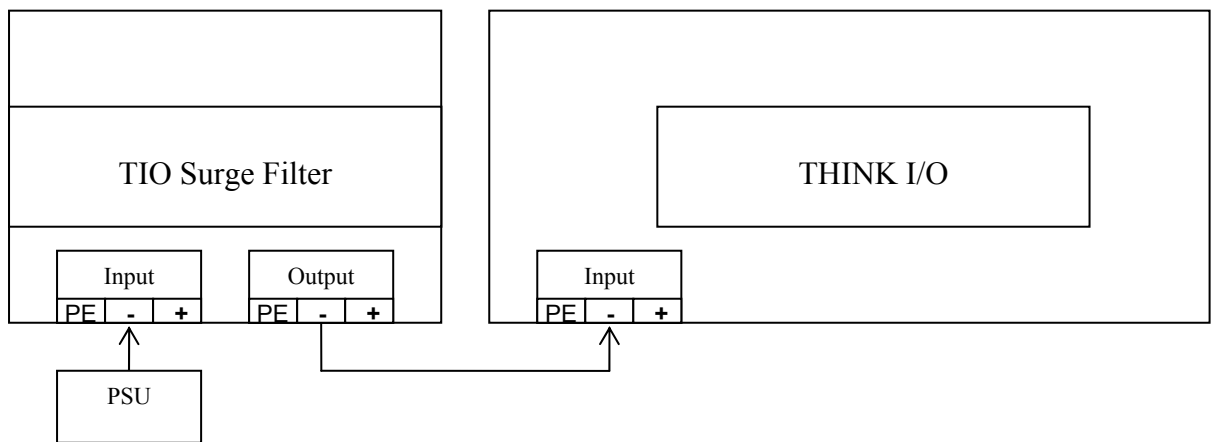


Technical Manual ThinkIO Surge Filter (Holdup) Module

1. Introduction

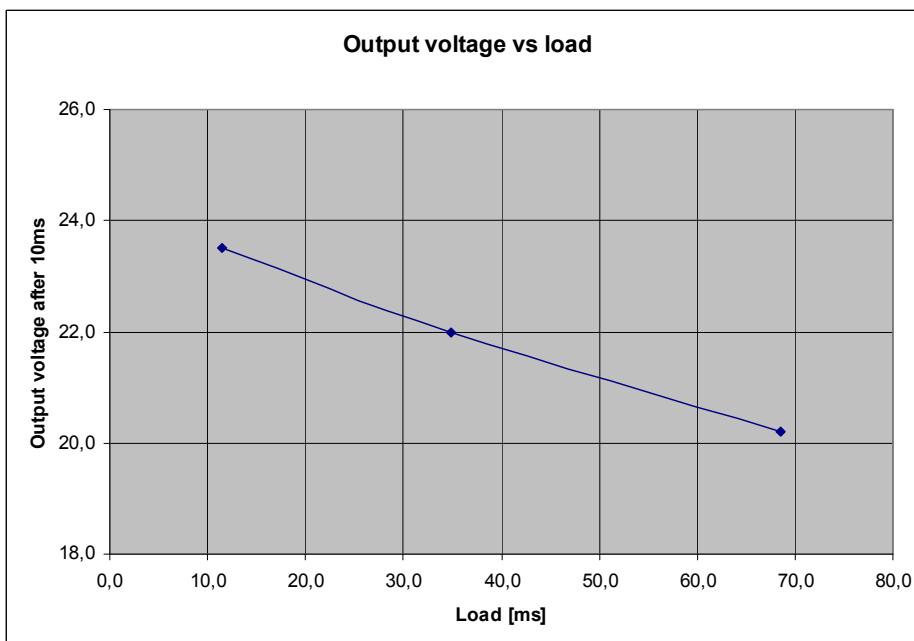
This module can be optionally used with the ThinkIO in situations where 10ms supply voltage holdup is required or when the input power must be filtered according to European regulation norms.

2. Block Diagram



3. Backup Time

Measurements were made to give a table for a calculation of the approximately backup time on a certain load. A constant resistive load was used for the measurement table results below:



A minimum backup time of 10ms is guaranteed under worst case conditions with input voltage at the limit and the ThinkIO at maximum load. This requirement is according to EN50155/S2 (railway) and EN61131-2 /PS2 (SPS). Typically, under normal conditions, the backup time will be approximately 20ms.

4. Specifications

Functionality	24V power supply filter and backup
Form factor	DIN rail housing
Input power connector	3-pin screw connector: - PE (shield) - GND - 24V
Output power connector	3-pin screw connector: - PE (shield) - GND - 24V
Input : - Voltage - Current	Nom. 24 V, Min. 20 V, Max. 31 V Max. 3.0 A
Output: - Voltage - Current	Depending on input: Nom. 22V, Min. 18 V, Max. 29 V Max. 3.0 A
Power dissipation ⁽¹⁾	Max. 5.5W
Environmental	
Temperature	Operational: -25 °C to 70 °C Storage: -10 °C to 85 °C
Humidity	93% at 40 °C, non-condensing
Compliance	Housing: IP20
	EMC compliance for ThinkIO-C/-P/-Duo
	GL/EN50155
	Designed to meet UL compliance