Product data sheet
Characteristics

LUCA05B
Standard control unit, TeSys Ultra, 3P, 1.25 to 5A, 690VAC, thermal magnetic protection, class 10, 24VAC coil



Main

Range	TeSys
Range of product	TeSys Ultra
Product name	TeSys Ultra
Device short name	LUCA
Product or component type	Standard control unit
Device application	Motor control Motor protection
Product specific application	Basic protection requirements for motor starters: overload and short-circuit
Function available	Manual reset Protection against overload and short-circuit Earth fault protection Protection against phase failure and phase imbalance
Product compatibility	Power base LUB12[RETURN]Power base LUB32[RETURN]Power base LUB38[RETURN]Power b
[Ue] rated operational voltage	690 V AC
Network frequency	40...60 Hz
Load type	3-phase motor - cooling: self-cooled
Utilisation category	AC-43 AC-41 AC-44
Motor power kW	1.5 KW at 400...440 V AC 50/60 Hz 2.2 KW at 500 V AC 50/60 Hz 3 KW at 690 V AC 50/60 Hz
Thermal protection adjustment range	1.25…5 A
Thermal overload class	Class 10 - frequency limit: 40…60 Hz - temperature compensation: -25…70 °C conforming to IEC Class 10 - frequency limit: 40…60 Hz - temperature compensation: -25…70 °C conforming to UL
Tripping threshold	14.2 x Ir +/- 20 %
Phase failure sensitivity	Yes
[Uc] control circuit voltage	24 V AC

Complementary

Control circuit voltage limits	20...26.5 V for AC circuit 24 V in operation 14.5 V for AC circuit 24 V drop-out
Typical current consumption	140 MA at 24 V AC I maximum while closing with LUB12 220 MA at 24 V AC I maximum while closing with LUB32 220 MA at 24 V AC I maximum while closing with LUB38 70 MA at 24 V AC I rms sealed with LUB12 90 MA at 24 V AC I rms sealed with LUB32 90 MA at 24 V AC I rms sealed with LUB38
Heat dissipation	2 W for control circuit with LUB12 3 W for control circuit with LUB32 3 W for control circuit with LUB38
Operating time	35 ms opening with LUB12 for control circuit 35 ms opening with LUB32 for control circuit 35 ms opening with LUB38 for control circuit 70 ms closing with LUB12 for control circuit 70 ms closing with LUB32 for control circuit 70 ms closing with LUB38 for control circuit
Standards	EN 60947-6-2 IEC 60947-6-2 UL 60947-4-1, with phase barrier CSA C22.2 No 60947-4-1, with phase barrier
Product certifications	CE[RETURN]UL[RETURN]CSA[RETURN]CCC[RETURN]EAC[RETURN]ASEFA[RETURN]ATEX[
[Ui] rated insulation voltage	690 V conforming to IEC 60947-6-2 600 V conforming to UL 60947-4-1 600 V conforming to CSA C22.2 No 60947-4-1
[Uimp] 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-
Fixing mode	Plug-in (front face)
Width	45 Mm
Height	66 Mm
Depth	60 Mm

Net weight	0.135 Kg
Compatibility code	LUCA

Environment

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…70 °C
Ambient air temperature for storage	-40…85 °C
Operating altitude	2000 m
Fire resistance	960 °C parts supporting live components conforming to IEC 60695-2-12 650 °C 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
Non-dissipating shock wave	1 KV serial mode conforming to IEC 60947-6-2 2 KV common mode conforming to IEC 60947-6-2
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
Immunity to microbreaks	3 Ms
Immunity to voltage dips	70 % / 500 ms conforming to IEC 61000-4-11

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	10.200 Cm
Package 1 Width	5.500 Cm
Package 1 Length	8.000 Cm
Package 1 Weight	112.000 G
Unit Type of Package 2	S02
Number of Units in Package 2	23
Package 2 Height	15.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	2.880 Kg

Offer Sustainability

Recyclability potential, in %	56
Total lifecycle Carbon footprint	19 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	1.0453743432267502
Carbon footprint of the manufacturing phase [A1 to A3]	1 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.05983562056345797
Carbon footprint of the distribution phase [A4]	0.1 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.008494682536318307
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	17.99763128339567
Carbon footprint of the use phase [B2, B3, B4, B6]	18 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	Yes
Carbon footprint of the end-of-life phase [C1 to C4]	0.27384786450423787
Carbon footprint of the end-of-life phase [C1 to C4]	0.3 kg CO2 eq.

Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	19
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	Yes
SCIP Number	801f74dc-0e56-49a3-aaeb-b34d99dcea36
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which
Halogen-free status	Halogen free plastic parts product
PVC free	Yes
End of life manual availability	End Of Life Information
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised