

Item #	Description	1-9	10-24	25-99	100-249	250-499
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### Waterproof USB Cable Assemblies - IEC IP67 Rated

As USB interconnect systems gain in popularity, so do the demands on the cabling systems. Standard USB connectors are not intended to withstand contaminants such as water and dust. By utilizing rugged, molded outer shells and a threaded coupling with an O-ring seal, these products are IEC IP67 rated.

### Waterproof Cable Assemblies - Revision 2.0 Compliant

Three types of assemblies are offered in a variety of lengths: Waterproof USB A male to standard USB B male, waterproof/panel mountable USB A female to standard USB A male, and waterproof/panel mountable USB B female to standard USB A male. All feature molded backshells, revision 2.0 compliant fully shielded cable, and threaded couplings. Color is black.

<a href="#">WPUSBAB-2M</a>	USB Cable, Waterproof Type A Male / Standard Type B Male, 2.0m	18.50	16.65	14.80	12.95	11.10
<a href="#">WPUSBAB-5M</a>	USB Cable, Waterproof Type A Male / Standard Type B Male, 5.0m	21.50	19.35	17.20	15.05	12.90
<a href="#">WPUSBAX-05M</a>	USB Cable, Waterproof Panel Mt. Type A Fem. / Std. Type A Male, 0.5m	17.00	15.30	13.60	11.90	10.20
<a href="#">WPUSBAX-2M</a>	USB Cable, Waterproof Panel Mt. Type A Fem. / Std. Type A Male, 2.0m	18.50	16.65	14.80	12.95	11.10
<a href="#">WPUSBAX-5M</a>	USB Cable, Waterproof Panel Mt. Type A Fem. / Std. Type A Male, 5.0m	21.50	19.35	17.20	15.05	12.90
<a href="#">WPUSBBA-05M</a>	USB Cable, Waterproof Panel Mt. Type B Fem. / Std. Type A Male, 0.5m	17.00	15.30	13.60	11.90	10.20
<a href="#">WPUSBBA-2M</a>	USB Cable, Waterproof Panel Mt. Type B Fem. / Std. Type A Male, 2.0m	18.50	16.65	14.80	12.95	11.10
<a href="#">WPUSBBA-5M</a>	USB Cable, Waterproof Panel Mt. Type B Fem. / Std. Type A Male, 5.0m	21.50	19.35	17.20	15.05	12.90
<a href="#">WPUSB-CVR</a>	USB Cover, Waterproof	4.35	4.09	3.83	3.57	3.31

### Waterproof USB Jacks with 10" Wire Leads - Type A and Type B Available

This product is ideal for enclosures or panels that are exposed to harsh environments. Wire leads are 24 AWG and can easily be soldered into a PCB or terminated with a variety of connectors.

<a href="#">WPUSBAF</a>	USB Jack, Waterproof Type A with 10" Wire Leads	15.00	13.50	12.00	10.50	9.00
<a href="#">WPUSBBF</a>	USB Jack, Waterproof Type B with 10" Wire Leads	15.00	13.50	12.00	10.50	9.00
<a href="#">WPUSB-CVR</a>	USB Cover, Waterproof	4.35	4.09	3.83	3.57	3.31



#### Waterproof Connectors - Where are they used and how are they rated?

Most off-the-shelf connector systems are designed for a fairly clean, dry environment. When they are used in a dusty or wet environment the user has to periodically replace or attempt to seal these connectors with epoxy, RTV or other material. These options can be quite expensive and time consuming. Fortunately, environmentally sealed connector systems are gaining in popularity and availability.

#### Where are they used?

Dust and moisture are the two most common contaminants that enter through exposed data ports, damaging or destroying electronic equipment. Fortunately, specially sealed cables and connectors are available to protect these ports from dust and moisture. Applications for these connectors are numerous and include automotive, communication, industrial and medical instruments.

L-com offers a number of protected interface types including:



#### How are they rated?

The most popular system to rate the environmental protection of a particular connector is the Ingress Protection rating (commonly known as IP rating). The IP rating is a number ranging from 1 to 3 digits.

- The first digit rates protection against ingress of solid objects
- The second digit rates protection against ingress of liquids
- The third digit rates protection against impact damage

Note: Many products, including L-com products, are not rated for impact. Larger value digits indicate greater protection against that substance/force.

Please see the chart below for details of the first two digit ratings:

First number (Protection against solid objects)	Definition	Second number (Protection against liquids)	Definition
0	No protection	0	No protection
1	Protected against solid objects over 50mm (e.g. accidental touch by hands)	1	Protected against vertically falling drops of water
2	Protected against solid objects over 12mm (e.g. fingers)	2	Protected against direct sprays up to 15° from the vertical
3	Protected against solid objects over 2.5mm (e.g. tools and wires)	3	Protected against direct sprays up to 60° from the vertical
4	Protected against solid objects over 1 mm (e.g. tools, wires and small wires)	4	Protected against sprays from all directions - limited ingress permitted
5	Protected against dust - limited ingress (no harmful deposit)	5	Protected against low pressure jets of water from all directions - limited ingress permitted
6	Totally protected against dust	6	Protected against strong jets of water, e.g. for use on ship decks - limited ingress permitted
		7	Protected against the effects of temporary immersion between 15cm and 1m. Duration of test 30 minutes.
		8	Protected against long periods of immersion under pressure

