LED Driver Protection

LED Drivers from Thomas Research Products include circuits to protect themselves from situations that could be damaging.

Protection		Standard Series (LED / LEG / PLED)	Value Series (TRC / TRV / TSC / TSV / VLED)	M Series (LEDxxW-xx-Cxxxx-M)
Output Over-Voltage *Protects driver if a light engine is connected that requires more voltage than driver can deliver*	*Which models have it?*	All have overvoltage protection	All have overvoltage protection	All have overvoltage protection
	How does it work?	OVP limits the output voltage	Driver will shut down if an over-voltage condition is sensed	OVP limits the output voltage
	Does it self-reset?	All models self-reset	No; Cycle input voltage to reset the driver	• 12W, 50W, 60W CC, 75W CC: Cycle input voltage to reset • All other models self-reset
Output Over-Current *Protects driver if a light engine is connected that requires more current than driver can deliver*	*Which models have it?*	All have overcurrent protection	All have overcurrent protection	All have overcurrent protection
	How does it work?	•12W, 17W, 20W, 50W Rev A1.1: Output current is reduced to zero, driver self-resets, and output current is restored. Note: If fault is not removed, the driver's output will flash as it continues to shut down the output and reset. • All other models: Driver shuts down, cycle power to reset	Output current is reduced to zero, driver self-resets, and output current is restored. Note: If fault is not removed, the driver's output will flash as it continues to shut down the output and reset.	Output current is reduced to zero, driver self-resets, and output current is restored. Note: If fault is not removed, the driver's output will flash as it continues to shut down the output and reset.
	Does it self-reset?	• 12W, 17W, 20W: Driver self-resets • All others: Cycle input voltage to reset	Yes	Yes
Short-Circuit *Protects driver if someone shorts output leads*	*Which models have it?*	All have short circuit protection	All have short circuit protection	All have short circuit protection
	How does it work?	• 12W, 17W, 20W, 50W Rev A1.1: Output current is reduced to zero, driver self-resets, and output current is restored. Note: If fault is not removed, the driver's output will flash as it continues to shut down the output and reset. • All other models: Driver shuts down, cycle power to reset	Output current is reduced to zero, driver self-resets, and output current is restored. Note: If fault is not removed, the driver's output will flash as it continues to shut down the output and reset.	Output current is reduced to zero, driver self-resets, and output current is restored. Note: If fault is not removed, the driver's output will flash as it continues to shut down the output and reset.
	Does it self-reset?	• 12W, 17W, 20W: Driver self-resets • All others: Cycle input voltage to reset	Yes	Yes
Over-Temperature *Shuts down driver if a specific temperature is exceeded, usually 105°C-115°C*	*Which models have it?*	• LED25W-HL, LED40W-HL	All have over-temp protection, EXCEPT: TRC-025, TRV-035, TRC-040, TRx-050, VLED25W	All have over-temp protection, EXCEPT: 12W, 40W
	How does it work?	Driver shuts down if an over-temperature condition is sensed (Tc=105°C)	Driver shuts down if an over-temp condition is sensed, EXCEPT: TRC-152Q, which decreases output to half current	Driver is shut down if an over-temperature condition is sensed
	Does it self-reset?	All models self-reset when case temperature falls below 65°C	All models self-reset when case temp falls below 75°C	• 50W, 60W CC, 75W CC: Cycle input voltage to reset • All other models self-reset

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