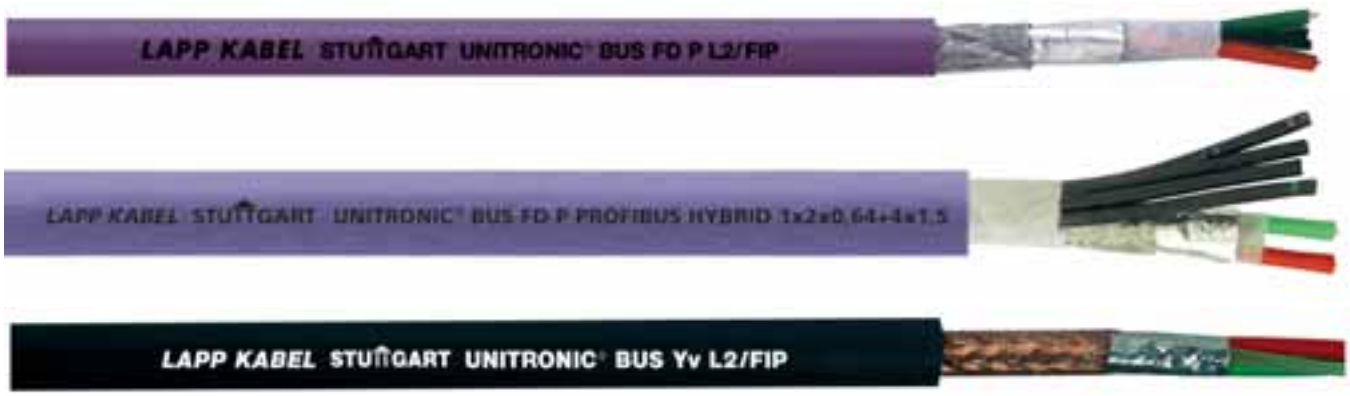
UNITRONIC® BUS FD P L2/FIP + Yv /YY L2/FIP

For highly flexible application resp. outdoor use/direct burial, UV resistant

PROFIBUS-DP/
FMS + FIP
150 Ohm +/- 15



Note
According to DIN 19245 and EN 50170 e.g. for SIEMENS SIMATIC® NET, also suited for FIP (Factory Instrumentation Protocol).
Technical data: see overview UNITRONIC® BUS cables.
The stated bitrates allow the following cable lenghts (max.) of one bus segment (Type A cable):

PROFIBUS-DP
(SIMATIC® NET)
9.6 kBit/s = max. 1200 m
19.2 kBit/s = max. 1200 m
93,75 kBit/s = max. 1200 m
187.5 kBit/s = max. 1000 m
500 kBit/s = max. 400 m
1,5 MBit/s = max. 200 m
12,0 MBit/s = max. 100 m

FIP
1,0 MBit/s = max. 200 m
2,5 MBit/s = max. 200 m

Cables can be used for PROFIBUS-DP as well as PROFIBUS-FMS and FIP.
Characteristic impedance 150 Ohm +/- 15

Lapp Kabel is member of the PROFIBUS Nutzerorganisation (PNO), i.e. PROFIBUS User Organisation

Cable Make-up
Cables in table below show different cable designs.
Details: see Data Sheets.

Explanation of abbreviations and terms:
FD: for power chains and frequently moved machine parts (not for robot application!)
P: for Polyurethane outer sheath
COMBI: for data transmission and power supply
TORSION: for torsional stress, e. g. a robot application
FESTOON: for cable trolley (festoon)
FD P HYBRID: highly flexible, Polyurethane outer sheath, 1 pair data transmission, 4 cores for power supply
YY: double PVC outer sheath
Yv: enhanced PVC outer sheath
BURIAL: for outdoor use/black outer sheath/UV resistant

Technical Data

- Minimum bending radius for please see Data Sheet
- Temperature range: please see Data Sheet
- Conductor resistance: please see Data Sheet
- Mutual capacitance: (800 Hz): max. 30 nF/km
- Characteristic Impedance: 150 +/- 15 Ohm
- Peak working voltage: (not for power purpose) 250 V
- Test voltage: conductor/conductor: 1500 V

Part number	Type	No. of pairs and mm² per conductor	Approx. outside diameter	Copper weight kg/km	Approx. weight kg/km
	for highly flexible application (power chains etc.) - Conventional cable design				
2170 222	UNITRONIC® BUS FD P L2/FIP	1 x 2 x 0.64 Ø	max. 8,0	30,1	64,0
2170 227	UNITRONIC® BUS FD P COMBI L2/FIP	1 x 2 x 0.64 Ø + 3 x 1.0 mm²	max. 10.1	49,0	93,0
2170 332	UNITRONIC® BUS L2/FIP Torsion UL/CSA (CMX)	1 x 2 x 0.8 Ø	max. 8.0	30,1	66,0
2170 331	UNITRONIC® BUS L2/FIP Festoon UL/CSA (CMG)	1 x 2 x 0.64 Ø	max. 8.0	30,1	60,0
2170 495	UNITRONIC® FD P PROFIBUS HYBRID	1 x 2 x 0.64 Ø + 4 x 1.5 mm²	max. 11.0	89,0	148,0
2170 875	UNITRONIC® FD P PROFIBUS HYBRID UL/CSA (CMG)	1 x 2 x 0.64 Ø + 4 x 1.5 mm²	max. 11.0	89,0	155,0
	for highly flexible application (power chains etc.) - "Fast Connect" cable design				
2170 322	UNITRONIC® BUS FD P L2/FIP FC UL/CSA (CMX)	1 x 2 x 0.64 Ø	max. 8.0	30,1	72,0
	for outdoor use / direct burial - UV resistant - Conventional cable design				
2170 223	UNITRONIC® BUS Yv L2/FIP	1 x 2 x 0.64 Ø	approx. 10.0	30,1	87,0
2170 236	UNITRONIC® BUS YY L2/FIP	1 x 2 x 0.64 Ø	approx. 10.0	30,1	87,0
	for outdoor use / direct burial - UV resistant - "Fast Connect" cable design				
2170 323	UNITRONIC® BUS L2/FIP BURIAL FC	1 x 2 x 0.64 Ø	approx. 10.8	30,1	115,0

No cutting charge for standard stock units (100, 500, 1000 m).
Please state desired Cable Packing Unit (e.g. 1 x 500m drum or 5 x 100m coils).
Coils < 30 kg, beyond automatically drums.
Copper basis: 150,- Euro/100 kg

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