

Table of Contents

1.	Introduction	4
1.1	About SME Company	4
1.2	About this manual	4
1.3	About warning, caution and information notices	4
1.4	Product warranty information	5
1.5	How to find us	5
2.	AC SmartMotion AC-L1 Overview	6
2.1	Product description	6
2.2	General technical specifications	7
2.3	Packaging configuration	9
2.4	Product indication label	9
3.	Installation and wiring	10
3.1	General description	10
3.2	Mounting the controller	10
3.2.1	Overview	10
3.2.2	Screw torque for the power connections	11
3.2.3	Connector parts	11
3.3	Cooling requirements	11
3.3.1	AC-L1 with aluminium baseplate and additional heatsink	11
3.3.2	· ·	
3.3.3	Clearances	12
3.4	List of complete pin-out	13
3.5	Typical connection diagram for basic TRACTION system	15
3.5.1	AC-L1 pin-out for basic TRACTION application	16
3.6	Typical connection diagram for basic PUMP system	18
3.6.1	AC-L1 pin-out for basic PUMP application	19
3.7	SME external devices description	
3.7.1	Encoder	21
3.7.2	Displays	21
3.8	Programmable parameters	22
3.9	Initial setup	22
4.	Main Functions	23
4.1	System configuration	23
4.2	Battery Discharge Algorithm (BDI)	23
4.3	Battery protections	23
4.4	Mains power management	23
4.5	Operating profiles	23
4.6	Generic outputs	23
4.7	LIN display	23
4.8	Service	24
4.9	Motor & control	24