

# **ITV Devices**

**SMT Battery Protection Device** 

### PRODUCT: ITV4030L1212

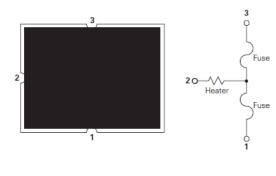
DOCUMENT: SCD29518 REV LETTER: A REV DATE: MARCH 7, 2020 PAGE NO.: 1 OF 2

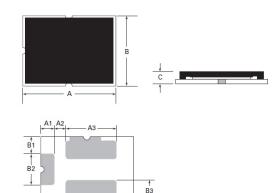
# **Specification Status: Released**

## TABLE I. Electrical Rating:

Current	100% x I <sub>rated</sub>					
Capacity	No Melting					
Cut Time	200% x I <sub>rated</sub>					
	< 1 min					
Interrupting	5 x I <sub>rated</sub> , power on 5 ms, power off 995 ms, 10000 cycles					
Current	No Melting					
Over Voltage	In exerction voltage range, the fusing time is strain					
Operation	In operation voltage range, the fusing time is <1min.					

# **Device Circuit:**





## TABLE II. DIMENSIONS (mm):

Α	$4.00 \pm 0.2$			
В	$3.00 \pm 0.3$			
С	0.90 max			
A1	0.58 ± 0.1			
A2	0.50 ± 0.1			
A3	2.20 ± 0.1			
B1	$0.80 \pm 0.1$			
B2	$1.44 \pm 0.1$			
B3	1.03 ± 0.1			

## **TABLE III. Electrical Specification:**

Part Number	Marking	I <sub>rated</sub> (A)	Cells in series	V <sub>max</sub> (V <sub>DC</sub> )	I <sub>break</sub> (A)	V <sub>оР</sub> (V)	Resistance		Agency Approval	
							R <sub>heater</sub> (Ω)	R <sub>fuse</sub> (mΩ)	c <b>"Al</b> "us	TÜVRheinland
ITV4030L1212	LF1212	12	3	36	50	7.4 ~ 13.8	5.7 ~ 9.9	1.5 ~ 3.5	Pending	Pending

#### Notes:

 $I_{\mbox{\scriptsize rated:}}$  Current carrying capacity that is measured at 40°C thermal equilibrium condition.

 $I_{\mbox{\tiny break}}$  : The current that the fuse element is able to interrupt.

 $V_{\mbox{\scriptsize max}}$  . The maximum voltage that can be cut off by fuse.

V<sub>OP</sub>: Range of operation voltage.

 $R_{\mbox{\scriptsize heater}}$  . The resistance of the heating element.

 $R_{\text{fuse}}$ : The resistance of the fuse element.

Cells in series: Number of battery cells connected in series in the circuit for ITV device to protect.

• Value specified is determined by using the PWB with 2mm\*2oz copper traces, AWG18 covered wire, and 0.6mm glass epoxy PCB.



# **ITV Devices**

**SMT Battery Protection Device** 

Halogen Free\*

### PRODUCT: ITV4030L1212

DOCUMENT: SCD29518 REV LETTER: A REV DATE: MARCH 7, 2020 PAGE NO.: 2 OF 2

### **Materials Information:**

#### **ROHS Compliant**

ELV Compliant





\* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm.

## **Environmental Specifications:**

Storage Temperature	0~35°C, ≦ 70%RH				
	3 months after shipment				
Operating Temperature	-10°C to +65°C				
Het Dessive Aging	100±5°C, 250 hours				
Hot Passive Aging	No structural damage and functional failure				
Humidity Aging	60°C±2°C, 90~95%R.H. 250 hours				
	No structural damage and functional failure				
Cold Passive Aging	-20±3°C, 500 hours				
Cold Passive Aging	No structural damage and functional failure				
	MIL-STD-202 Method 107G				
Thermal Shock	+125ºC /-55ºC, 100 times				
	No structural damage and functional failure				

Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, military, aerospace, medical, lifesaving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse documentation. The sale and use of Littelfuse products is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse.