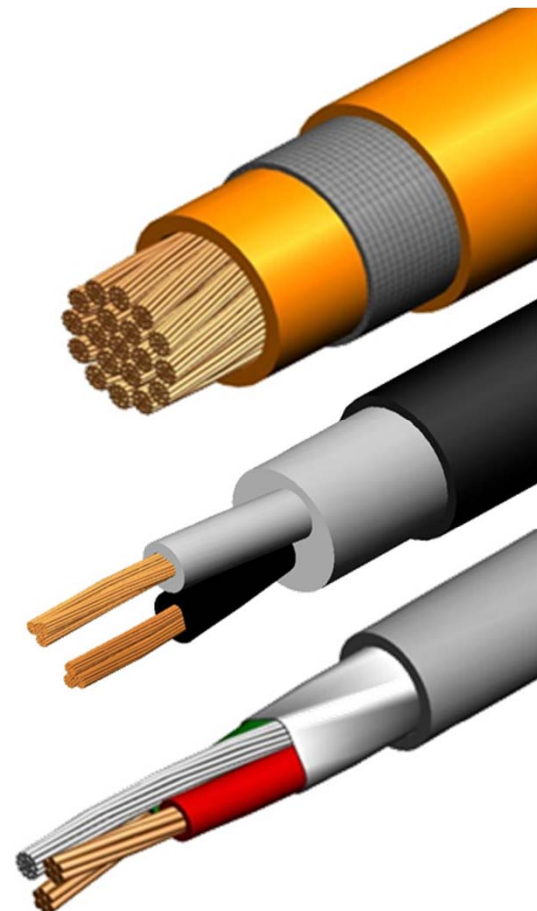
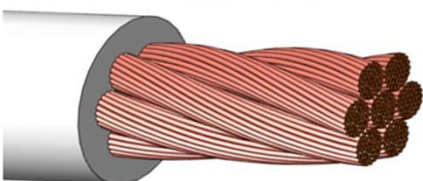
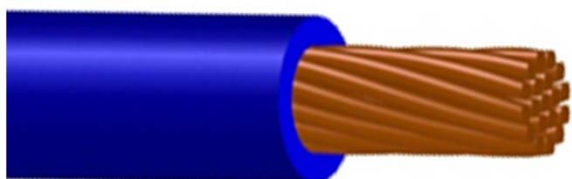


Automotive Wire and Cable Products

- Primary Wires:
ISO: *Classes B - H*
JASO: *AEX, AESSX, AVX, AVSSX*
SAE: *TXL, GXL, STX*
- Engine Harness Wire:
AutoRad®
- Transmission Wire:
Silicone & Non-Silicone Blocked
- Sensor Cables:
ABS, Crank Sensor, Transmission
- Fuel Tank Wire
- Active/Passive Sensor Cables
- Hybrid Electric Vehicle Cables
FlexradXF®
- Air Bag Wire
- Battery Cable
- Shielded and Blocked Wires
- Databus- J1939

Jacket & Insulation Materials

Material	Temperature Rating
PUR	(85°C up to 125°C)
XLPU	(85°C up to 150°C)
XLPVC	(100°C up to 115°C)
XLPE	(120°C up to 150°C)
XLPO	(120°C up to 150°C)
XLFE	(150°C up to 200°C)
XLETFE	(150°C up to 200°C)



Wire Type	Standard	Judd Specification	Temperature Ratings	Conductor Range	Insulation Type	Application
TXL	SAE J1128	JW1427	135°C	0.22mm ² - 8.00mm ²	HFXLPO	Engine Harness
		JW573	135°C		XLPE: G12	Gas Tank Wire
		JW1067	150°C		XLFE: J5 & J7	Transmission Wire
		JW1072	200°C		XLFE: R5	
AVSSX	JASO D611	JW1052	105°C	0.30mm ² - 2.00mm ²	XLPVC	Passenger Compartment
AVX		JW1198				0.50mm ² - 8.00mm ²
AESSX		JW881	125°C	0.30mm ² - 2.00mm ²	XLPE	Engine Harness
AEX		JW1151				0.22mm ² - 8.00mm ²
Thin-Wall 60V (FLR)	ISO 6722	JW1202	105°C T2	0.13mm ² - 6.0mm ²	XLPVC	Passenger Compartment
		JW1223	125°C T3		HFXLPO	Engine Harness
		JW1109	150°C T4		XLPE	Engine Harness
		JW1669	200°C T6		XLFE	Engine Harness Transmission Wire
		JW1193	225°C T7		XLFP	Oxygen Sensor
		JW1657	125°C T3	8.00mm ² - 120.0mm ²	XLPO	Battery Cable
		JW1658	150°C T4		XLFE	
		JW1659	200°C T6			
Thin-Wall 600V (FLR)	ISO 6722	JW1660	125°C T3	2.00mm ² - 120.0mm ²	XLPO	HV Battery Cable
		JW1608	150°C T4		XLFE	
		JW1619	200°C T6		XLPO	Shielded HV Battery Cable
		JW1663	125°C T3		XLFE	
		JW1606	150°C T4		XLPO	
		JW1435	200°C T6		XLFE	

Engine Harness Wire

Product Characteristics

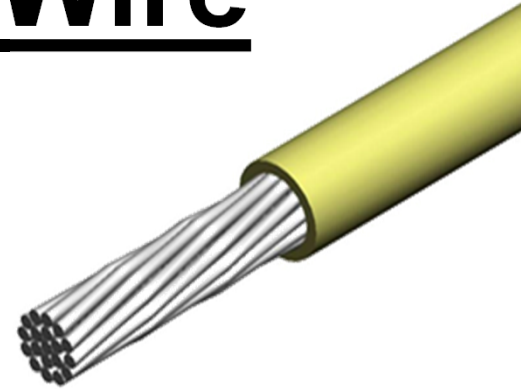
- Halogen-free insulation types
- Deca Bromine-free insulation types
- High abrasion resistant properties
- Excellent chemical resistance
- Multiple conductor stranding options
 - Symmetric or Asymmetric
- -40°C up to 200°C, 3000hr Temperature Rating

Standard	Wire Type	Judd Spec	Temp Rating	Size	Insulation Type
SAE J1128	TXL	JW1427	135°C	0.22mm ²	HFXLPO
	GXL	JW1335		8.00mm ²	HFXLPO
JASO D618	AESSX	JW881	120°C	0.30mm ² - 2.00mm ²	XLPE
	AEX	JW1151	120°C	0.30mm ² - 8.00mm ²	XLPE
ISO 6722	AutoRad125	JW1223	125°C	0.22mm ² - 6.00mm ²	XLPE
	AutoRad150	JW1109	150°C		XLPE
	AutoRad200	JW1669	200°C		XLFE

Fuel Systems Wire

Applications

- Fuel Pump
- Fuel Level Sensor
- Diesel Exhaust Reduction Sensor



Materials

- G12 - Proprietary Formulated Crosslinked Polyethylene
- TXL or ISO Thin Wall Constructions
- 3000hr 125°C Rated Material
- Low Cost Solution to PTFE
- Competitive to Nylon

Specifications

	JW573	JW1266	JW1416
Standard	SAE	SAE	ISO
Temp. Rating	125°C	125°C	125°C
Conductor(s)	BC, TPC or SPC	BC, SILBLK	BC, SILBLK
Size Range	24awg – 12awg	0.50mm ² – 2.00mm ²	0.35mm ² – 3.00mm ²
Wall Thickness	TXL	TXL	ISO Thin Wall
Voltage Rating	50V	60V	60V
Fluid Compatibility	Standard + Ford Flex Fuel	Standard + Ford Flex Fuel and Diesel Fuel	Standard + Ford Flex Fuel, Diesel Fuel, GMW16848, E25, Oxidized Gasoline, E85 and E100

Fuel Systems Wire

Fuel Resistance Properties

Ethanol and Methanol Based Results

- Diameter Change: <10%
- Tensile Strength Retention: >80%
- Elongation Retention: >50%

Diesel Based Results

- Diameter Change: <30%
- Tensile Strength Retention: >70%
- Elongation Retention: >50%

Ethanol Fuels		
60°C	336hrs	960hrs
E10	Pass	NR
E22A	Pass	NR
E25	Pass	Pass
E85	Pass	Pass
E93A	Pass	NR
E100	Pass	Pass

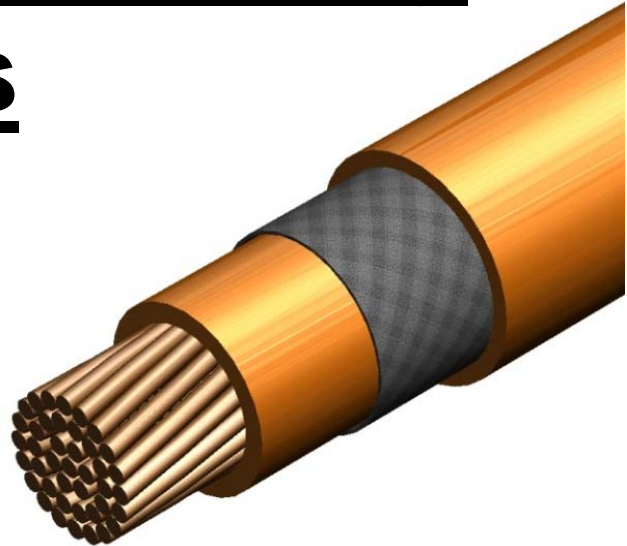
Methanol Fuels		
60°C	336hrs	960hrs
M15	Pass	Pass
M15A	Pass	NR
M30A	Pass	NR
M50A	Pass	NR
M85A	Pass	NR

Diesel Fuels		
90°C	336hrs	960hrs
B20	Pass	Pass
ULS B20	Pass	Pass
B30A	Pass	NR

600V Automotive Battery Cables

Applications

- 2mm² up to 10mm²
 - Auxiliary power supply cables
- 12mm² up to 120mm²
 - Power unit cables
 - Power control cables
 - Battery cables



Product Characteristics

- 600V rated per SAE & ISO
- Bare Copper Conductors
 - Symmetric or Asymmetric Options
- 95% Braid Shield Coverage
- Flexible Insulation Systems
- 125°C, 150°C & 200°C
- 3,000hr Rated
- High Abrasion Resistance
- High Current Carrying Capacity

Spec	JW1660	JW1663	JW1608	JW1606	JW1619	JW1435
Construction	Unshielded	Shielded	Unshielded	Shielded	Unshielded	Shielded
Temperature Rating	125°C		150°C		200°C	
Materials	XLPE		XLPO (EX-50)		XLFE	

Judd Wire's, 600V battery cables are designed based on ISO thin-wall dimensions and are 3,000 hour rated at 125°C, 150°C and 200°C temperature classes

	3mm ²	5mm ²	12mm ²	16mm ²	35mm ²	50mm ²
BC Conductor Stranding	44	105	154	133	665	798
Insulated Conductor Wall Thickness (mm)	0.40	0.40	0.60	0.65	0.80	0.90
Insulated Conductor Diameter (mm)	3.25	4.05	6.15	6.80	9.90	11.60
Shield Single End Size (AWG)	36	36	36	36	34	34
Shield Diameter (mm)	4.0	4.8	7.3	8.0	11.2	13.0
Sheath Thickness (mm)	0.40	0.60	0.65	0.80	1.00	1.10
Shielded and Sheathed Diameter (mm)	4.50	5.70	8.30	9.30	12.90	14.90
Total Weight (kg/km)	55.7	87.6	180.0	219.0	455.7	636.2

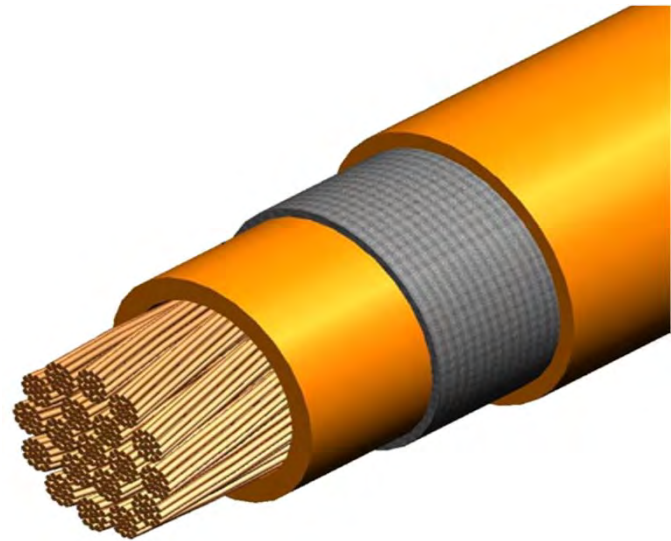
Custom designs and conductor stranding available up to 120mm²

FlexradXF[®]

Judd Wire, a high technology, specialty wire and cable manufacturer, introduces FlexradXF[®], our newest irradiation cross-linked high flex insulation system for battery applications

Applications

- 2mm² up to 10mm²
 - Auxiliary power supply cables
- 12mm² up to 120mm²
 - Power unit cables
 - Power control cables
 - Battery cables



Product Characteristics

- Irradiation Crosslinked Polyolefin Insulation System
 - **10% more flexible than EPDM/Silicone**
- 600V & 1kV Options
- Thin Wall Designs
- Shielded and Unshielded Constructions
- 10,000hr 120°C
- 3,000hr 150°C

	JW1661 Unshielded HV				JW1664 Shielded HV			
Size	12mm ²	16mm ²	35mm ²	50mm ²	12mm ²	16mm ²	35mm ²	50mm ²
BC Conductor Stranding	154	133	665	798	154	133	665	798
Diameter (mm)	6.15	6.80	9.90	11.60	8.30	9.30	12.90	14.90

FlexradXF[®]

Size	JW1661 <i>Unshielded HV</i>				JW1664 <i>Shielded HV</i>			
	12mm ²	16mm ²	35mm ²	50mm ²	12mm ²	16mm ²	35mm ²	50mm ²
BC Conductor Stranding	154	133	665	798	154	133	665	798
Insulated Conductor Wall Thickness (mm)	0.60	0.65	0.80	0.90	0.60	0.65	0.80	0.90
Insulated Conductor Diameter (mm)	6.15	6.80	9.90	11.60	6.15	6.80	9.90	11.60
Shield Single End Size (AWG)	-	-	-	-	36	36	34	34
Shield Diameter (mm)	-	-	-	-	7.3	8.0	11.2	13.0
Sheath Thickness (mm)	-	-	-	-	0.65	0.80	1.00	1.10
Shielded and Sheathed Diameter (mm)	-	-	-	-	8.30	9.30	12.90	14.90
Total Weight (kg/km)	128.3	153.1	343.3	497.1	180.4	219.7	456.8	638.7
Bend Force* (N)	-	-	38.0	56.9	-	-	52.8	96.3
Current Carrying Capacity @ 22°C (Amps)	135	161	278	356	135	161	278	356

Custom designs and conductor stranding available up to 120mm²

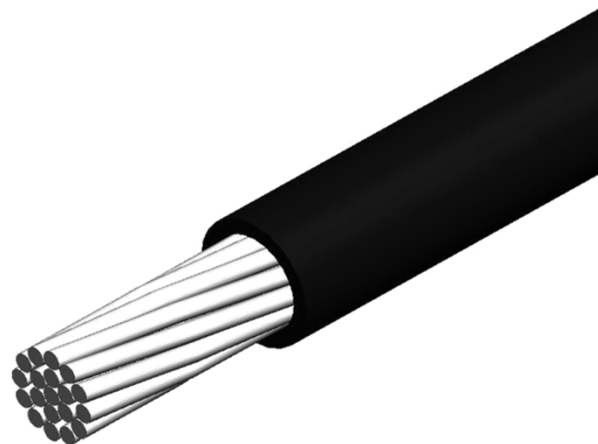
*Flexibility data obtained by using the test method outlined in ISO/WD 19642-2 sec 4.3.5

Transmission Wire

Materials

- Conductors
 - Bare Copper
 - Tinned Copper
 - Silicone Blocked
 - Bare Copper
 - Tinned Copper
- 3000hr Rated Insulations
 - Crosslinked Fluoroelastomer
 - 150°C: J5, J7
 - 200°C: R5
 - Crosslinked ETFE
 - 200°C: XLETFE

	J5	J7	R5
Silicone Blocked	JW1067	JW1111	JW1072
SAE	JW1158	JW1342	JW1107
ISO	JW1339	JW1407	JW1355



Transmission Wire

ATF 212-B

72hr Immersion at 150°C

	J5	J7	R5	XLETFE
Tensile Retention	80%	90%	80%	95%
Elongation Retention	80%	90%	50%	90%
Volume Swell	<10%	<10%	<5%	0%
180° Bend	Pass	Pass	Pass	Pass

Dexron VI

72hr Immersion at 150°C

	J5	J7	R5	XLETFE
Tensile Retention	90%	90%	80%	95%
Elongation Retention	95%	100%	60%	70%
Volume Swell	<10%	<10%	<5%	0%
180° Bend	Pass	Pass	Pass	Pass

ATF 212-B

1,512hr Immersion at 150°C

	J5	J7	R5	XLETFE
Tensile Retention	70%	90%	80%	90%
Elongation Retention	20%	60%	30%	70%
Volume Swell	10%	10%	5%	1%
180° Bend	Pass	Pass	Pass	Pass
OD Change	<10%	<10%	<5%	<5%
Withstand Voltage	Pass	Pass	Pass	Pass
Pressure Test @ 150°C	Pass	Pass	Pass	Pass

Dexron VI

1,512hr Immersion at 150°C

	J5	J7	R5	XLETFE
Tensile Retention	70%	90%	75%	90%
Elongation Retention	20%	60%	30%	80%
Volume Swell	10%	10%	5%	0%
180° Bend	Pass	Pass	Pass	Pass
OD Change	<10%	<10%	<5%	<5%
Withstand Voltage	Pass	Pass	Pass	Pass
Pressure Test @ 150°C	Pass	Pass	Pass	Pass

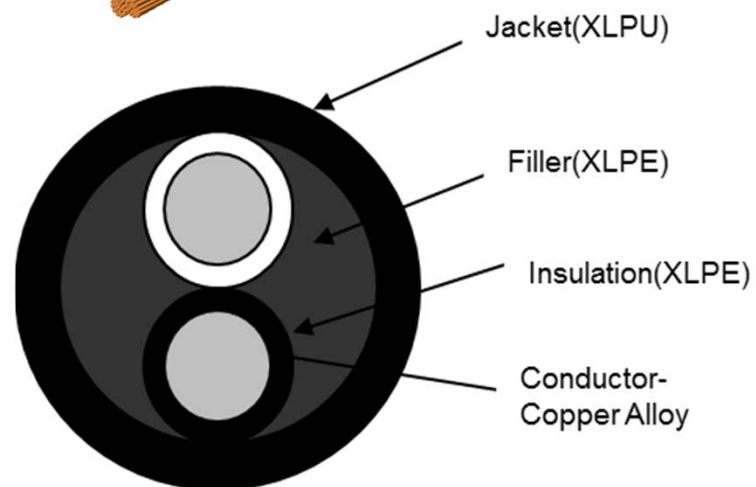
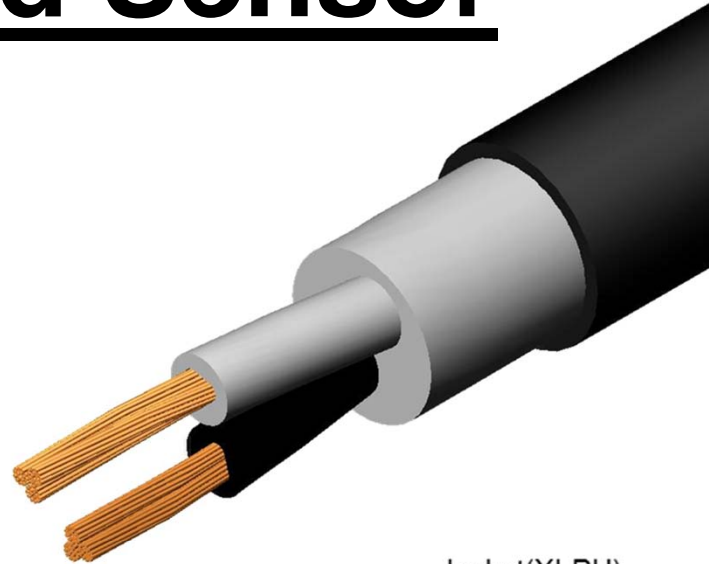
Wheel Speed Sensor

Product Characteristics

- High Tensile Strength
- High Flex Endurance
- High Abrasion Resistance
- Up to 125°C 3000hr rated
- JASO/SAE/ISO Compliant

Materials

- Conductors
 - Annealed Copper
 - Copper Alloy
 - High Strand Count
- Core Insulation
 - Crosslinked Polyethylene
 - Halogen Free
- Jacket Insulation
 - Crosslinked Polyurethane Types
 - Halogen Free
 - Heat Resistant
 - Flame Retardant
 - Heat Adhesive



Standard Sizes

- 0.50mm² – 6.2mm OD
- 0.30mm² – 5.0mm OD
- 0.25mm² – 4.3mm OD
- 0.25mm² – 4.0mm OD

Composite Sensor Cables

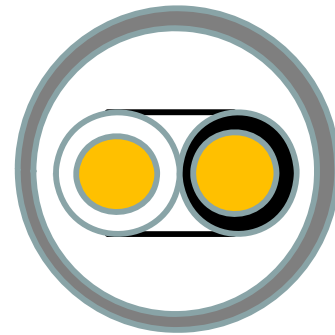
Product Characteristics

- High Tensile Strength
- High Flex Endurance
- High Abrasion Resistance
- Up to 125°C 3000hr rated
- JASO/SAE/ISO Compliant

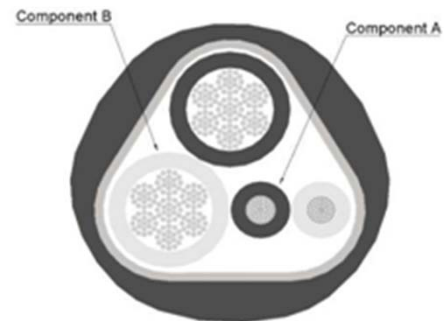
Construction Details

- 2.5mm² 7x72/0.08 Stranding
 - Bare or Tinned Copper
 - Copper Alloy
- WSS Conductor
 - 0.25mm² or 0.30mm²
- XLPE Core
- Polyurethane Jacket
 - Crosslinked – 125°C
 - Non-crosslinked – 120°C
- WSS Diameter: 4.3mm
- OD: 8.4mm – 10.4mm

2 Conductor Filled EPB Cable



4C Composite WSS/EPB (Unjacketed WSS Cable)



4C Composite WSS/EPB (Jacketed WSS Cable)

