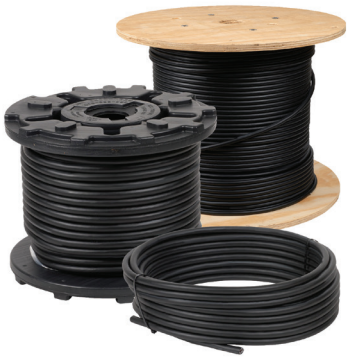
LAPP OLFLEX® 1XL VFD Cable



Variable-frequency drives (VFDs) control the speed and torque of AC motors by varying the frequency of the voltage to the motor; however, the VFD does not send a pure sine-wave frequency to the motor. More accurately, VFDs use a series of voltage pulses that vary in frequency — a technique called pulse-width modulation (PWM).

While PWM is an excellent way to control a motor, it creates several issues that can affect the motor's life and power quality, as well as create Electromagnetic Interference (EMI) and reduce the life of the cable.

By using a cable designed for use with VFDs, it is possible to limit the effect of high frequencies on the surrounding equipment and possibly prevent costly machine downtime.

The LAPP ÖLFLEX® VFD 1XL is a robust oil- and UV-resistant shielded VFD cable featuring XLPE insulation for enhanced electrical properties and problem-free performance where precision control is critical.

Features

- Cross-linked Polyethylene (XLPE) conductor insulation
- Class K, flexible stranded tinned copper conductors
- Green/yellow ground conductor with XLPE insulation
- Triple layer foil tape with 100% coverage
- 85% coverage tinned copper braid shield
- Tinned copper drain wire
- Black Thermoplastic Elastomer (TPE) jacket
- TC-ER rating for installation without conduit
- Designed for basic continuous flexing and cable track applications
  - Distance: chain length up to 15ft
- Resistant to a wide range of disinfecting solutions used in the food, beverage, chemical and related industries, according to the ECOLAB® PM 40-1 test procedure
- Cut to length in 1-foot increments
- Minimum cut lengths as low as 10 feet
- Made in USA

Click on the above thumbnail or go to https://www.automationdirect.com/VID-WD-0016 for a short introduction on our cut to length cable

Please Note: Our prices on VFD Cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

VFD Cable Specifications

Conductors Gauge & Stranding	16–6 AWG tinned copper fine wire, Class K	***Minimum Bend Radius***	Installation: 7.5x cable diameter Continuous flexing: 15x cable diameter***
Voltage Rating	UL TC: 600V UL Flexible Motor Supply: 1000V UL/CSA AWM: 1000V		
Jacket Material	Thermoplastic Elastomer (TPE)	***Applicable Standards***	UL 1277 – TC-ER UL 2277 – Flexible Motor Supply Cable UL 758 – AWM 22022 UL 44 – Meets XHHW-2 performance requirements CF-01 motion-rated: UL verified ID A522492 NFPA 79 NEC Article 501 – Class 1 Division 2 ECOLAB PM 40-1 RoHS II
Jacket Color	Black		
Conductor Insulation	Cross linked polyethylene (XLPE)		
Conductor Colors	Black with white numbers and green/yellow ground		
Shielding	Barrier tape; triple layer foil tape (100% coverage); tinned copper braid (85% coverage); tinned copper drain wire		
Temperature Range	UL/CSA: -25 to +90 °C [-13 to +194 °F] For stationary use: -40 to +90 °C [-40 to +194 °F] For flexible use: -25 to +90 °C [-13 to +194 °F]	***Approvals***	UL (E171371) c(UL) CIC FT4 cRU AWM II A/B FT4 CE
Life Cycle Range	1–2 million cycles		
Oil Resistance	Oil Res I & II	***Sample Print Legend***	LAPP KABEL STUTTGART ÖLFLEX® VFD 1XL ***AWG (MM²)/C SHIELDED (UL) TC-ER 90C WET or DRY 600V SUN RES OIL RES II DIR BUR E171371 or FLEXIBLE MOTOR SUPPLY CABLE 1000V or c(UL) CONTROL CIC 150V XLPE FT4 --- cRU AWM II A/B 90C 1000V FT4 CE TPE
Sunlight Resistance	Yes		
Direct Burial	Yes		

*** See web store for maximum cut lengths**
**** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com**
***** Continuous Flex Test Method Verified (UL Verified ID A522492)**

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VFD 4-Conductor Cable Selection												
Part Number	*Number of Conductors (includes ground)**	*AWG*	*Strand*	*Conductor Insulation Thickness (in)*	*Jacket Wall Thickness (in)*	*Nom. O.D. (in ±10%)*	*Minimum Installed Bend Radius (in)***	*Cond. DC Resistance, Nominal Ω/MFT @ 20 °C†*	*Braid DC Resistance, Nominal Ω/MFT @ 20 °C†*	*Minimum Cut Length (ft)****	*Approx. Weight (lb/ft)*	*Price per foot*
												
L701700-1	4	16	26/30	0.021	0.047	0.374	2.81	4.60	2.03	20	0.108	$4.02
L701701-1	4	14	41/30	0.021	0.047	0.410	3.08	2.90	1.82	20	0.137	$4.77
L701702-1	4	12	65/30	0.021	0.047	0.464	3.48	1.85	1.52	20	0.188	$5.70
L701703-1	4	10	105/30	0.021	0.047	0.504	3.78	1.15	1.35	20	0.268	$8.79
L701704-1	4	8	168/30	0.031	0.063	0.706	5.30	0.72	2.54	20	0.448	$15.17
L701705-1	4	6	266/30	0.041	0.083	0.915	6.86	0.46	1.42	10	0.687	$20.72

*** Separate tinned copper drain wire included**
**** For flexing operations, minimum bend radius is 15x cable diameter**
***** See web store for maximum cut lengths**
† Nominal estimates based on calculation

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