

Multilog IS User Manual (Part 2 of 2)

Safety Supplement - Issue A



Warning: This manual contains important safety and operating information. Please read, understand, and follow the instructions / warnings contained in this manual.

Label drawings:

Multilog IS:

XX	XX	XX	XX	XX	XX
XXX			XXXXXXXXXX		
**[LABEL TYPE **					
P/N	XXXXXXXXXXXXXX		S/N:	XXXXXXXXXX	
DOM:	XXXXXXXXXXXXXX		NETWORK:	XXXXXXXXXX	
SMS:	XXXXXXXXXXXXXX				
XXX:	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX				
					
					
			XXXXXXXXXX		
	XXXXXXXXXXXXXXXXXXXX		XXXXXXXXXXXXXXXXXXXX		
	II 1 G Ex Ia IIC T4 Ga		-20°C ≤ TAMB ≤ +60°C		
WARNING - DO NOT REPLACE BATTERY WHEN EXPLOSIVE ATMOSPHERE IS PRESENT					
WARNING - DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE IS PRESENT					
WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD, DO NOT RUB WITH A DRY CLOTH.					
USE ONLY REPLACEABLE BATTERY PACK XXXXXXXXXXXXXX					
COMPANY NAME & ADDRESS					
XX	XX	XX	XX	XX	XX

Enclosure Label

XXXXXXXXXXXXXXXXXX XXXXXXXXXX		
XXXX	XXXXXX	XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XX	XX	XXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXX		

Connections Label

Internal Battery Pack:

BATTERY PACK	
PN:-	XXXXXXXXXXXXXX
SN:-	XXXXXX
DOM:-	XX/XX/XXXX
RATING:-	XX.Xv XXAh
TEST REV:-	XX.XX
TESTED BY:-	IDXXX (XXX)
WARNING - This product contains a lithium thionyl chloride (Li-SOCL₂) battery pack. Do not attempt to open, disassemble or service the battery pack. Do not crush, puncture, short external contacts or heat above 100°C (212°F). Under no circumstances should the battery pack be recharged. Dispose of in accordance with local regulations. Do not dispose of in fire or water. Do not carry, or lift this product by the cable. Replace only with a designated battery pack.	
USE ONLY ON:- XXXX	
 	XXXXX Company Address
*** BARCODE***	
Company Website	

INTBATTPACK/7V2/H95x

'x' indicates pack variant

External Battery Pack (option):

	
 II 1 G Ex ia IIC T4 Ga XXXXXXXXXXXX	XXXXXXXXXX XXXXXXXXXXXX  
-20°C ≤ Tamb ≤ +60°C	
WARNING: POTENTIAL ELECTROSTATIC DISCHARGING HAZARD, DO NOT RUB WITH DRY CLOTH	
WARNING: DO NOT REPLACE BATTERY WHEN EXPLOSIVE ATMOSPHERE IS PRESENT	
INPUT PARAMETERS U₀ = 11.7V I₀ = 3.08A P₀ = 6.36W C₀ = 1.54μF L₀ = 2.6μH	OUTPUT PARAMETERS C_i = 0μF L_i = 0μH
USE ONLY ON XXXXX	
Company name, address & website	

Battery Enclosure Label

Entity Parameters:

	Output Parameters	Input Parameters			Output Parameters	Input Parameters
EXT POWER (External Battery Pack Input of PSU PCB)	Uo = 0 Io = 0 Po = n/a Co = n/a Lo = n/a	Ui = 11.7 V Ii = 3.08 A Pi = 6.36 W Ci = 1.1 nF Li = 2 μH		ANTENNA (Antenna interface of Main PCB)	Uo = 11.7 V Io = 1.2 μA Po = 3 μW Co = 1.5 μF Lo = 95 MH	Ui = 0 Ii = 0 Pi = 0 Ci = 1200 pF Li = 2 μH
SONICSENS (SonicSens interface 1 of Main PCB)	<u>Power Output:</u> Uo = 11.7 V Io = 0.43 A Po = 1.24 W Co = 1.41 μF Lo = 0.15 mH <u>Comms:</u> Uo = 5.4 V Io = 15 mA Po = 22 mW Co = 65 μF Lo = 158 mH	Ui = 0 Ii = 0 Pi = 0 Ci = 0 Li = 0 Ui = 5.4 V Ii = 11 mA Pi = 15 mW Ci = 0 Li = 4 μH		SONICSENS (SonicSens interface 2 & 3 of FPS module)	<u>Power Output:</u> Uo = 11.7 V Io = 0.43 A Po = 1.24 W Co = 1.41 μF Lo = 0.15 mH <u>Comms:</u> Uo = 5.4 V Io = 15 mA Po = 22 mW Co = 65 μF Lo = 158 mH	Ui = 0 Ii = 0 Pi = 0 Ci = 0 Li = 0 Ui = 5.4 V Ii = 11 mA Pi = 15 mW Ci = 0 Li = 4 μH
DIGITAL SENSOR (Digital Sensor Inputs 1, 2, 3 & 4 of Main PCB)	Uo = 5.88 V Io = 373 mA Po = 0.55 W Co = 43 μF Lo = 0.2 mH	Ui = 0 Ii = 0 Pi = 0 Ci = 0 Li = 4 μH		EXTERNAL PRESSURE & RTD (TEMP) (Pressure / RTD Inputs 1, 2, 3 & 4 of Main PCB)	Uo = 5.88 V Io = 120 mA Po = 0.18 W Co = 43 μF Lo = 2.4 mH	Ui = 0 Ii = 0 Pi = 0 Ci = 0 Li = 2 μH
FLOW (FLOW PULSE Inputs 1, 2, 3, 4, 5 & 6 of Main PCB)	Uo = 5.88 V Io = 0.3 mA Po = 0.44 mW Co = 43 μF Lo = 395 H	Ui = 0 Ii = 0 Pi = 0 Ci = 0 Li = 4 μH		FLOW (FLOW PULSE Inputs 7, 8, 9, 10, 11, 12, 13 & 14 of FPS module)	Uo = 5.88 V Io = 0.3 mA Po = 0.44 mW Co = 43 μF Lo = 395 H	Ui = 0 Ii = 0 Pi = 0 Ci = 0 Li = 4 μH
PULSE REPLICATION OUTPUT (Outputs 1, 2, 3 of Main PCB)	Uo = 5.88 V Io = 0.6 mA Po = 879 μW Co = 43 μF Lo = 98 H	Ui = 24 V Ii = 174 mA Pi = 720 mW Ci = 0 Li = 0		PULSE REPLICATION OUTPUT (Outputs 4, 5, 6 & 7 of FPS module)	Uo = 5.88 V Io = 0.6 mA Po = 879 μW Co = 43 μF Lo = 98 H	Ui = 24 V Ii = 174 mA Pi = 720 mW Ci = 0 Li = 0
PASSIVE 4 – 20mA (mA Inputs 1& 2 of Main PCB)	Uo = 7.0 V Io = 1.45 mA Po = 2.6 mW Co = ** Lo = **	Ui = 28 V Ii = 93 mA Pi = 0.7 W Ci = 0 Li = 4 μH		0-1V & 0-10V (0-1V / 0-10V inputs of Main PCB)	Uo = 7.0 V Io = 1.45 mA Po = 2.6 mW Co = ** Lo = **	Ui = 28 V Ii = 93 mA Pi = 0.7 W Ci = 0 Li = 4 μH
** - These parameters will depend on the voltage of the supplying IS circuit. For example, for a typical 28V 300Ω barrier channel, Lo is 4 mH and Co is 83 nF for Group IIC						
ACTIVE 4 – 20mA (mA Inputs 1& 2 of 4-20 mA module)	Uo = 28 V Io = 86 mA Po = 0.61 mW Co = 80 nF Lo = 4.1 mH	Ui = 28 V Ii = 93 mA Pi = 0.7 W Ci = 2.2 nF Li = 6 μH				
Note: The two 4-20 mA channels form a single IS circuit. The parameters listed apply to the combined circuits connected to channels one and two, and NOT to each channel individually.						

	Output Parameters	Input Parameters			Output Parameters	Input Parameters
RS485 (7.5V) (RS485 interface of RS485 (7.5V) UCOM module)	<u>Power Output:</u> Uo = 8.52 V Io = 547 mA Po = 1.165 W Co = 6.20 µF Lo = 119 µH <u>Comms:</u> Uo = 5.88 V Io = 24 mA Po = 34 mW Co = 43 µF Lo = 61 mH <u>Aggregated:</u> Uo = 8.52 V Io = 571 mA Po = 1.199 W Co = 6.20 µF Lo = 105 µH	Ui = n/a Ii = n/a Pi = n/a Ci = n/a Li = n/a Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 4 µH Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 4 µH		SDI-12 (7.5V) (SDI-12 interface of SDI-12 (7.5V) UCOM module)	<u>Power Output:</u> Uo = 8.52 V Io = 547 mA Po = 1.165 W Co = 6.20 µF Lo = 119 µH <u>Comms:</u> Uo = 5.88 V Io = 12 mA Po = 17 mW Co = 43 µF Lo = 246 mH <u>Aggregated:</u> Uo = 8.52 V Io = 559 mA Po = 1.182 W Co = 6.20 µF Lo = 111 µH	Ui = n/a Ii = n/a Pi = n/a Ci = n/a Li = n/a Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 2 µH Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 2 µH
RS485 (9.5V) (RS485 interface of RS485 (9.5V) UCOM module)	<u>Power Output:</u> Uo = 11.75 V Io = 281 mA Po = 0.83 W Co = 1.50 µF Lo = 450 µH <u>Comms:</u> Uo = 5.88 V Io = 24 mA Po = 34 mW Co = 43 µF Lo = 61 mH <u>Aggregated:</u> Uo = 11.75 V Io = 305 mA Po = 0.864 W Co = 1.50 µF Lo = 378 µH	Ui = n/a Ii = n/a Pi = n/a Ci = n/a Li = n/a Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 4 µH Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 4 µH		SDI-12 (9.5V) (SDI-12 interface of SDI-12 (9.5V) UCOM module)	<u>Power Output:</u> Uo = 11.75 V Io = 281 mA Po = 0.83 W Co = 1.50 µF Lo = 450 µH <u>Comms:</u> Uo = 5.88 V Io = 12 mA Po = 17 mW Co = 43 µF Lo = 246 mH <u>Aggregated:</u> Uo = 11.75 V Io = 293 mA Po = 0.847 W Co = 1.50 µF Lo = 412 µH	Ui = n/a Ii = n/a Pi = n/a Ci = n/a Li = n/a Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 2 µH Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 2 µH
RS485 (12V) (RS485 interface of RS485 (12V) UCOM module)	<u>Power Output:</u> Uo = 15.4 V Io = 159 mA Po = 0.61 W Co = 521 nF Lo = 1.4 mH <u>Comms:</u> Uo = 5.88 V Io = 24 mA Po = 34 mW Co = 43 µF Lo = 61 mH <u>Aggregated:</u> Uo = 15.4 V Io = 183 mA Po = 0.644 W Co = 521 nF Lo = 1.06 mH	Ui = n/a Ii = n/a Pi = n/a Ci = n/a Li = n/a Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 4 µH Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 4 µH		SDI-12 (12V) (SDI-12 interface of SDI-12 (12V) UCOM module)	<u>Power Output:</u> Uo = 15.4 V Io = 159 mA Po = 0.61 W Co = 521 nF Lo = 1.4 mH <u>Comms:</u> Uo = 5.88 V Io = 12 mA Po = 17 mW Co = 43 µF Lo = 246 mH <u>Aggregated:</u> Uo = 15.4 V Io = 171 mA Po = 0.627 W Co = 521 nF Lo = 1.21 mH	Ui = n/a Ii = n/a Pi = n/a Ci = n/a Li = n/a Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 2 µH Ui = n/a Ii = n/a Pi = n/a Ci = 0 Li = 2 µH

Part Number make-up – MLIS n / n / n / IS / n ('n' = variable length option field)

MLIS	n	/n	/n	/IS	/n
HWM Logger Type No.	Mechanical Options	Shipping Spec	Modem / Options	Safety Accreditation	Branding

See the Configuration options document (PND-156) for details of the options available.



Warning:

In an ATEX environment, this product is only to be installed and connected by a fully ATEX trained installer. For the Multilog IS, the connected intrinsically safe equipment must be certified with Entity Parameters. Any intrinsically safe equipment intended for connection to the Multilog IS must have compatible Entity Parameters and be connected and installed as per the manufacturer's instructions.

Configuration of Multilog IS

Wire-free communications is provided via a mobile device app. Communication to the logger to setup/configure the data logger is via a Bluetooth® compatible data link. Use of the configuration app requires an Intrinsically Safe device if used within the safe zone.



Warnings:

- POTENTIAL ELECTROSTATIC CHARGING HAZARD, DO NOT RUB WITH A DRY CLOTH.
- DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE IS PRESENT.
- DO NOT REPLACE BATTERY WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.
- THE MOBILE PHONE USED TO CONFIGURE THE **Multilog IS** IN THE HAZARDOUS AREA MUST NOT BE CONNECTED TO THE MAINS ELECTRICAL SUPPLY OR ANY OTHER EQUIPMENT THAT IS CONNECTED TO A MAINS SUPPLY DURING CONFIGURATION.



Warning: Contains Lithium Batteries

If batteries are exposed - do not short circuit, re-charge, puncture, incinerate, crush, immerse, force discharge, or expose to temperatures above the declared operating temperature range of the product. **Risk of fire or explosion.** These batteries are sealed units which are not hazardous when used according to the recommendations.

Note: - The cellular modem fitted has a maximum output of 2W of RF Power.

Additional information is available in the MAN-156-0001 – Multilog IS User Manual (Part 1 of 2), available from the HWM website.

If further support or assistance is required, please contact HWM Technical Support on 01633 489479 (option 5) or e-mail cservice@HWM-Water.com

HWM-Water Ltd
Ty Coch House
Llantarnam Park Way
Cwmbran
NP44 3AW
United Kingdom
+44 (0)1633 489479
www.hwmglobal.com



©HWM-Water Limited. This document is the property of HWM-Water Ltd. and must not be copied or disclosed to a third party without the permission of the company. Copyright reserved.