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Converter Types

The Converter function of a CIP Motion device covers a wide range of power conversion technologies from simple non-regenerative AC/DC converters, typically known as diode rectifiers, to sophisticated regenerative AC/DC converters that provide closed loop control of DC bus voltage as well as active and reactive current flow back to the grid. This also includes support for DC/DC power converters.

The following attribute table is used to identify the type of Converter function.

Converter Type

Usage	Access	T	Data Type	Default	Min	Max	Semantics of Values
Optional - BD	Get/GSV		USINT	-	-	-	Enumeration: 0 = Passive AC/DC 1 = Active AC/DC 2 = DC/DC 3-127 = Reserved 128-255 = Vendor Specific

The term Converter applies to any device function that converts AC or DC input power to DC Bus output power that may be used by Inverter power structures to drive motors.

Passive AC/DC represents the class of devices that convert AC input power to DC output power using passive electronics. A diode bridge rectifier is an example of a Passive AC/DC converter. They do not have the capability to transfer energy back to the AC main supply.

Active AC/DC represents the class of devices that transfer power between AC and DC sources using active electronics. For example, Active AC/DC converters include both regenerative converters that regulate bi-directional power transfer between AC and DC sources and low harmonic converters that regulate power flow from the AC source to the DC bus.

DC/DC represents the class of devices that convert power between a primary DC input source and one or more secondary DC buses using active electronics, or simply distribute primary DC input power to secondary DC buses. DC/DC converters with active electronics are capable of transferring energy between a primary DC input source and one or more secondary DC buses, each with different voltage levels.

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