



## TTL Isolator

The TTL Isolator is a TTL device that isolates the Digital Lynx SX from external devices up to 5000V<sub>RMS</sub>. This is accomplished using optically coupled isolators. It can only be used as an input for TTL signals.

## Data Acquisition System Connection

The TTL Isolator can connect to either of the two 2x17 Pin TTL I/O Ports on the Digital Lynx SX. When connecting to the Digital Lynx SX, ensure the port's power is enabled and the TTL Port X/Y Power Indicator is illuminated. For information on enabling the power refer to the *16SX and 4SX DAS Section*.

## External TTL Generator Connection

The Input Connector on the TTL Isolator matches the same pin layout on the TTL I/O Ports on the Digital Lynx SX. The +5V Power Rail is not passed through, as this would break the isolation barrier, but does power the Digital Lynx SX side of the circuitry. Remember that this device isolates the Digital Lynx SX Ground from the TTL Generator Ground, meaning you must connect the TTL Generator Ground connection to a Ground Connection on the input connector to create a return path. This device will not operate if this is not done correctly.

## When to use this product

The TTL Isolator was specifically designed to stop external TTL Generators from inducing noise into the Digital Lynx SX. If connecting the grounds of the Digital Lynx SX and TTL Generator adds noise to your biological signals or creates TTL errors please use this

device. The TTL Isolator also protects the Digital Lynx SX from being damaged by external TTL Generator errors and voltage transients. The TTL Isolator can also be used to translate different voltages to the 0V-5V TTL Levels of the Digital Lynx SX. Please inform Neuralynx if you intend to use it as a translator.

## 16SX and 4SX DAS

For more information on the Digital Lynx SX Data Acquisition System refer to its Users Manual found on the Neuralynx website.

## Input Connector Pin Layout

ISO Ground	34	33 Unconnected
ISO Ground	32	31 TTL In Bit15
ISO Ground	30	29 TTL In Bit14
ISO Ground	28	27 TTL In Bit13
ISO Ground	26	25 TTL In Bit12
ISO Ground	24	23 TTL In Bit11
ISO Ground	22	21 TTL In Bit10
ISO Ground	20	19 TTL In Bit9
ISO Ground	18	17 TTL In Bit8
ISO Ground	16	15 TTL In Bit7
ISO Ground	14	13 TTL In Bit6
ISO Ground	12	11 TTL In Bit5
ISO Ground	10	9 TTL In Bit4
ISO Ground	8	7 TTL In Bit3
ISO Ground	6	5 TTL In Bit2
ISO Ground	4	3 TTL In Bit1
ISO Ground	2	1 TTL In Bit0

## Output Connector Pin Layout

+5V Input	33	34 SX Ground
TTL Out Bit 15	31	32 SX Ground
TTL Out Bit 14	29	30 SX Ground
TTL Out Bit 13	27	28 SX Ground
TTL Out Bit 12	25	26 SX Ground
TTL Out Bit 11	23	24 SX Ground
TTL Out Bit 10	21	22 SX Ground
TTL Out Bit 9	19	20 SX Ground
TTL Out Bit 8	17	18 SX Ground
TTL Out Bit 7	15	16 SX Ground
TTL Out Bit 6	13	14 SX Ground
TTL Out Bit 5	11	12 SX Ground
TTL Out Bit 4	9	10 SX Ground
TTL Out Bit 3	7	8 SX Ground
TTL Out Bit 2	5	6 SX Ground
TTL Out Bit 1	3	4 SX Ground
TTL Out Bit 0	1	2 SX Ground

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105 Commercial Drive, Bozeman, MT 59715

Phone 406.585.4542 • Fax 866.585.1743

[www.Neuralynx.com](http://www.Neuralynx.com)

[support@Neuralynx.com](mailto:support@Neuralynx.com)

**Technical Specifications:**

<b>Size (LxWxH)</b>	64mm x 55mm x 15mm
<b>Weight</b>	30.0g
<b>Signals</b>	<ul style="list-style-type: none"><li>• 16 Isolated(Input to Output) TTL Signals</li><li>• Digital Lynx Ground Isolated form Input Connector Ground</li></ul>
<b>Connections</b>	Input: Male 2x17 0.1" Pitch Connector Output: Female 2x17 0.1" Pitch Connector

© Neuralynx, Inc.  
105 Commercial Drive, Bozeman, MT 59715  
Phone 406.585.4542 • Fax 866.585.1743

[www.Neuralynx.com](http://www.Neuralynx.com)  
[support@Neuralynx.com](mailto:support@Neuralynx.com)