



DATA SHEET	70388729-70388739
LAPPKABEL SERVO Cables LK – FNC Encoder- & Resolver Cables	Valid up from : 27.02.2009

Application

LAPP LK FNC are Encoder-, Resolver-, Bus- and Power cables, suitable for FANUC* Power Drive Systems. The highly flexible Versions (P/N 70388729 – 703887239) are suitable in continuous flexing (i.e. Power Chains) at ordinary duty, as well as for static usage. Intended Usage Profile: Interconnection between Frequency, Converters and Servo Drives. Typical Fields of Applications: Industrial Machines, such as Machine Tools, Production Plants, Handling Systems, Body Press, Transfer Lines. USA: According NFPA 79 Ed. 2007 accepted only, when part of a listed assembly. Outside of the USA, these cables can be used in dry wet and damp locations, also into the open under respect of its recommended temperature ratings. All cables are increased resistant against oils and coolants, CFC- free, free of lacquer destructive substances. Exclusive of P/N 7038 8736 & 7038 8738, all others are made of halogen-free materials. Usage of these cables inside moving cable carriers respectively in motor drum guidance or under strain of more than 15N/mm² is not allowed.

Technical Datas:

Conductor	P/N: 7038 8729 - 7038 8737: Tinned copper, extra fine wire standing, Cl. 6 P/N: 7038 8738 – 7038 8739: Bare copper, extra fine wire stranding, Cl. 6
Insulation:	P/N 7038 8729 - 7038 8735: Polyolefine P/N 7038 8736 - 7038 8737: Polyolefine P/N 7038 8738: PVC, P/N 7038 8739: TPE-E (PTE)
Cond. ident code:	see further information of this data sheet.
Make-up:	Conductors and Pairs twisted together in short lay lengths to form cables core.
Screen	Overall screen: Braid made of tinned copper wires, coverage: ≥ 80%
Outer sheath:	P/N 7038 8729 - 7038 8735, P/N 7038 8737 - 7038 8739: PUR oil resistant, halogen free, flame retardant, UL/CSA: FT 1 P/N 7038 8736: PVC, oil resistant flame retardant
Rated Voltage:	7038 8729 – 7038 8735 Signal Cables: 300V (UL/CSA) 30V (IEC) 7038 8736 – 7038 8737 Bus Cables: 30V (UL) 7038 8738 – 7038 8739 Control Cables: 300V (UL/CSA), 300/500V (IEC)
Test voltage	1500 V eff. 1min
Temperature range	P/N 70388722 - 70388723: Operating temp: -20°C up to + 60°C Static usage/storage: -50°C up to + 80°C
Minimum bending radius	Flexing use: 10 x cables outer diameter, at temperatures < 70° C, Static use: 5 x cables outer diameter.
Oil resistance	Acc. IEC 60811-2-1, UL 1581



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Approvals

UL AWM,
CSA AWM I/II A/B, exclusive P/Ns 7038 8736 + 7038 8737

Additional data P/N 7038 8729 1x2x0,18+5x0,5

1x2x0,18mm² Cond. Ident code: brown+white
5x0,5mm² Cond. Ident code: blue, pink, green, yellow, grey
Overall screen Tinned copper braid, coverage ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ
Outer Sheath PUR, oil resistant. Green (RAL 6018)
Outer Diameter: nom: 7.6mm
Minimum Bending Radius: 80mm

Servo Cable Imprint Legend:

LAPP KABEL STUTTGART SERVO LK FNC DESINA 5x0,5+1x2x0,18 --- E63634  AWM 80°C 300V –
214533M CSA AWM I/II A/B 75°C 300V FT1 ROHS Art, Nr. 70388729


Electrical Characteristics:

0,18mm² Pair: Capacitance Cond/Cond: nom. 60 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8730 2x2x0,18+5x0,5

2x2x0,18mm² Cond. Ident code: Pair 1 & 2: brown+white – violet+black
5x0,5mm² Cond. Ident code: blue, pink, green, yellow, grey
Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ
Outer jacket PUR – oil resistant: Green (RAL 6018)
Outer diameter: nom. 7.7 mm
Minimum Bending Radius: 80mm

Cables imprint legend

LAPP KABEL STUTTGART SERVO LK FNC DESINA 5x0,5+2x2x0,18 ---- E63634  AWM 80°C 300V –
214533M CSA AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388730

Electrical Characteristics:

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0,18mm² Pairs: Capacitance Cond/Cond: nom. 60 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8731 4x2x0,22+2x0,5

4x2x0,22mm² Cond. Ident code:
1. Pair: brown/black+ brown/red
2. Pair: yellow/black + yellow /red
3. Pair: green/black + green/red
4. Pair: grey/black + gray/red

2x0,5mm² Cond. Ident code: brown, yellow


Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ

Outer jacket PUR – oil resistant: Green (RAL 6018)

Outer diameter: nom. 7.6 mm

Minimum Bending Radius: 80mm

Cables imprint legend

LAPP KABEL STUTTGART SERVO LK FNC DESINA 2x0.5+4x2x0,22 ---- E63634  AWM 80°C 300V –
214533M CSA AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388731

Electrical Characteristics:

0,22mm² Pairs: Capacitance Cond/Cond: nom. 70 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8732 3x2x0,18+6x0,5

3x2x0,18mm² Cond. Ident code:
1. Pair: red + white
2. Pair: red + black
3. Pair: black + white

6x0,5mm² Cond. Ident code:
3 x red, numbered with 4, 5, 6,
3 x black, numbered with 1, 2, 3

Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ

Outer jacket PUR – oil resistant: Green (RAL 6018)




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Outer diameter: nom. 8.7 mm

Minimum Bending Radius: 90mm

Cables imprint legend

LAPP KABEL STUTTGART SERVO LK FNC DESINA 6x0.5+3x2x0,18 ---- E63634  AWM 80°C 300V – 214533M CSA AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388732

Electrical Characteristics:

0,18mm² Pairs: Capacitance Cond/Cond: nom. 60 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8733 3x2x0,18+6x1,0

3x2x0,18mm² Cond. Ident code:
4. Pair: red + white
5. Pair: red + black
6. Pair: black + white

6x0,5mm² Cond. Ident code:
3 x red, numbered with 4, 5, 6,
3 x black, numbered with 1, 2, 3


Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ

Outer jacket PUR – oil resistant: Green (RAL 6018)

Outer diameter: nom. 8.7 mm

Minimum Bending Radius: 90mm

Cables imprint legend

LAPP KABEL STUTTGART SERVO LK FNC DESINA 6x1+3x2x0,18 ---- E63634  AWM 80°C 300V – 214533M CSA AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388733

Electrical Characteristics:

0,18mm² Pairs: Capacitance Cond/Cond: nom. 60 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8734 5x2x0,18+6x0,5

5x2x0,18mm² Cond. Ident code:
1. Pair: black + orange
2. Pair: black + grey
3. Pair: white + yellow

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- 4. Pair: white + grey
- 5. Pair: white + brown

6x0,5mm²

Cond. Ident code:
3 x red, numbered with 4, 5, 6,
3 x black, numbered with 1, 2, 3


Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ

Outer jacket PUR – oil resistant: Green (RAL 6018)

Outer diameter: nom. 8.7 mm

Minimum Bending Radius: 90mm

Cables imprint legend

LAPP KABEL STUTTGART SERVO LK FNC DESINA 6x0,5+5x2x0,18 ---- E63634  AWM 80°C 300V –
214533M CSA AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388734

Electrical Characteristics:

0,18mm² Pairs: Capacitance Cond/Cond: nom. 60 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8735 10x2x0,18

10x2x0,18mm²

Cond. Ident code:
1. Pair: white + yellow
2. Pair: white + green
3. Pair: white + brown
4. Pair: white + orange
5. Pair: white + grey
6. Pair: black + yellow
7. Pair: black + green
8. Pair: black + brown
9. Pair: black + orange
10. Pair: black + grey

Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ

Outer jacket PUR – oil resistant: Green (RAL 6018)

Outer diameter: nom. 9.0 mm

Minimum Bending Radius: 80mm

Cables imprint legend



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LAPP KABEL STUTTGART SERVO LK FNC DESINA 10x2x0,18 ---- E63634 AWM 80°C 300V – 214533M
CSA AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388735

Electrical Characteristics:

0,18mm² Pairs: Capacitance Cond/Cond: nom. 60 pF/m
Characteristic Impedance: nom. 100 Ohm at 1 MHz

Additional data of P/N : 7038 8736 + 7038 8737 10x2xAWG28 (0,08mm²)

10x2xAWG28(0,08mm²) Cond. Ident code:
1. Pair: white + blue
2. Pair: white + yellow
3. Pair: white + green
4. Pair: white + red
5. Pair: white + violet
6. Pair: brown + blue
7. Pair: brown + yellow
8. Pair: brown + green
9. Pair: brown + red
10. Pair: brown + violet

Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ

Outer jacket P/N: 7038 8736: PVC – oil resistant: violet (RAL 4001)
P/N: 7038 8737: PUR –oil resistant: violet (RAL 4001)

Outer diameter: nom. 6.0 mm

Minimum Bending Radius: 80mm

Cables imprint legend

P/N 70388736:
LAPP KABEL STUTTGART SERVO LK FNC DESINA 10x2xAWG28 C ---- E63634 AWM 80°C 30V – ROHS
Art. Nr. 70388736

P/N 70383837:
LAPP KABEL STUTTGART SERVO LK FNC DESINA 10x2xAWG28 C ---- E63634 AWM 80°C 30V – ROHS
Art. Nr. 70388737

Electrical Characteristics:

AWG28 (0,08mm²) Pairs: Capacitance Cond/Cond: nom. 65 pF/m
Characteristic Impedance: nom. 90 Ohm at 1 MHz

Additional data of P/N : 7038 8738 – 7038 8739 3G0,75

0,75mm² Cond. Ident code:
2 Cond : black with numbers 1, 2,
1 Protective cond: gnye

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Insulation: P/N 7038 8738: PVC
P/N 7038 8739: TPE-E (PET)

Overall- screening: Braid, made of tinned copper wires. Coverage: ≥ 80%
Stranded drain wire under braid, 24 x 0,1mmØ


Outer jacket PUR – oil resistant, Orange (RAL 2003)

Outer diameter: nom. 6.2 mm


Minimum Bending Radius: 70mm

Cables imprint legend

P/N 7038 8738:

LAPP KABEL STUTTGART SERVO LK FNC DESINA 3G0,75 ---- E63634  AWM 80°C 300V – 214533M CSA
AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388738

P/N: 7038 8739:

LAPP KABEL STUTTGART SERVO LK FNC DESINA 3G0,75 ---- E63634  AWM 80°C 300V – 214533M CSA
AWM I/II A/B 75°C 300V FT1 ROHS Art. Nr. 70388739

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