

the [old way]

Typical space requirements for pull boxes having conduit enter at opposite ends of the box (per BICSI TDMM 13).

Conduit Trade Size (in)	Box Width (in)	Box Length (in)	Box Depth (in)
1	4	16	3
1-1/4	6	20	3
1-1/2	8	27	4
2	8	36	4
2-1/2	10	42	5
3	12	48	5
3-1/2	12	54	6
4	15	60	8



the [smart way]

The Smart LB conduit body requires considerably less space and less labor than traditional pull boxes.

Conduit Trade Size (in)	SmartLB Width (in)	SmartLB Length (in)	SmartLB Depth (in)
3/4 to 1-1/4	2.5	9.7	4.6
1-1/2 to 2-1/2	4.3	22.5	10.3
3 to 4	6.4	30.0	13.8



SmartLB

Ahead of the Curve!

Unlike traditional LBs that have a sharp 90-degree corner, Smart LB conduit bodies have a built-in radius that helps prevent cables from getting caught or damaged when pulled around corners. With no sharp edges to damage cable, the gentle bend radius meets ANSI/TIA/EIA 568 & NECA/FOA requirements for pulling optical fiber and twisted pair cable. Smart LBs are the only conduit bodies that are recommended by the BICSI TDMM 13th for telecommunication cable. Includes a gasketed cover for wet locations.

DIE CAST ALUMINUM

- Gray powder coat paint finish
- Suitable for indoor, outdoor (OSP) & plenum use
- For use with EMT, IMC, Rigid or Liquid-Tight conduit and fittings

PVC

- Standard gray
- Suitable for indoor / outdoor (OSP) use
- For use with schedule 40 PVC and schedule 80 PVC
- Works with standard PVC cleaner and cement



[includes] gasketed cover

Item#	Description	Trade Size	Item Weight	CU. Inch Fill	Master Carton	Master Weight
KBLB120	1-1/4" SMART LB BODY - DIE CAST ALUMINUM	1-1/4"	2.10 lbs.	47	20	42.50 lbs.
KBLB250	2-1/2" SMART LB BODY - DIE CAST ALUMINUM	2-1/2"	14.00 lbs.	443	4	56.50 lbs.
KBLB400	4" SMART LB BODY - DIE CAST ALUMINUM	4"	27.40 lbs.	1248	2	55.30 lbs.
KBLB121	1-1/4" SMART LB BODY - PVC	1-1/4"	1.27 lbs.	47	20	25.90 lbs.
KBLB251	2-1/2" SMART LB BODY - PVC	2-1/2"	7.48 lbs.	413	4	30.40 lbs.
KBLB401	4" SMART LB BODY - PVC	4"	14.35 lbs.	1221	2	29.20 lbs.



SmartLB

CONDUIT BODIES



SmartLB

Why not a **[standard]** conduit body?

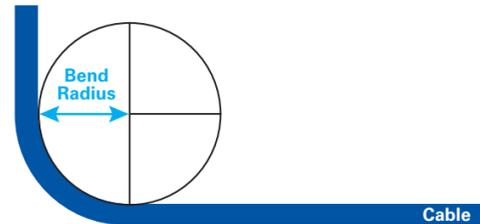
Telecommunication cable is not only expensive but it is also temperamental and fragile. Once a cable has been installed exceeding its bend radius it will not perform to its maximum potential. Bending a cable past its recommended bend radius causes macro bending, a fatal condition that can cause a significant loss in performance. Smart LB is the ONLY conduit body specifically recommended by the BICSI TDMM 13th for use with telecommunication cable. Conduit bodies designed for use with electrical wiring systems are not recommended for use with telecommunication cabling because they do not guarantee a correct bend radius.

Why is the **[bend radius]** of telecommunication cable so important?

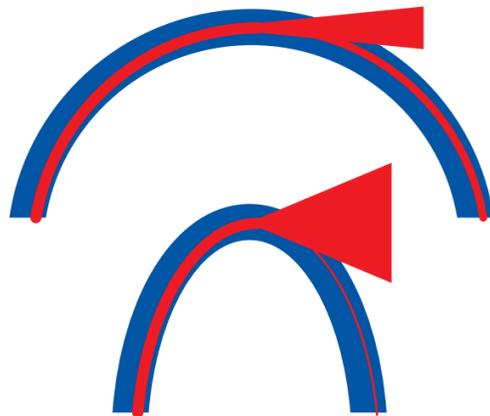
Think of telecommunication cable like a garden hose, the cable is the hose and the data is the water. The more you bend the hose (or shrink the bend radius) the less water will travel through the hose. This is the same in telecommunication cable, the smaller the bend radius the more likely the cable will have macro bending. This is not limited to fiber optic only. With twisted pair cable excessive bending can disturb the critical geometry of the twists, reducing performance through increased sensitivity to external noise and increased near-end crosstalk within the cable. In addition, long-term damage to the cable jacketing and insulating material can result from excess bending stress.

Everything you didn't know you needed to know about bending

BEND RADIUS is the measurement of the inside curvature of a cable.



In fiber optic transmissions, **MACRO BEND** is a large visible bend in the fiber that can cause extrinsic attenuation (a reduction of the optical power in the glass). This means that light actually leaks out of the fiber when it is bent; as the bend becomes more acute, more light leaks out.



SmartLB is **[code compliant]**, meeting the minimum bend radius for the following codes:

NECA/FOA 301-2009

5.4.2.2: Bend Radius

- a) Do not exceed the cable bend radius. Fiber Optic cable can be broken when kinked or bent too tightly, especially during pulling.
- c) After completion of the pull, the cable should not have any bend radius smaller than ten (10) times the cable diameter.

ANSI/TIA/EIA 568

Balanced 100-Ohm Twisted Pair Cabling (UTP and ScTP)

Minimum Bend Radius

Cable Type	Bend Radius
4 Pair UTP	4 X cable diameter
4 Pair ScTP	8 X cable diameter
Backbone	10 X cable diameter

Optical Fiber Cable

Minimum Bend Radius and Maximum Pulling Tension

	No Load Condition	Maximum Load
Intrabuilding 2 or 4 Fiber	25mm	50mm
Intrabuilding Backbone	10 X OD	15 X OD
Interbuilding Backbone	10 X OD	20 X OD

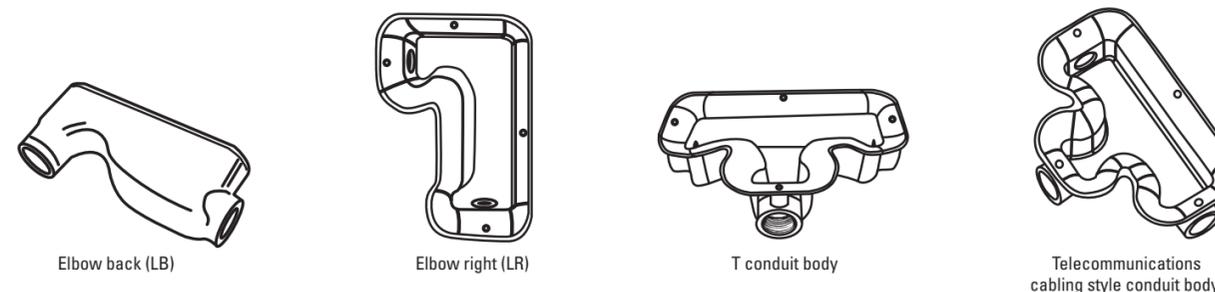
Note: The maximums are noted here in the absence of any manufacturers specifications.

BICSI TDMM, 13th Edition

5.2: Conduit Distribution Systems - Conduit Body

A conduit body features an internal radius that accommodates a standards-based cable bend radius once cable is installed in the lay position of the conduit body device. Only the telecommunications cabling style conduit bodies should be used in a telecommunications cabling installation.

Figure 5.23: Conduit bodies recommended for telecommunications cables



Conduit bodies designed for use with electrical wiring systems are not recommended for use with telecommunications cabling. Conduit bodies designed for use with telecommunications cabling systems that provide standards-based internal bend radii may be used where applicable.

the **[old way]**

Here is a typical space requirement for pull boxes having 3" conduit enter at opposite ends of the box.



the **[smart way]**

The Smart LB uses space more efficiently and saves on labor costs.

