

# LUCM05BL

multifunction control unit LUCM - class 5...30 -  
1.25...5 A - 24 V DC



## Main

Range of product	TeSys U
Device short name	LUCM
Product or component type	Multifunction control unit
Product specific application	Most sophisticated control and protection requirements, with display
Product compatibility	ASILUFC5 ASILUFC51 LUFC00 LUFN.. LUFV2 LULC031 LULC033 LULC07 LULC08 LULC09 LULC15
Utilisation category	AC-41 AC-43 AC-44
Motor power kW	3 kW at 690 V AC 50/60 Hz 1.5 kW at 400...440 V AC 50/60 Hz 2.2 kW at 500 V AC 50/60 Hz
Thermal protection adjustment range	1.25...5 A
[Uc] control circuit voltage	24 V DC
Overload tripping class	Class 5...30 - frequency limit: 50...60 Hz - temperature compensation: -25...55 °C - conforming to IEC 60947-6-2 Class 5...30 - frequency limit: 50...60 Hz - temperature compensation: -25...55 °C - conforming to UL 508
Language	English - setting factory setting English, French, German, Italian, Spanish - setting settable

## Complementary

Main function available	Differentiation of thermal overload and magnetic fault Earth fault protection Log function Manual or automatic reset Monitoring function, indication of main motor parameters Overload, no-load running Protection against overload and short-circuit Protection against phase failure and phase imbalance Protection function alarm
Mounting mode	Plug-in
Mounting location	Front side
Control circuit voltage limits	20...28 V for DC circuit 24 V in operation
Typical current consumption	150 mA at 24 V DC I maximum while closing with LUB12 200 mA at 24 V DC I maximum while closing with LUB32 70 mA at 24 V DC I rms sealed with LUB12 75 mA at 24 V DC I rms sealed
Operating time	35 ms opening with LUB12 for control circuit 35 ms opening with LUB32 for control circuit 65 ms closing with LUB32 for control circuit 75 ms closing with LUB12 for control circuit

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Load type	Single-phase motor - cooling: self-cooled, force cooled - setting settable 3-phase motor - cooling: self-cooled, force cooled - setting settable
Tripping threshold	14.2 x I <sub>r</sub> +/- 20 %
Physical interface	RS485 multidrop - connector(s): RJ45 - location: front panel - communication protocol: Modbus RTU 19200 bit/s
Return time	<= 200 ms
Display	2 lines of 12 characters - display LCD - English - accuracy +/- 5 % - resolution 1 % of I <sub>r</sub> 2 lines of 12 characters - display LCD - French - accuracy +/- 5 % - resolution 1 % of I <sub>r</sub> 2 lines of 12 characters - display LCD - German - accuracy +/- 5 % - resolution 1 % of I <sub>r</sub> 2 lines of 12 characters - display LCD - Italian - accuracy +/- 5 % - resolution 1 % of I <sub>r</sub> 2 lines of 12 characters - display LCD - Spanish - accuracy +/- 5 % - resolution 1 % of I <sub>r</sub>
Reset	Automatic reset - setting: setting range Manual - setting: factory setting Manual - setting: setting range Remote reset - setting: setting range
Time before reset	120 s - reset manual - setting factory setting 1...1000 s - reset manual or automatic reset - setting settable
Information displayed	Average current - setting factory setting Average current - setting settable Cause of last 5 faults - setting settable Current in phase - setting settable Earth leakage current - setting settable Phase imbalance - setting settable Thermal state of motor - setting settable
[U <sub>i</sub> ] rated insulation voltage	600 V conforming to CSA 22-2 No 14 600 V conforming to UL 508 690 V conforming to IEC 60947-1
[U <sub>imp</sub> ] rated impulse withstand voltage	6 kV conforming to IEC 60947-6-2
Safe separation of circuit	400 V SELV between the control and auxiliary circuits conforming to IEC 60947-1 400 V SELV between the control or auxiliary circuit and the main circuit conforming to IEC 60947-1
Product weight	0.175 kg

## Environment

Heat dissipation	0.8 W for external auxiliary circuit 1.7 W for control circuit with LUB12 1.8 W for control circuit with LUB32
Immunity to microbreaks	3 ms
Immunity to voltage dips	70 % 500 ms conforming to IEC 61000-4-11
Standards	CSA C22-2 No 14 type E EN 60947-6-2 IEC 60947-6-2 UL 508 type E with phase barrier
Product certifications	ABS ASEFA ATEX BV CCC CSA DNV (Det Norske Veritas) GL GOST LROS (Lloyds register of shipping) UL
IP degree of protection	IP20 front panel and wired terminals conforming to IEC 60947-1 IP20 other faces conforming to IEC 60947-1 IP40 front panel outside connection zone conforming to IEC 60947-1
Protective treatment	TH conforming to IEC 60068
Ambient air temperature for operation	-25...60 °C with LUCM -25...70 °C with LUCA, LUCB, LUCC, LUCD
Ambient air temperature for storage	-40...85 °C
Operating altitude	2000 m
Fire resistance	650 °C conforming to IEC 60695-2-12 960 °C parts supporting live components conforming to IEC 60695-2-12

Shock resistance	10 gn power poles open conforming to IEC 60068-2-27 15 gn power poles closed conforming to IEC 60068-2-27
Vibration resistance	2 gn 5...300 Hz power poles open conforming to IEC 60068-2-6 4 gn 5...300 Hz power poles closed conforming to IEC 60068-2-6
Resistance to electrostatic discharge	8 kV level 3 in open air conforming to IEC 61000-4-2 8 kV level 4 on contact conforming to IEC 61000-4-2
Resistance to radiated fields	10 V/m 3 conforming to IEC 61000-4-3
Resistance to fast transients	2 kV class 3 serial link conforming to IEC 61000-4-4 4 kV class 4 all circuits except for serial link conforming to IEC 61000-4-4
Immunity to radioelectric fields	10 V conforming to IEC 61000-4-6