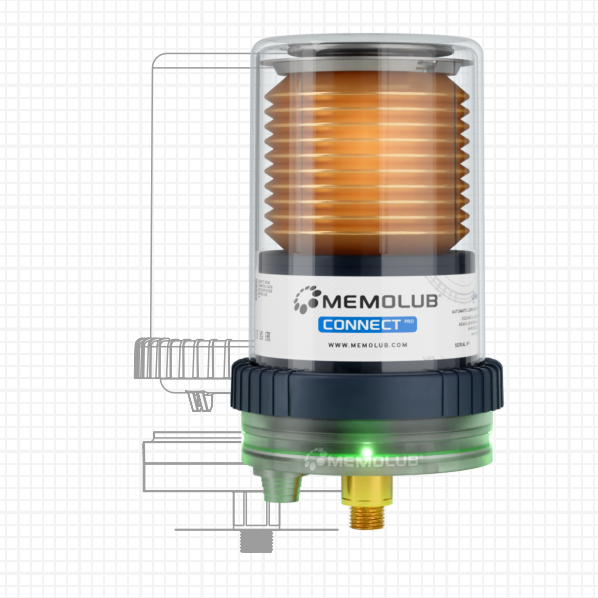


MEMOLUB CONNECT SERIES USER MANUAL

MEMOLUB.COM

INTRODUCTION

At a glance

MEMOLUB CONNECT PRO is an electro-mechanical lubrication system for single-point and multi-point applications. It is available in three grease cartridge sizes (120cc, 240cc, 480cc) and one refillable oil container (OIL-R500, 500cc), making it suitable for both grease and oil lubrication requirements.

The unit operates on a battery pack or an external power supply between 6 and 36 VDC. Its two-component design separates serviceable parts (replaceable cartridge or refillable container, batteries) from the permanently installed settings, allowing maintenance without disturbing the configuration at the lubrication point.

With an ejection pressure of 25 bar, the system covers applications beyond the range of conventional lubrication systems. Using a progressive distributor block (available as an accessory), it supports up to 8 grease points or 12 oil points simultaneously. The unit mounts directly on the lubrication point or remotely via pipe or flexible tubing.

Connectivity and remote monitoring

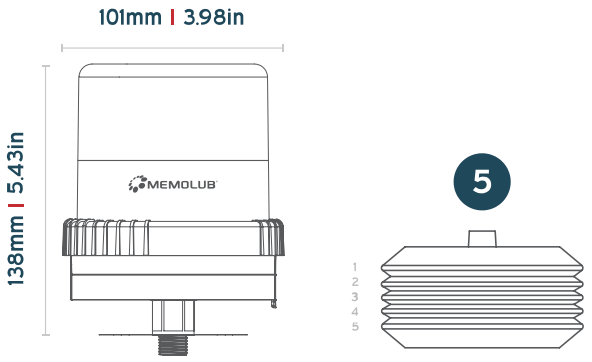
MEMOLUB CONNECT PRO integrates Bluetooth and LoRaWAN connectivity. The Bluetooth app provides on-site access to device status and settings. LoRaWAN enables full remote access: monitoring, alerts, and settings adjustment from any location. Memolub offers a ready-to-use platform, and integration into customer-owned LoRaWAN platforms is supported.

All-directional, high-visibility LEDs indicate device status locally. The system monitors pump operation, battery level, and cartridge fill level. Alerts are accessible via the Bluetooth app and the LoRaWAN platform, with automatic email notification on alarm detection. Internal temperature is also readable through both platforms. A test button at the base of the unit allows manual verification.

DIMENSIONS

120CC
Grease / Oil Cartridge
120cc I 4oz

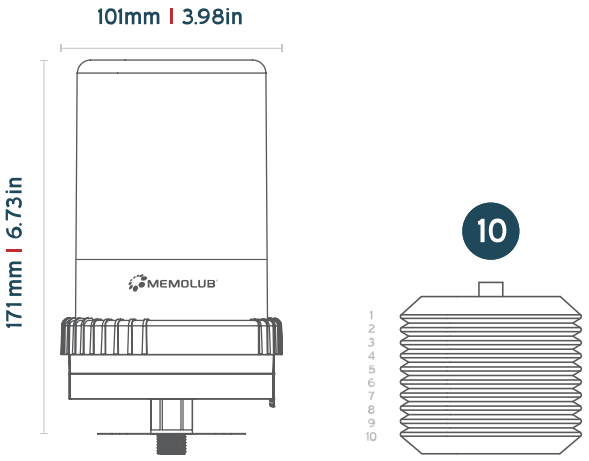
240CC
Grease / Oil Cartridge
240cc I 8.1oz



480CC

Grease / Oil Cartridge

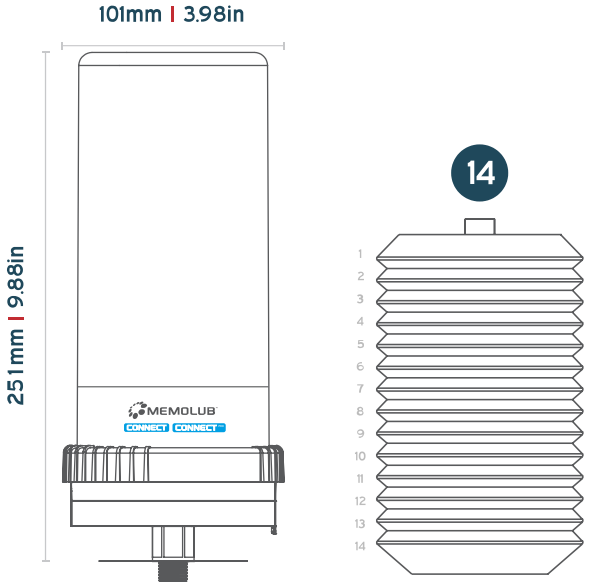
480cc I 16.2oz

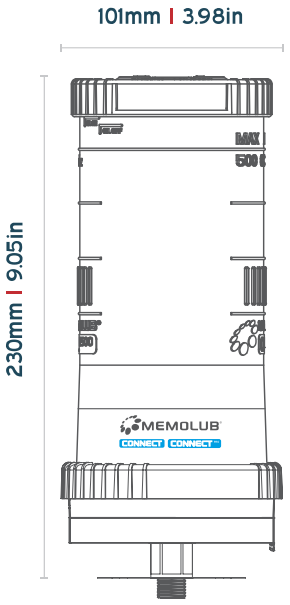


OIL R-500

Refillable Oil Reservoir

500cc I 16.9oz





PRECAUTIONS

- Do not open the housing: loaded spring
- Hold MEMOLUB® down during manual checks
- Leq <70 dB
- Use MEMOLUB® only for greasing machinery
- Use only lubricant cartridges and batteries recommended by the manufacturer



SPECIFICATIONS

GENERAL

	MEMOLUB® CONNECT PRO
External dimensions	Ø101mm, H138 (std) to 251mm (Giga)
Temperature exposure range	-40 to +60°C*
Connections	BSP M1/4"
Lubricants	Oil and grease, up to NLGI 2**
Maximum stroke pressure	25 bar/ 350 PSI

*Only applicable with batteries and lubricant suitable for low temperatures

** For other consistencies, please contact your local distributor

ELECTRICAL

	MEMOLUB® CONNECT PRO
Power Source	Battery / External
Voltage	4.5V DC (3x1.5V DC AA) OR 24V
Short circuit protection	Yes
Stroke duration	8 seconds
Minimum stroke interval	15 minutes
Communication Protocol	LoRaWAN + Bluetooth
Display	Local: RGB Leds; Remote: via app and cloud interface

LUBRICATION

There are basically two modes to use the VISIO CONNECT for lubricating an application:

1) Periodic mode: the systems makes an expulsion for each defined period. The period can be set either:

a) Locally on the rotary encoder wheel - positions 1 to 9, with corresponding preset frequencies listed in the "FREQUENCY" section (see next section).

b) Remotely, using the wireless LoRa or the BlueTooth interface *

2) on-demand mode: using the wired connection (6 DIN M16 connector - wires n1 & n2) **

LUBRICATION MODE	MIN. OUTPUT	MAX. OUTPUT	INTERFACE
Periodic	0.17 cc/day	14.4cc/day	Local: encoder wheel, stroke washers
Periodic	0 cc/day	57.6cc/day	Remote: LoRaWAN, Bluetooth
On-demand	0 cc/day	864 cc/day	6-DIN M16 connector

* Local rotary encoder wheel set on position 0. See WIRELESS CONTROL section for detailed information.

** See CABLING and WIRED CONTROL sections for implementation.

LORAWAN

	MEMOLUB® CONNECT PRO
Version	1.1.4
Supported Frequency Plans	EU863-870, AU915-928, US902-928,
Range (outdoor, line of sight)	1km*

* *Range based on field tests conducted in an urban environment using a gateway equipped with a 3 dBi antenna.*

BLUETOOTH

	MEMOLUB® CONNECT PRO
Version	5.2
Frequency	2,4 GHz
Range (indoor, office environment)	30m
Range (outdoor, line of sight)	150m

SETTINGS & FEEDBACK

FREQUENCY SETTINGS

The below table relates to the settings available in the periodic mode of lubrication.

WHEEL POSITION	DOSING PERIODICITY	MAX. DAILY OUTPUT*	REFILLING FREQUENCY VS. CARTRIDGE CONTENT (120CC)	REFILLING FREQUENCY VS. CARTRIDGE CONTENT (240CC)	REFILLING FREQUENCY VS. CARTRIDGE CONTENT (480CC)
0	External (Interface / App)				
1	48 hours	0.3 cc/day	12 months	24 months**	48 months**
2	24 hours	0.6 cc/day	6 months	12 months	24 months**
3	16 hours	0.9 cc/day	4 months	8 months	16 months**
4	12 hours	1.2 cc/day	3 months	6 months	12 months
5	8 hours	1.8 cc/day	2 months	4 months	8 months
6	6 hours	2.4 cc/day	1.5 month	3 months	6 months
7	4 hour	3.6 cc/day	1 month	2 months	4 months
8	2 hour	7.2 cc/day	0.5 month	1 month	2 months
9	1 hour	14.4 cc/day	0.25 month	0.5 month	1 month

*Maximum daily output without stroke washers.

** Please consider lubricant expiry date for long cartridge lifetimes.

VOLUME SETTINGS [CM³/DAY]

By using stroke washers you can adjust the amount of lubricant discharged per pumping cycle.

NUMBER OF STROKE WASHERS	WHEEL POSITION									
	0	1	2	3	4	5	6	7	8	9
-	External (Interface / App)	0.3	0.6	0.9	1.2	1.8	2.4	3.6	7.2	14.4
C	External (Interface / App)	0.28	0.56	0.84	1.12	1.7	2.2	3.4	6.7	13.5
O + C	External (Interface / App)	0.26	0.52	0.79	1.04	1.62	2.1	3.15	6.3	12.6
2 O + C	External (Interface / App)	0.24	0.49	0.73	0.98	1.46	1.95	2.92	5.85	11.7
3 O + C	External (Interface / App)	0.22	0.45	0.67	0.9	1.35	1.8	2.7	5.4	10.8
4 O + C	External (Interface / App)	0.2	0.41	0.62	0.82	1.23	1.65	2.47	4.95	9.9
5 O + C	External (Interface / App)	0.18	0.37	0.55	0.74	1.1	1.5	2.2	4.5	9
6 O + C	External (Interface / App)	0.17	0.34	0.5	0.68	1	1.35	2.02	4.05	8.1

*The circlip must always be added on top of the washers.

The circlip must always be added on top of the washers.

VISUAL FEEDBACK

COLOR	STATUS
	The test run was initiated through pushbutton.The pumping cycle ran successfully,
	Battery low / Lubricant cartridge empty / Loss of pump prime *
	Gearbox damaged
	Data connection successful.
	Incomplete dose delivery / Counterpressure detected before pump cycle.

LEARNING PERIOD

*The "cartridge empty / loss of pump prime" alarm of Memolub Connect Pro calls on machine learning capabilities, allowing it to account for environmental conditions when calculating its status. A total of 15 cycles are required to stabilize pumping conditions and acquire normal operation data. During all this time the lubricator must remain properly attached, and in the same environment, without any changes to its position, fastening, support, or grease type. These parameters should remain unchanged during both learning period and normal operation. If any of these parameters are altered, the learning process can be reset by pressing and holding the pushbutton for more than 5 seconds.

The "cartridge empty / loss of pump prime" alarm also assumes a clear differentiation between primed and unprimed operation. This reflects in a minimal flow resistance of the downstream piping, including customer application. For grease NLGI2, this piping (assumed outside dia <=8mm) should be at least 1m long. For oil, the brass fitting of the CONNECT BASE should be mounted with the strain valve #2805.

For more detailed explanations and solutions when alarms are displayed, please refer to the FAQs section.

REMOTE INSTALLATION DISTANCES

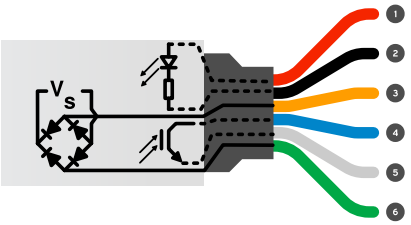
TYPE OF INSTALLATION	MAXIMUM DISTANCE*
Single point	8m
Multipoint with 2 outlets	6m
Multipoint with 4 outlets	
Multipoint with 6 outlets	
Multipoint with 8 outlets	
Multipoint with 10 outlets	Contact your distributor
Multipoint with 12 outlets	

*The maximum distance are valid for a variety of greases with a consistency level up to NLGI2. For oils, we generally consider the same distances multiplied by a factor 2.

CABLE

MEMOLUB CONNECT PRO

The Connect Pro is delivered with a 6 x 0.25mm² cable with a 6DIN M16 female connector.

DESCRIPTION	
1. EXTERNAL INPUT (OPTOCOUPLER INPUT +)	
2. EXTERNAL INPUT (OPTOCOUPLER INPUT -)	
3. POWER SUPPLY + (24VAC/DC)*	
4. STATUS OUTPUT (OPTOCOUPLER COLLECTOR)	
5. STATUS OUTPUT (OPTOCOUPLER EMITTER)	
6. POWER SUPPLY - (0VDC)	

* Operating voltage ranges from 6 to 36 VDC

WIRED CONTROL

ON-DEMAND MODE

As mentionned in the specifications, single ejections can be triggered by wire control. This section explains the signal requirements for this control to be effective.

Note that periodic and on-demand mode are NOT exclusive: both can be active simultaneously. If you don't want the periodic mode to be active, please set the encoder wheel on position "0" and don't use wireless interfaces.

Finally, on-demand control is more flexible than periodic control and should be implemented carefully, considering lubricant and application particularities. Otherwise, effective lubricant output could not match expected values.

INTERMITTENT SIGNAL

MEMOLUB CONNECT

DESCRIPTION	SIGNAL
INPUT SIGNAL (FROM CUSTOMER PLC/TIMER)	
OUTPUT SIGNAL "BUSY" (TO CUSTOMER PLC)	
PUMP OUTLET (TO LUBRICATION)	
OUTPUT SIGNAL "DEFAULT" (TO CUSTOMER PLC)	

CONTINUOUS SIGNAL

MEMOLUB CONNECT

DESCRIPTION	SIGNAL
INPUT SIGNAL (FROM CUSTOMER PLC/TIMER)	
OUTPUT SIGNAL "BUSY" (TO CUSTOMER PLC)	
PUMP OUTLET (TO LUBRICATION)	
OUTPUT SIGNAL "DEFAULT" (TO CUSTOMER PLC)	