

Commutators for Electrical and Optical Cable Management

Neuroscience research involving behavioral tests may require animals to move freely within the confines of the experimental field often while tethered to research equipment via various cables. A commutator is a swivel that keeps those cables untangled as the animal perform the tasks. Plexon offers a several specialty commutators supporting optogenetics as well as neural recording with low or high channel count systems using analog or digital headstages.

PlexBright® Compatible Commutators

Plexon offers three commutators designed to support optogenetic research, of which two also support simultaneous neural recording. All three have the following in common:

- ◆ Easily facilitates unilateral or bilateral stimulation
- ◆ Light-weight, low torque design for experiments with animals as small as mice
- ◆ Passive actuation mechanism
- ◆ Compatible with all PlexBright® Compact LED Modules
- ◆ Compatible with PlexBright 4 Channel Optogenetic Controller or PlexBright LD-1 Single Channel Driver

Features	PlexBright Dual LED Commutator	PlexBright Dual v+ 16 Channel Commutator	Carousel Commutator	Motorized Carousel Commutator
				
Ideal Application	Experiments in which the only tethered cables are as a result of the optogenetic stimulation	Experiments in which optogenetic stimulation is performed simultaneously with low channel count neural recording using analog headstages	Experiments in which optogenetic stimulation is performed simultaneously with neural recordings using digital headstages	Experiments in which optogenetic stimulation is performed simultaneously with neural recording using digital headstages
Plexon data acquisition system compatibility	None	- OmniPlex® System with a DigiAmp™ or MiniDigi™ digitizing amplifier, - OmniPlex System with an analog amplifier, or - MAP System	OmniPlex System utilizing a Digital Headstage Processor (DHP)	OmniPlex System utilizing a Digital Headstage Processor (DHP)
Headstage compatibility	None	Analog	Up to 2 digital	Up to 4 digital
Electrical channels	Experiments in which the only tethered cables are as a result of the optogenetic stimulation	Experiments in which the only tethered cables are as a result of the optogenetic stimulation	Depends on channels per headstage (any combination of 8, 16, or 32 channel headstages, up to 64 channels)	N/A
Total Lines	4	25	20	40