LK-40 RELEASE LINK - SubSeaSonics
(USED WITH TR-45 - Timer Release)

(Nov. 29, 2012. File = LK-40_45_DATA_SHEET

Description: Quick, light load Release Link for use with the TR-45 timer release made with stainless steel wire. The use of stainless steel wire has been discontinued due to two recently discovered failures out of 1000 deployments. The problem is premature hoop erosion due to 'crevice corrosion'. Accordingly, all new TR-45 link needs will be met with a new LK-81-NI link made with a proprietary 60% nickel wire. It will take twice as long to erode. Eventually Sub Sea Sonics expects to make a smaller load link called the LK-41-NI (40 lb). Until then the existing LK-40 links can be used in deployments where the small failure rate is tolerable.

Load limit of LK-40: 40 lb (18 kg) plus a 20 lb surge.

Hoop size: Large enough to pass a 3/32 inch (0.094", 2.38 mm) diameter line.

Wire metal: Stainless steel alloy 308.

Use: Replaceable release link for use with TR-45 Timer Release.

Method of release: Electrolytic erosion of metal at exposed points.

Hoop construction wire diameter (excluding paint): 0.025 inch (0.635 mm).

The following table shows approximate release erosion times with 3 Energizer L91 lithium AA batteries wired in series and installed internal to the TR-45 by Sub Sea Sonics at the time of sale:

HOOP PAINT FULLY SCRAPED OFF – WORST CASE (Lithium batteries)	HOOP PAINT INTACT (Lithium batteries)
12 minute @ 21°C (70°F) 16 minute @ 5°C (41°F) 20 minute @ 0°C (32°F)	4 minute @ 21°C (70°F) 6 minute @ 5°C (41°F) 7 minute @ 0°C (32°F)

Note: Bio fouling can extend these times by restricting ion flow.

Battery "energy" used per release for worst case of all paint scraped off: 38 mA-Hr. One set of 3 lithium batteries should last 2.0 active years including 30 releases with the LK-40, 10 releases with the LK-81-NI.

Reference Information: Lithium battery capacity = 3000 mA-Hr. Maximum battery current while in timing mode equals 0.100 mA.