white/yellow • white/black	26 AWG 3pr	yellow & green • black & brown • red & orange <u>pair shield</u> : drain wire of tinned copper wire strands, wrapped with tinned copper wires
	24 AWG 4c	4-conductor bundle: brown/yellow • brown/gray • green/black • green/red	20 AWG 1pr	brown/red & brown/blue
0036914*	20 AWG 9c	blue • white • red • pink • green yellow • brown • black • gray		—
0036915*	18 AWG 2c	white • brown	24 AWG 4pr	brown & green • gray & pink blue & violet • red & black
0036916*	20 AWG 2c	white • brown	24 AWG 6pr	white & brown • green & yellow • gray & pink blue & red • black & violet • gray/pink & red/blue
0036917	26 AWG 10c	white • brown • green • yellow • gray pink • blue • red • black • violet	20 AWG 1pr	white & brown
0036918	26 AWG 10c	white • brown • green • yellow • gray pink • blue • red • black • violet		—
	20 AWG 4c	white • brown • blue • black		
0036920	20 AWG 4c	white • blue • white/green • brown/green	26 AWG 4pr	red & black • brown & green yellow & violet • gray & pink
0036921		—	24 AWG 4pr	white & brown • green & yellow gray & pink • blue & red
0036923		—	26 AWG 8pr	white/yellow & white/green • white/red & white/orange white/black & white/brown • gray & white • blue & violet yellow & green • red & orange • black & brown
0036924		—	26 AWG 4pr	black & brown • red & orange yellow & green • blue & violet
0036926	26 AWG 12c	black • brown • red • orange • yellow • green • blue • violet • gray • white • white/black • white/brown		—
0036927*	20 AWG 2c	white • brown	24 AWG 4pr	brown & green • gray & pink blue & violet • red & black
0036928	26 AWG 4c	4-conductor bundle: white • brown • green • yellow <u>shield</u> : wrapped with tinned copper wires	26 AWG 2pr	blue & red • gray & pink
	20 AWG 4c	white • brown • green • yellow	26 AWG 2pr	white & brown • green & yellow <u>pair shield</u> : wrapped with tinned copper wires
0036929*	20 AWG 2c	pink • gray	24 AWG 2pr	white & brown • green & yellow <u>pair shield</u> : aluminum-laminated foil, wrapped with tinned copper wires
0036930*	20 AWG 2c	white • brown	24 AWG 2pr	red & black • gray & pink

\* Contains tinned copper drain wire under overall shield.  
All designs have an overall tinned copper braid shield (85% coverage)