

SAFETY LOCKING DEVICES

L200 Safety Locking Device



Heavy-Duty L200 Safety Locking Device on a very large gate in a logistics operation with forklift traffic

The L200 Safety Locking Device designed for highly demanding applications is predestined for guarding large protective doors and sliding gates, in logistics operations, for example, or with very big machinery, and under harsh conditions. It is insensitive here to high recoil forces, such as when massive, heavy doors and gates slam. The interlocking is especially impressive due to its slender but very robust structure. It is used according to requirements with appropriate locking types (spring-force or magnet-actuated locking). The contact set enables safety-related integration up to category 4 in accordance with EN ISO 13849. If an escape route is planned, then when using the PB variant, the locking device can be quickly unlocked by pressing the ergonomically optimized unlocking button installed in the danger zone.

Typical areas of application

- Use with harsh ambient conditions and high mechanical demand
- Access guarding on big machinery and systems with dangerous movements that run-on
- Guard interlocking of heavy protective doors or sliding gates where the prevention of undefined interruptions is required

Important technical data, overview

Switch type	Interlock device with guard interlocking in accordance with EN 1088	
Housing material	Metal	
Interlocking force	Max. 2500 N	
Contact equipment	M: 2NC ⊕ A: 1NC ⊕ + 1NO	
Switching principle	Creep contact	
External actuator	AC-AHLxx series, straight, angled, resilient, alignable	
Locking type	Mechanically, electro-magnetically	
Locking actuation	Spring, magnet	
Approach actuation directions	1 x above, 4 x lateral (90°)	
Connection system	Number of cable entries	3
	Type of cable entries	M20 x 1.5
Protection rating	IP 67	

Functions

Interlock device with guard interlocking in accordance with EN 1088
Integration in control circuits up to category 4 in accordance with EN ISO 13849
Mechanical guard interlocking (spring-force)
Electro-magnetic guard interlocking (magnet-force)
Emergency unlock (-PB)
Illuminated displays for magnet activation
Auxiliary unlocking (-SLM24, -PB)

Special features

- **"Heavy duty" use, including under tough, harsh ambient conditions and external mechanical stresses**
- **Universal use with 5 actuator starting directions**
- **4 different "heavy duty" actuators for the most diverse installation applications**
- **Self-centering with funnel-shaped entry opening**
- **Ergonomically optimized emergency unlocking button (Panic Button version), position selectable**
- **Compact, slender, extremely robust**



Features



Certification requested:



IMQ is a European Commission recognized certification center

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SAFETY LOCKING DEVICES

Ordering information

L200

Included in delivery: Application information (print document)

Functions: Locking device with guard interlocking in accordance with EN 1088, emergency unlocking button (-PB), illuminated displays, auxiliary unlocking (-SLM24, -PB)

L200 Safety Locking Devices

Art. no.	Article	Description	Contact equipment
63000650	L200-M1C3-SLM24-L2G	Safety Locking Device, metal, mechanically locked, magnet 24V, 2 LED green	M:(2NC ⊖) A:(1NC ⊖ + 1NO)
63000651	L200-M1C3-MLM24-L2G	Safety Locking Device, metal, electro-magnetically locked, magnet 24V, 2 LED green	M:(2NC ⊖) A:(1NC ⊖ + 1NO)
63000652	L200-M1C3-SLM24-PB-L2G	Safety Locking Device, metal, mechanically locked, magnet 24V, emergency unlocking button, 2 LED green	M:(2NC ⊖) A:(1NC ⊖ + 1NO)

Actuators must be ordered separately, see page 417.

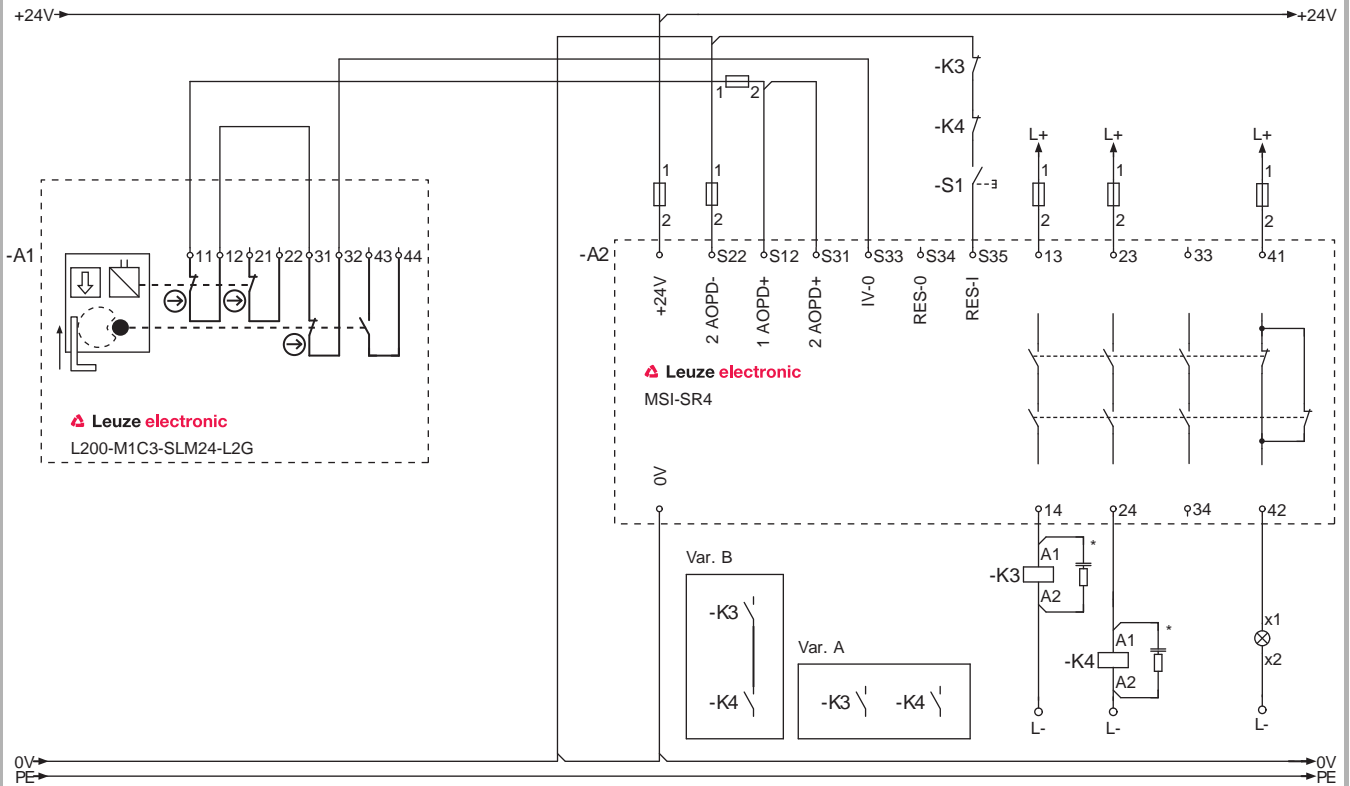
Article list for L200

Article	Description
L200	Safety Locking Device
-M	Metal housing
1	Contact set
C3	Number of cable bushings
-SLM24	Mechanically locked, magnet voltage, 24V
-MLM24	Electrically locked, magnet voltage, 24V
-L2G	2 green signal LEDs
-PB	Emergency unlock button

L 2 0 0

Electrical connection

L200 connection example



*) Spark extinction circuit, supply suitable spark extinction

L200 Safety Locking Device with MSI-SR4 Safety Relay

⚠ Please observe the operating instructions of the components!

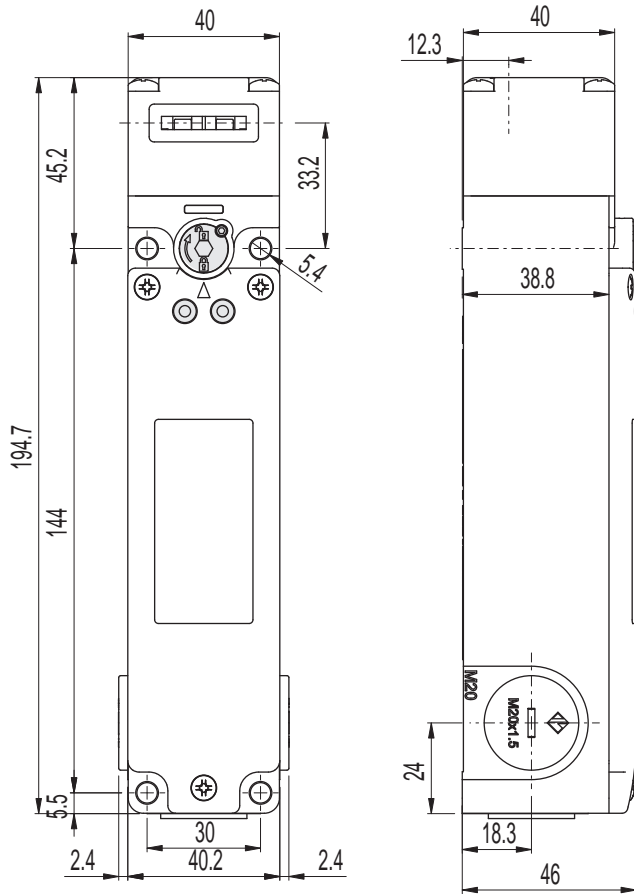
SAFETY LOCKING DEVICES

Technical data

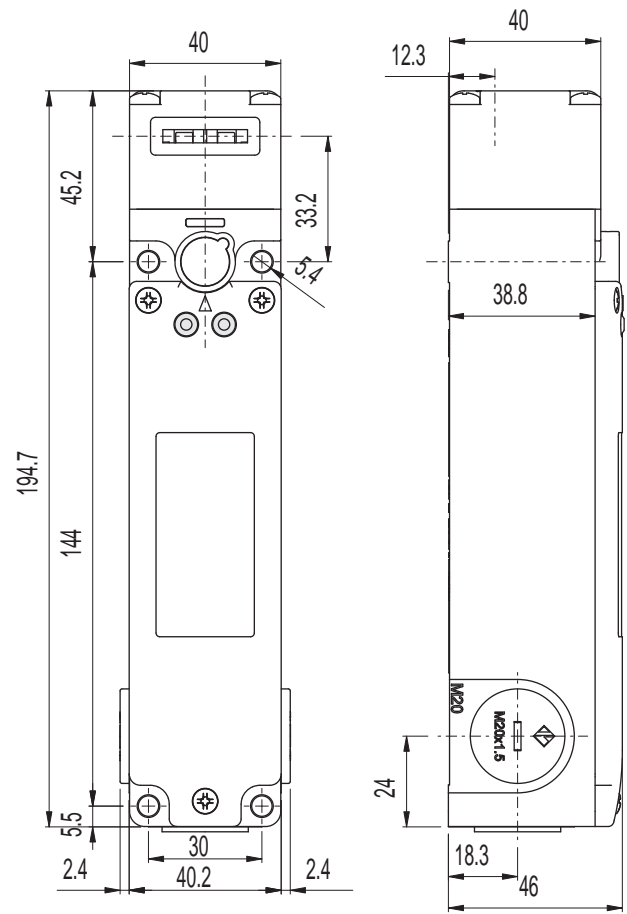
General system data		
Switch type	Interlock device with guard interlocking in accordance with EN 1088	
Service life (T_M) in accordance with EN ISO 13849-1	20 years	
Number of cycles until 10 % of the components have a failure to danger (B_{10d})	5,000,000	
Locking type	Mechanically (L200-M1C3-SLM24-L2G, L200-M1C3-SLM24-PB-L2G) Electro-magnetically (L200-M1C3-MLM24-L2G)	
Locking actuation	Spring (L200-M1C3-SLM24-L2G, L200-M1C3-SLM24-PB-L2G) Magnet (L200-M1C3-MLM24-L2G)	
Ambient temperature, operation	-25...+60 °C	
Dirt levels, external, in accordance with EN 60947-1	3	
Housing material	Metal	
External actuator	AC-AHLxx series, straight, angled, resilient, alignable	
Dimensions	See dimensional drawing	
Protection rating	IP 67	
Contact protection	Earthing	
Approach actuation directions	1 x above, 4 x lateral (90°)	
Mechanical life time in accordance with IEC 6047-5-1	1x10 ⁶ actuation clearance	
Actuation frequency according to IEC 6047-5-1	Max. 600 activations an hour	
Approach speed	Max. 0.5 m/s	
Actuation force (pull-out)	30 N	
Recoil tolerance	4.5 mm	
Interlocking force	Max. 2500 N	
Contact equipment	M: 2NC ⊖ A: 1NC ⊕ + 1NO	
Switching principle	Creep contact	
Contact opening	Force-fit	
Contact material	Silver alloy	
Magnet operating voltage and tolerance	24 V DC (-10 % to +25 %)	
Duty cycle	100 %	
Power consumption	Average, 9 VA	
Usage category in accordance with EN 60947-5-1	AC 15: Ue 250 V, Ie 5 A DC 13: Ue / Ie: 24 V / 6 A, 125 V / 1.1 A, 250 V / 0.4 A	
Rated insulation voltage	250 V AC, 300 V DC	
Conventional thermal current	Max. 10 A	
Short-circuit protection in accordance with IEC60269-1	Magnet	0.5 A, 24 V, type gG
	Safety circuit	500 V, 10 A, type gG
Connection system	Number of cable entries	3
	Type of cable entries	M20 x 1.5
	Cable cross-section (wire)	1 x 0.34 mm ² to 2 x 1.5 mm ²

Please note the additional information in the connecting and operating instructions at www.leuze.com/l200.

Safety Locking Device



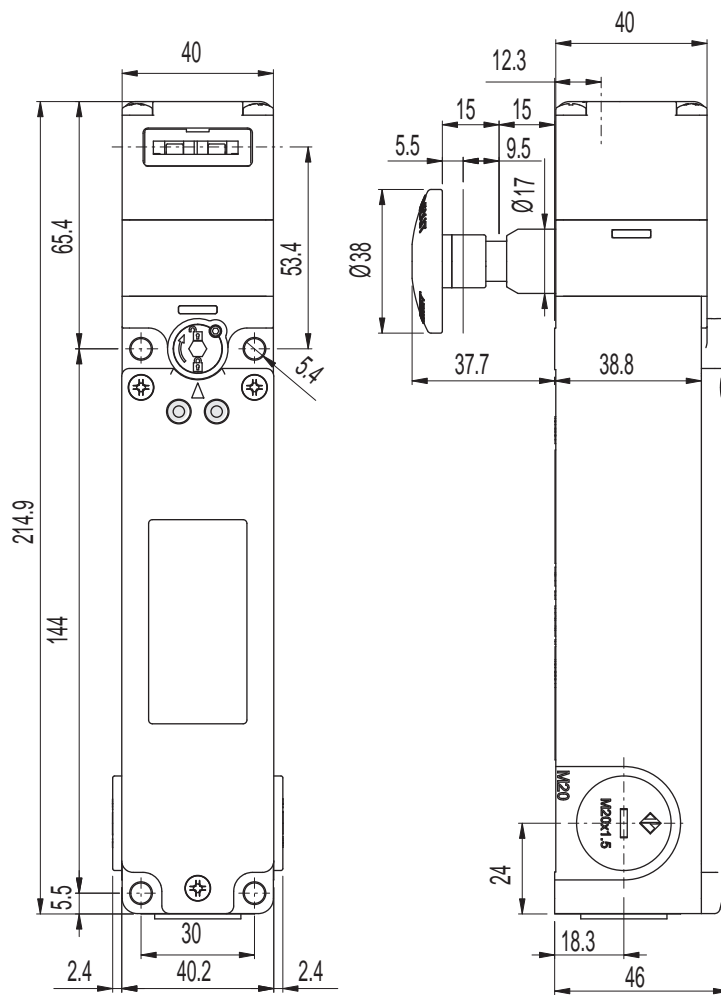
Safety Locking Device L200-M1C3-SLM24-L2G



Safety Locking Device L200-M1C3-MLM24-L2G

Dimensional drawings

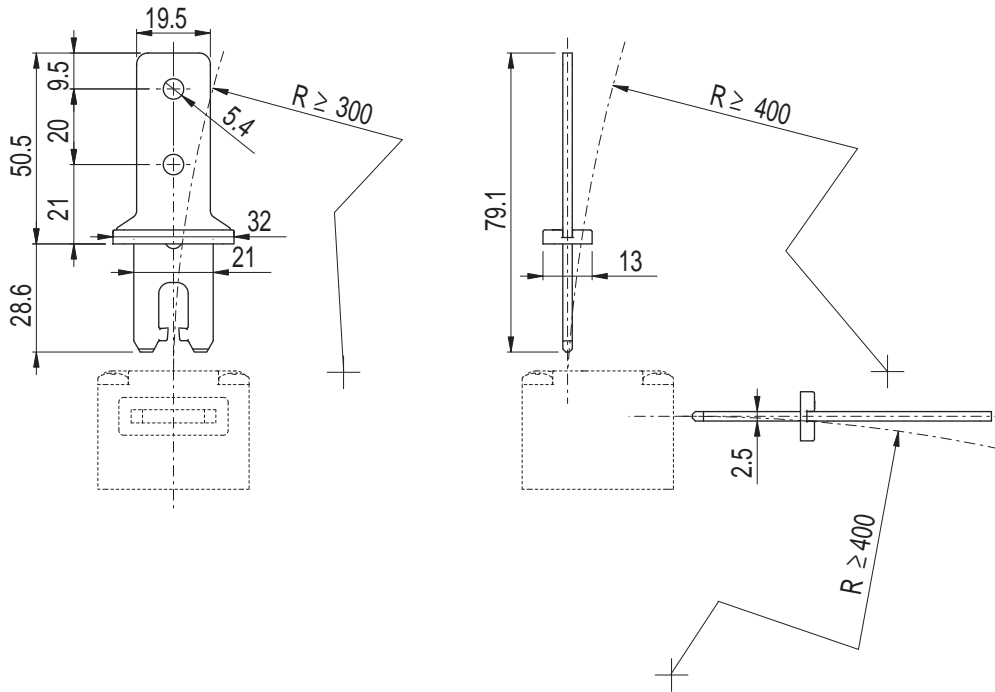
Safety Locking Device



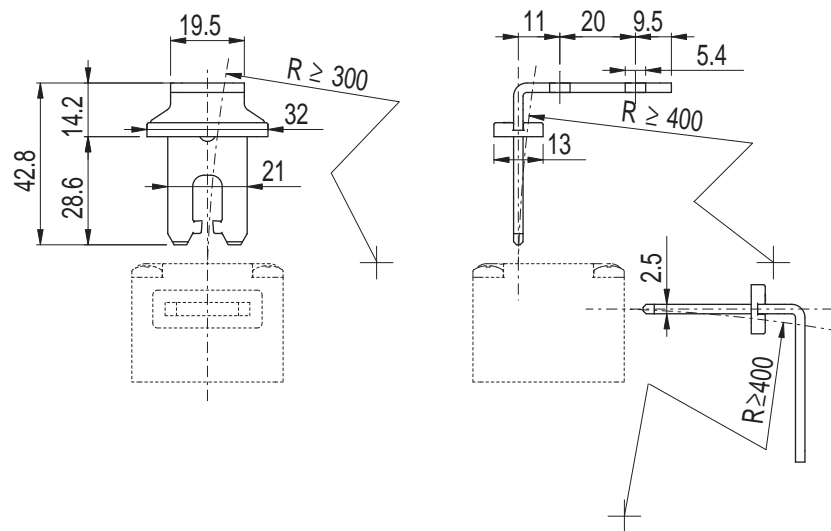
Safety Locking Device L200-M1C3-SLM24-PB-L2G

Dimensions in mm

Actuator



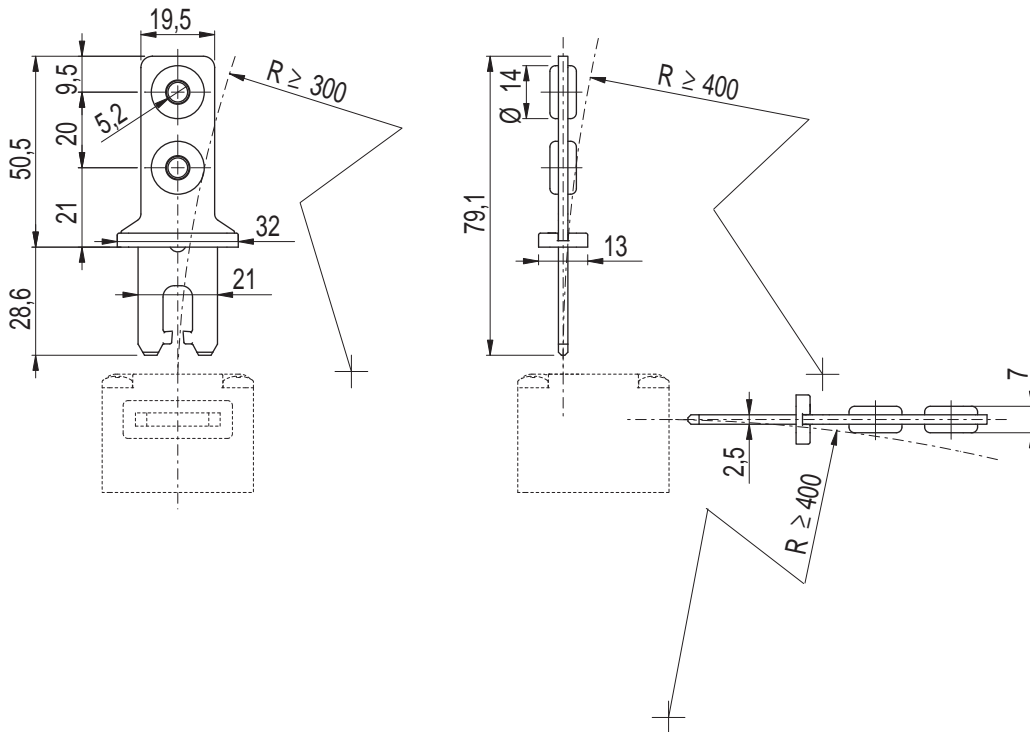
Actuator AC-AHL-S



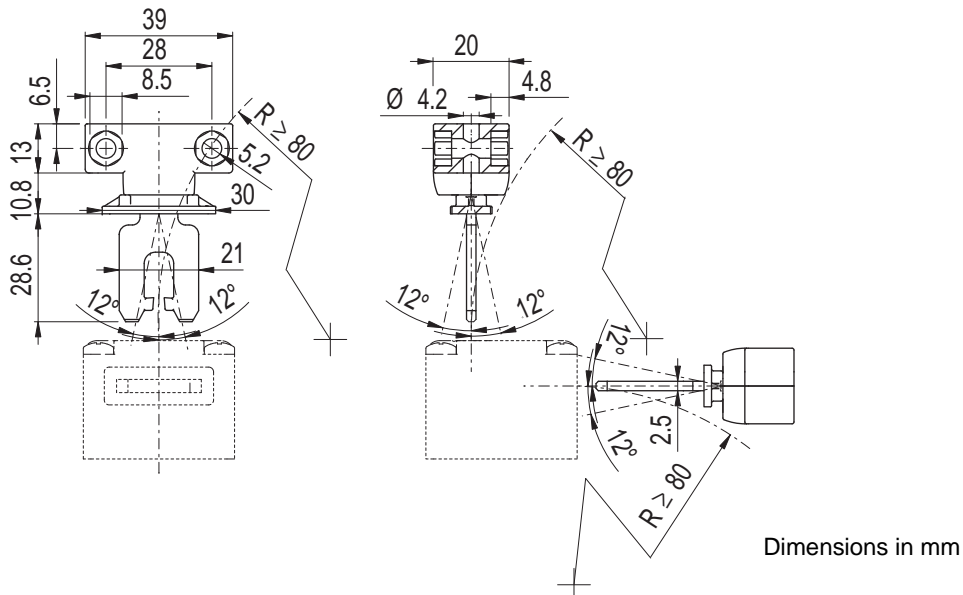
Actuator AC-AHL-A

Dimensional drawings: Accessories

Actuator



Actuator AC-AHL-RM



Actuator AC-AHL-F4J2-TK

Accessories ordering information
L200 Heavy Duty accessories

Art. no.	Article	Description	Length, design
63000740	AC-AHL-S	Actuator	Straight
63000741	AC-AHL-A	Actuator	Angled
63000742	AC-AHL-RM	Actuator	Straight, rubber-mounted fixing
63000743	AC-AHL-F4J2-TK	Actuator	Straight, flexible, 4 directions, alignable 2 directions, rotatable head
63000843	AC-A-M20-12NPT	Adapter	M20 x 1.5 on 1/2 NPT
63000845	AC-PLM-8	Built-in plug	M12, metal, with internal 8-pin connection cable
63000847	AC-KL-AHL	KeyLock for locking the actuator introduction	
63000749	AC-Exit-PB	Stick-on label "Push To Exit"	

Article list for L200 accessories

Article	Description
AC	Accessories
-AHL	Actuator, Heavy Duty
-S	Straight
-A	Angled
-RM	Rubber-mounted
-F4	Flexible in 4 directions
J2	Alignable in 2 directions
-TK	Actuator key, turns
-PLM-8	Built-in plug, 8-pin, metal
-KL	Locking of the actuator introduction

AC