
 TECHNICAL DATA SHEET

Type LTZU Halogen Free, UL Listed Liquid-tight flexible metallic conduit

T&B Liquidtight Systems™



Halogen Free, UL Listed Liquid-tight Flexible Metal Conduits are designed for applications where safety concerns exist regarding a material's reaction in a fire situation.

Certifications / Standards:



Features & Benefits:

- Global Certification to UL, CSA and IEC Requirements
- High quality cores and jackets for excellent strength and durability
- Trade sizes from 3/8" to 4" (12mm to 100mm)
- Coordinated performance with Series 52/53 Steel Fittings
- Ingress protection ratings aligned with industrial enclosures
- Smooth extruded jackets provide best performance with fittings
- Conduit sizes 1/2" and up meets CSA Heavy duty requirements, when used with series 5200/5300 liquid-tight fittings

Applications:

- Halogen Free, industrial grade liquid-tight flexible metallic conduit
- Low smoke and low flame spread rate
- Enclosed public facilities, mass transit vehicles, tunnels, subways
- Used extensively in environments where flexibility is necessary for motion, vibration and bending
- Liquid-tight applications against water, moderate oils and chemicals
- For use in electrical circuits up to 1,000 V
- CSA Certified conduit is intended for use to Canadian Electrical Code as described in Section 12 for dry, damp or wet locations, and in Section 18 (J18), where flexibility is required

Construction / Material / Finish:

- Hot-dipped zinc galvanized steel core
- Zero halogen TPU (polyurethane) extruded smooth jacket
- Ink printed ratings and technical information
- Full range of trade sizes from 3/8" to 4" (12mm to 100mm)
 - 3/8" to 1 1/4", integral copper bonding wire, square lock design
 - 1 1/2" to 4" fully interlocked design
- Colors: black (standard), gray (optional)

Combustion & Flamability | Test | Value

- Vertical Burn - Jacket Material | UL 94 | V-0 rating: No flaming drips
- Vertical Burn - Jacket Material | UL 360 | Pass: No flaming drips
- Oxygen Index % | D2863 | 28.5
- Flame Spread Index | ASTM E162 | 25: No flaming drips
- Smoke Generation (flaming) | ASTM E662 (NFPA 258) | Ds 41@1.5 min./Ds 113@4.0 min.
- Smoke Generation (non-flaming) | ASTM E662 (NFPA 258) | Ds 4@1.5 min./Ds 19@4.0 min.
- Toxic Gas Generation | Bombardier SMP 800-C | Pass
- Toxicity Index | NES 713 | 3.9

Note: Test data is based on controlled laboratory conditions and does not reflect performance in actual fire conditions

Environment ratings:

Working Temperature:

- UL: Dry: -40 to +80°C (-40 to +176°F)
Oil: -40 to +70°C (-40 to +158°F)
Wet: -40 to +60°C (-40 to +140°F)

- CSA: Dry: -40 to +60°C (-40 to +140°F)
Oil: -40 to +60°C (-40 to +140°F)
Wet: -40 to +60°C (-40 to +140°F)
- IEC/CE: Gen: -45 to +90°C (-49 to +194°F)

Chemical resistance guide:

See publication TDS000117

Conforms to:

- UL 360, Liquid-tight Flexible Metal Conduits (LFMC)
 - UL file: E125517
- CSA C22.2 No. 56, Liquid-tight Flexible Metal Conduits (LFMC)
 - CSA file: LR-72635
- IEC 61386-1, -23, Conduit systems for cable management
 - EU DoC: EC-012-16-105
- CE (Conformité Européenne, European Conformity)
- RoHS (Restriction of Hazardous Substances Directive)

Standards requirements:

Meets all UL 360 and CSA C22.2 No. 56 standard requirements including:

- ID and OD dimensions, chemical and acid resistance, flame retardant and self extinguishing, abrasion resistance, UV protection, crush resistance, oil resistance, bending resistance, corrosion resistance and bending strength
- CSA Heavy duty requirements

Meets all IEC 61386-23 standard requirements including:

- Compression strength - Code 4 Heavy; 1250 N/50mm
- Impact strength - Code 4 Heavy; 6 Joules
- Tensile strength - Code 4 Heavy; 1000 N/2 min.

Ingress protection:

- Provides "ingress integrity" between enclosures, fittings, conduits and seals when using LTZU conduits and series 52/53 liquid-tight fittings.
- Covers all trade sizes from 3/8" to 4" (12mm to 103mm)

UL CSA & NEMA system ingress rating:

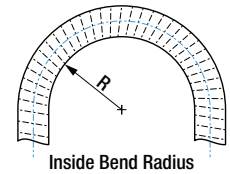
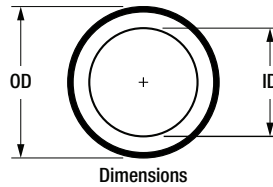
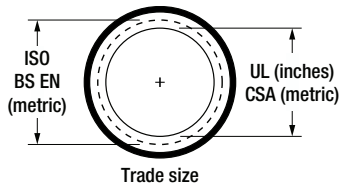
- UL Listed type ratings tested to UL 50E requirements
- UL file: E23018
 - Indoor: Type 4, 12, 13
 - Outdoor: Type 3, 3R, 4
- CSA C22.2, No. 94.2: Type 3, 3R, 4, 12, 13
- NEMA 250: Type 3, 3R, 4, 12, 13

IEC system ingress rating:

- IP ingress protection per IEC 60529 requirements
- IEC ingress rating: IP66, IP67

Type LTZU - Halogen Free, UL Listed
Product selection and dimensions

Product selection														
Trade size										Coil Length				
UL	CSA	ISO BS EN	Carton			Standard reel			Bulk reel			Weight		
Inches	mm	mm	Part No./GID	Feet	Meter	Part No./GID	Feet	Meter	Part No./GID	Feet	Meter	lbs/ft	kg/m	
3/8	12	16	LTZUS01B-C	100	30	LTZUS01B-K	500	150	LTZUS01LB-L	1,000	300	0.29	0.43	
			7TAA012LTO0000			7TAA012LTO0010			7TAA012LTO0017					
1/2	16	20	LTZUS02B-C	100	30	LTZUS02B-K	500	150	LTZUS02B-L	1,000	300	0.32	0.48	
			7TAA012LTO0001			7TAA012LTO0011			7TAA012LTO0018					
3/4	21	25	LTZUS03B-C	100	30	LTZUS03B-K	500	150	LTZUS03B-L	1,000	300	0.53	0.79	
			7TAA012LTO0002			7TAA012LTO0012			7TAA012LTO0019					
1	27	32	LTZUS04B-C	100	30	LTZUS04B-J	400	120	-	-	-	0.82	1.22	
			7TAA012LTO0003			7TAA012LTO0013								
1 1/4	35	40	LTZUS05B-B	50	15	LTZUS05B-E	200	60	-	-	-	1.02	1.52	
			7TAA012LTO0004			7TAA012LTO0014								
1 1/2	41	50	LTZUS06B-B	50	15	LTZUS06B-D	150	45	-	-	-	1.24	1.84	
			7TAA012LTO0005			7TAA012LTO0015								
2	53	70	LTZUS07B-B	50	15	LTZUS07B-C	100	30	-	-	-	1.45	2.16	
			7TAA012LTO0006			7TAA012LTO0016								
2 1/2	63	70	LTZUS08LB-A	25	8	-	-	-	-	-	-	1.92	2.86	
			7TAA012LTO0007											
3	78	80	LTZUS09B-A	25	8	-	-	-	-	-	-	2.52	3.75	
			7TAA012LTO0008											
4	103	100	LTZUS11B-A	25	8	-	-	-	-	-	-	3.50	5.21	
			7TAA012LTO0009											



Dimensions															
Part number	Trade Size			Minimum inside bend radius				Inches				Millimeters			
	UL	CSA	ISO BS EN	Static		Dynamic		Inside (ID)		Outside (OD)		Inside (ID)		Outside (OD)	
	Inches	mm	mm	Inches	mm	Inches	mm	Min	Max	Min	Max	Min	Max	Min	Max
LTZUS01B-*	3/8	12	16	2.0	51	4.0	102	0.484	0.504	0.690	0.710	12.3	12.8	17.5	18.0
LTZUS02B-*	1/2	16	20	3.0	76	5.0	127	0.622	0.642	0.820	0.840	15.8	16.3	20.8	21.3
LTZUS03B-*	3/4	21	25	4.2	107	6.0	152	0.820	0.840	1.030	1.050	20.8	21.3	26.2	26.7
LTZUS04B-*	1	27	32	5.5	140	12.0	305	1.041	1.066	1.290	1.315	26.4	27.1	32.8	33.4
LTZUS05B-*	1 1/4	35	40	7.0	178	15.0	381	1.380	1.410	1.630	1.660	35.1	35.8	41.4	42.2
LTZUS06B-*	1 1/2	41	50	4.5	114	17.0	432	1.575	1.600	1.865	1.900	40.0	40.6	47.4	48.3
LTZUS07B-*	2	53	63	6.0	152	22.0	559	2.020	2.045	2.340	2.375	51.3	51.9	59.4	60.3
LTZUS08B-*	2 1/2	63	70	8.0	203	30.0	762	2.480	2.505	2.840	2.875	63.0	63.6	72.1	73.0
LTZUS09B-*	3	78	80	10.0	254	36.0	914	3.070	3.100	3.460	3.500	78.0	78.7	87.9	88.8
LTZUS11B-*	4	103	100	12.0	305	52.0	1,321	4.000	4.040	4.460	4.500	101.6	102.6	113.3	114.3

Note: Products must be installed in accordance with applicable national and local electrical codes