

Cross Limit Switch

LAMBDA



B-COMMAND®
PREMIUM ENGINEERING



B-COMMAND QUALITY AND RELIABILITY

Since many years B-COMMAND is active in the branch of conveyor and hoisting technique as a supplier of solutions for control- and safety technology.

The requirements on our products differ widely - from heavy industry applications on an overhead crane up to accurate positioning of machinery and highly sensitive devices. But one thing remains the same for all our products: quality and reliability.

Together with our customers it is our goal to improve the overall safety of industrial machinery. All our efforts during research and development and product design are focused on using the best technology for maximum customer advantages. Creating special solutions

for individual projects within very short time also for small and medium quantities is one of our major USP's.

We work in a very close cooperation to all partners among the supply chain - customers and suppliers. Because of this fact, we have the full transparency of all details in production and are able guarantee the best quality of our products, even in difficult environments.

We are willing to create outstanding solutions for our outstanding customers.



QUALITY MANAGEMENT
— Certification —



PREMIUM CROSS LIMIT SWITCH FOR CRANES AND HOISTS



The conveyor- and hoisting technique has to deal with uncountable requirements and regulations for both - operator and machinery. Operator and manufacturer of cranes put an enormous focus on permanent safety and reliability of machinery under all environmental conditions.



The safe limiting of the end-positions of crane and trolley travel of overhead-cranes is realized by our cross limit switches. Beside the basic stop-function of trolley movement for each direction by using 2 contacts, we are also able to realize a **slow-down and stop function by using 4 contacts**. In addition special switching configurations allow an exclusion of defined areas out of the travel range of the cranes.

Cross limit switches of series Alpha, Beta and Lambda are especially made for the heavy industry usage.

All used materials guarantee robustness, a good dimensional stability and max. resistance against oil, gas and extreme variations in temperature.

The technological progress in crane development implicates higher requirements for cross limit switches for new machines. All our cross limit switches have been designed for high-speed cranes and can be used with **max. 3m/s activation speed**.

The housings of the cross limit switches are

made of extremely resistant ZAMAK die-cast material or fiber-reinforced thermoplastic which are also resistant against high loads.

All of our cross limit switches are equipped with **3 possible cable-entries in size of M20**. This allows a flexible cable-connection for the operator. Additionally we offer a pre-wiring.

The operator can choose between:

- Delivery of pre-wired contacts with connector installed in the housing (M20, number of poles different),
- Delivery of pre-wired contacts with cable in desired length.

Realizing customized solutions in the shortest time is a challenge we daily face. Beside all standard cross limit switches we pictured in our catalog, we are able to offer a **wide range of special solutions according to your requirements**.

We look forward to work on your specification.



Series Lambda

- ▶ Small, compact dimensions
- ▶ Robust metal housing
- ▶ 2 or 4 contacts (1NO+1NC each)
- ▶ Multiturn version without end-stop
- ▶ Several switching configurations
- ▶ 3 possible cable entries
- ▶ Activation speed: max. 3m/s
- ▶ Protection degree IP 65



PRODUCT DESCRIPTION

Cross limit switches series Lambda stand for robustness and compactness. The compact housing is made of extremely resistant ZAMAK die-cast material and offers space for up to 4 potential-free switching contacts.

The cross limit switches Lambda are available with overall 7 different switching configurations.

- Beside the basic stop-function of trolley movement for each direction by using 2 contacts, we are also able to realize a slow-down and stop-function by using 4 contacts which is used for overall crane movement.
- Beside all standard configurations customized switching profiles can be created according to your requirements.

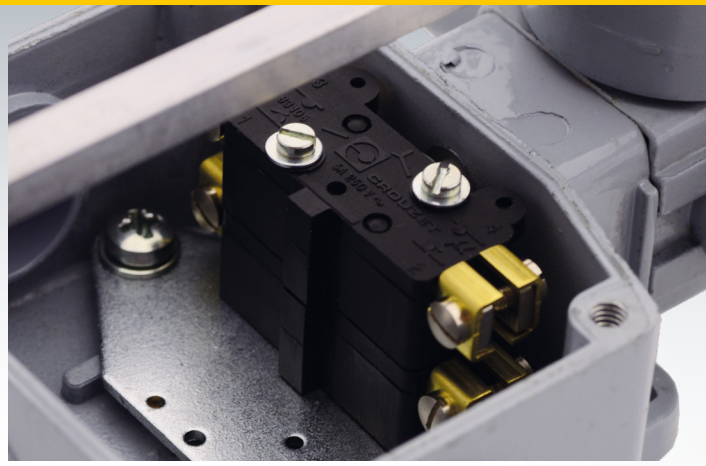
All materials are resistant against oil, gas and extreme variations in temperature. The rubber sealing allows an optimum protection against dust and liquids, which is underlined by certified protection degree IP 65.

The small and compact housing is especially perfect for a space-saving application. The position limit switch is specially designed and manufactured according to the Machinery Directive 2006/42/EG and fulfils Performance Level c and d (different types).

For easy installation and wiring all contacts are clearly marked and the zero position of the limit switch is visualized by a red painted cross bar and also a zero marking on the bar fastener plate for error prevention during mounting.



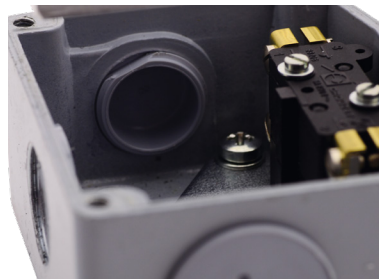
PRODUCT SPECIFICATIONS



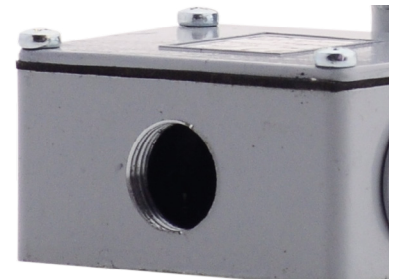
- 2 Contacts (1NO+1NC potential-free) with 4 screw connections each.
- Snap Action Switches, Self-cleaning.



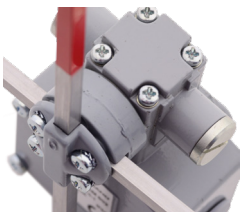
- 4 Contacts (1NO+1NC potential-free) with 4 screw connections each.
- Snap Action Switches, Self-cleaning.



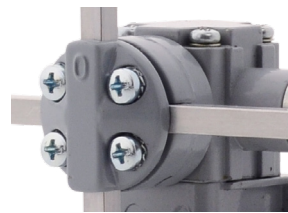
- Comfortable space inside housing for cable connections.
- Separate ground connection inside.
- Flexible cabling made easy by three possible cable entries.



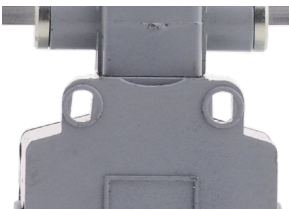
- Cable entry M20x1,5 including thread for easy cable entry.
- Non-losable cover fixation screws outside protection area for stable protection degree.



- Compact ZAMAK metal housing for crane & hoist applications.
- Red marked zero cross bar for clear identification of limit switch position.



- Zero-position marking with unique fixing position for bar fastening plate.
- Self-locking screws for maximum safety.



- 2 fixation points below the limit switch head for safe mounting.



- Cover with integrated sealing.
- Non-losable cover fixation screws outside protection area for stable protection degree.

OPTIONAL



Wiring with standard cable in requested lengths



Mounting and internal pre-wiring of connectors



TECHNICAL SPECIFICATIONS

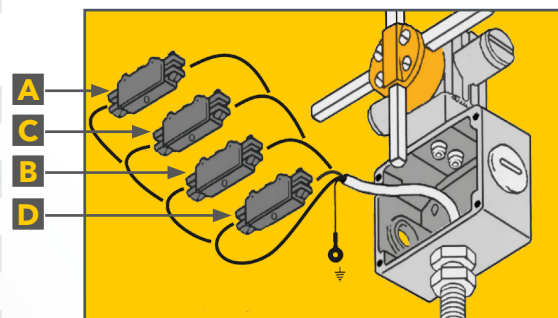
• Marking	CE
• Harm. rules	2011/65/EU, 2015/863/EU, 2014/35/EU, 2006/42/CE, EG1907/2006 (REACH) DIN EN 60204-1, DIN EN60947-1, DIN EN 60947-5-1, DIN EN 60529
• Temperature	operational: -20°C ... +70°C storage: -40°C ... +70°C
• Insulation class	Class I acc. to IEC 536 / DIN EN 61140 VDE 0140-1
• Protection degree	IP 65 acc. to IEC 529, DIN EN 60529 VDE 0470-1
• Cable-entries	3 x M20x1,5
• Material enclosure	ZAMAK die-cast enclosure
• Max. activation speed	3 m/s
• Material rods	Aluminium, length 200mm (optional length 300mm)
• Reliability-prediction acc. to DIN EN ISO13849-1 (B10d)	2x10 ⁶ activations (LAM006), 4x10 ⁶ activations (LAM001, LAM002)
• Performance Level	PL d (LAM001, LAM002), PL c (LAM006)

ELECTRICAL SPECIFICATIONS

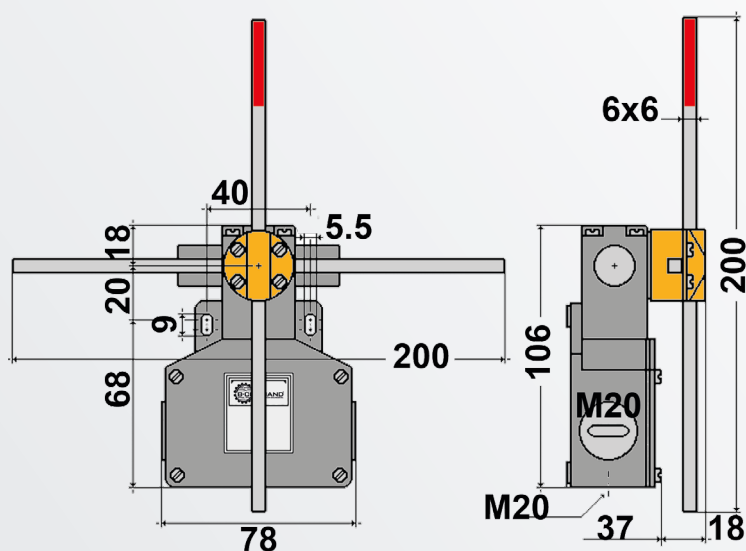
• Current Nominal rating	5A at 250V~
• Current thermal rating	17,5A at 250V~
• Max rating	16A at 250V~ 16A at 24V DC 0,6A at 250V DC

TECHNICAL CHARACTERISTICS OF CONTACTS

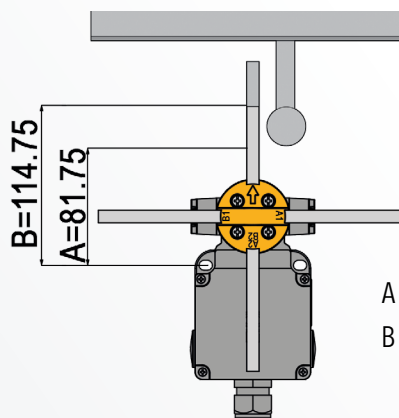
• Approvals	CE, CSA, UL, IMQ, UTE, VDE, ASE
• Switches	1NO+1NC potential free contacts, Snap Action, Silver alloy, self-cleaning
• Nominal operation voltage	250V~
• Nominal insulating voltage	250V~
• Thermal rated current	17.5A
• Nominal current	5A during 250V~
• Mech. lifetime	10 million operations
• Cable diameter	2x1,5 mm ² ; 1x2,5 mm ²
• Connection	Screw terminals



DIMENSIONS



MOUNTING INSTRUCTIONS



A Rod length: 200 mm
B Rod length: 300 mm

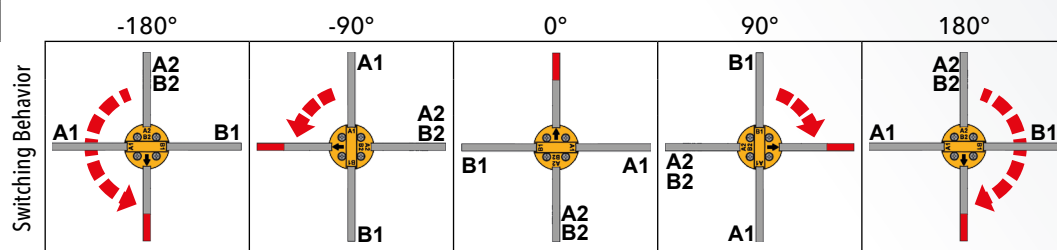
- Maintained positions every 90°
- Average angle for tripping: 48°
- Maximum impact speed: 3 m/s
- Max. operation frequency: 3600 operations/hour

ATTENTION: Failure to follow these technical specifications will jeopardize functioning and safety of the system.

SWITCHING BEHAVIOR CROSS LIMIT SWITCH SERIES LAMBDA

Contact open

Contact close



Item-Code

Number
Contacts/
Maintained
Positions

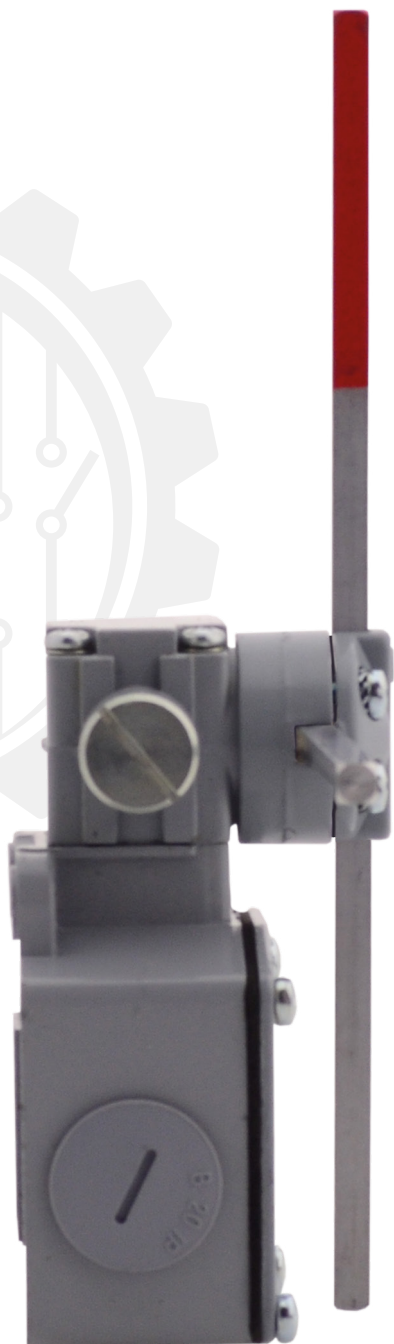
LAM001	2 x 1NO+1NC, Multiturn	A	11-12 13-14						
		B	11-12 13-14						
LAM002	2 x 1NO+1NC, 3 Positions	A	11-12 13-14						
		B	11-12 13-14						
LAM003	2 x 1NO+1NC, Multiturn	A	11-12 13-14						
		B	11-12 13-14						
LAM004	2 x 1NO+1NC, Multiturn	A	11-12 13-14						
		B	11-12 13-14						
LAM005	2 x 1NO+1NC, Multiturn	A	11-12 13-14						
		B	11-12 13-14						
LAM006	4 x 1NO+1NC, 5 Positions	A	11-12 13-14						
		B	11-12 13-14						
		C	11-12 13-14						
		D	11-12 13-14						
LAM007	4 x 1NO+1NC, Multiturn	A	11-12 13-14						
		B	11-12 13-14						
		C	11-12 13-14						
		D	11-12 13-14						



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