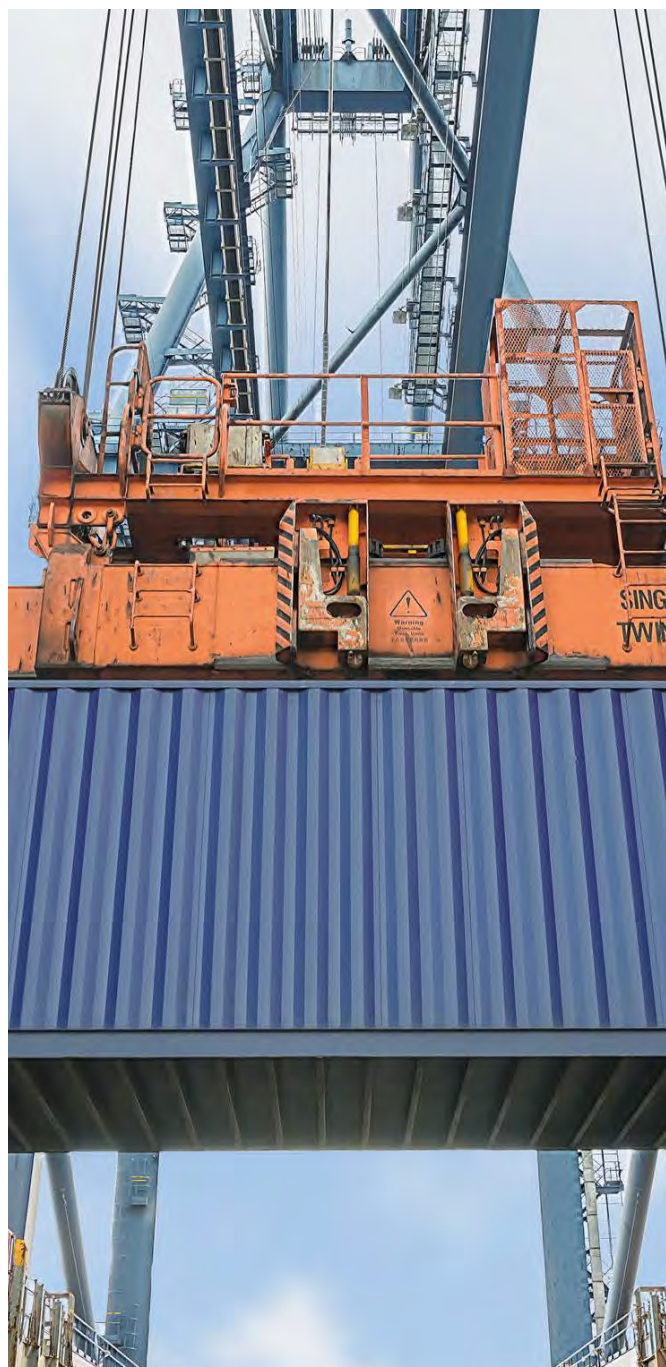


AT A GLANCE



LIGHT CAM[®] AND LIGHT CAM[®] M

BENEFITS INCLUDE

- Form fit gear
- Self locking design for the cam discs
- High gear ratio of 74 for adjusting the cams
- Drive of incremental and absolute encoders possible

Limit Switch Control Current

Worm / Bevel Geared Cam Limit Switches

Series Light Cam[®] / Light Cam[®]M – Basic Limit Switch

Revision number: 3.1.2.1-01

Revision date: 19.11.2019

Features

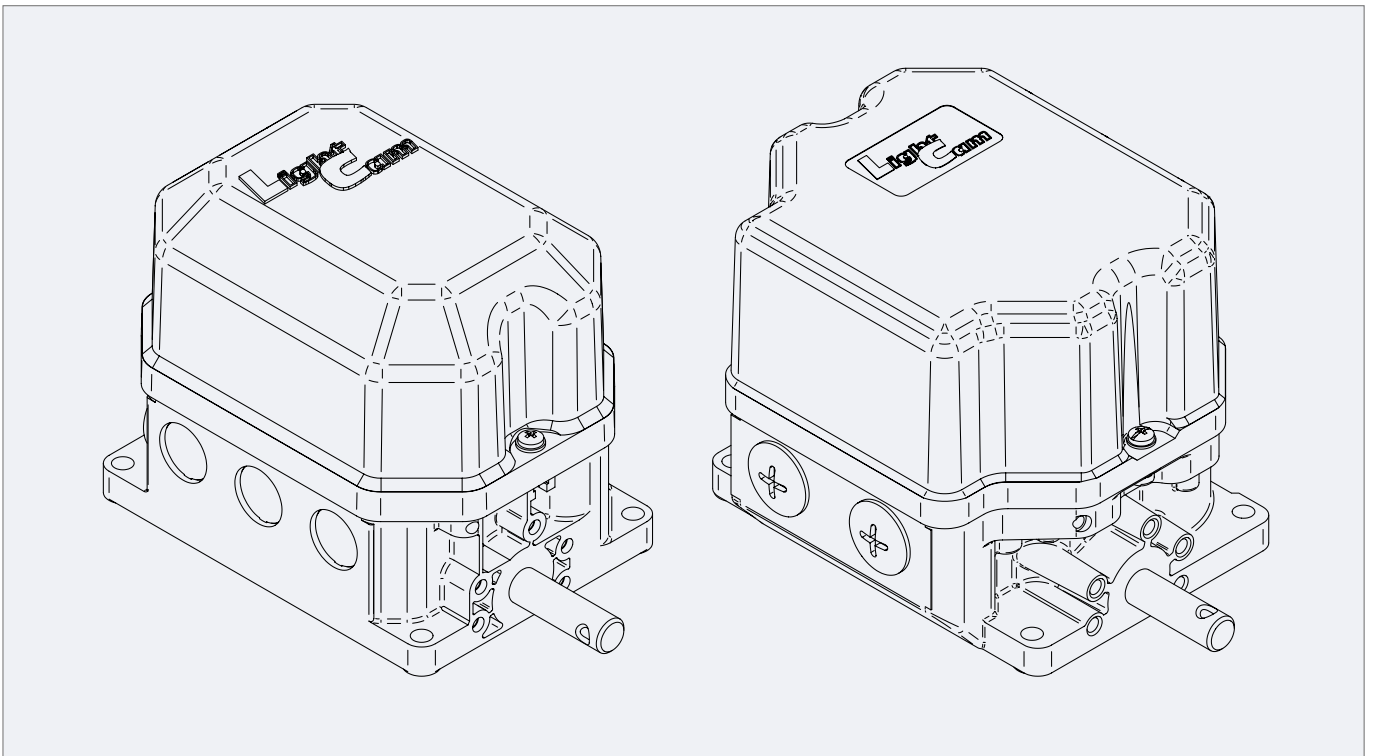
- Combined worm / spur gear for high gear reductions requiring less mounting space
- 4 or 8 contacts available

Application

- Crane
- Wind
- Stage

Additional information

- IP65 synthetic housing or IP66 aluminum housing available



Series Light Cam® / Light Cam® M – Gear Data

Revision number: 3.1.2.2-01

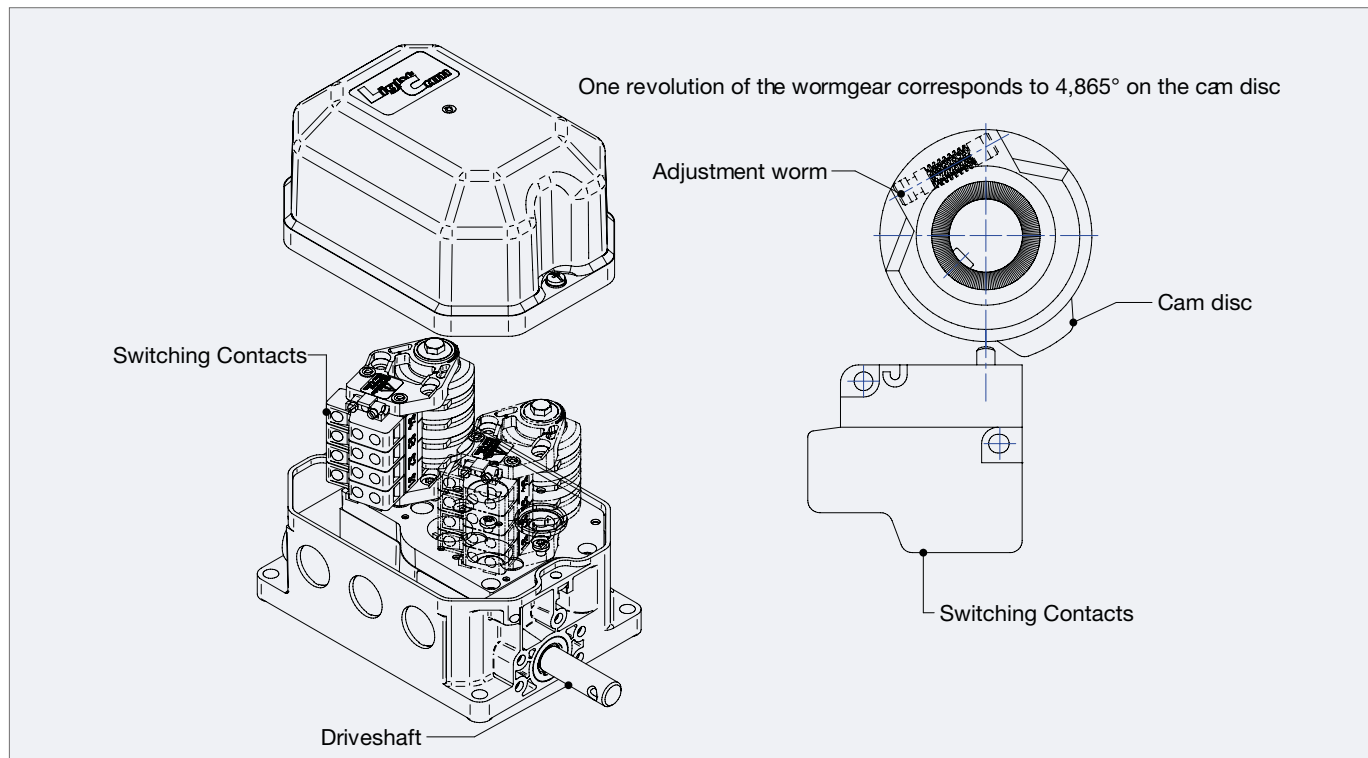
Revision date: 19.11.2019

Features

- Cam discs with precise adjustment and cam diameter of 42.5 mm
- Form fit gear design

Additional information

- Self-locking design for the cam discs
- High gear ratio of 74 for the cam adjustment



Gear Data Light Cam® / Light Cam® M											
Nominal revolutions at 40° - cam disc	Gear ratio	Mechanical hysteresis [revolutions at drive shaft]		Min. drive torque [Nm] for Switching an single contact	Max. drive torque [Nm] for forced opening an single contact		Max. input speed [rpm]	Min. input speed [rpm] (only when used as a changeover)			
		Contact			Contact			Contact			
		99, 99G	80, 88, 90, 90G		99, 99G	80, 88, 90, 90G		99, 99G	90, 90G	88	80
0,85	1,000	0,003	0,017	0,2	0,493	1,663	200	0,049	0,212	0,042	0,424
1,85	2,118	0,006	0,037		0,338	0,891		0,103	0,449	0,090	0,899
3,9	4,484	0,013	0,077		0,265	0,526		0,219	0,952	0,190	1,903
6	6,781	0,020	0,117		0,243	0,416		0,331	1,439	0,288	2,878
9	10,254	0,031	0,177		0,229	0,343		0,501	2,176	0,435	4,352
15	16,994	0,051	0,294		0,217	0,286		0,830	3,606	0,721	7,212
25	29,672	0,089	0,513		0,210	0,249		1,449	6,297	1,259	12,593
29	33,529	0,101	0,579		0,209	0,244		1,638	7,115	1,423	14,230
53	60,000	0,180	1,037		0,205	0,224		2,931	12,732	2,546	25,465
76	85,500	0,257	1,477		0,203	0,217		4,176	18,144	3,629	36,287
95	107,368	0,322	1,855		0,203	0,214	5,244	22,784	4,557	45,569	
135	153,000	0,459	2,644		0,202	0,210	7,473	32,468	6,494	64,935	
180	208,772	0,626	3,607		0,201	0,207	10,198	44,303	8,861	88,606	
260	297,500	0,893	5,140		0,201	0,205	14,532	63,131	12,626	126,263	
305	343,817	1,031	5,940		0,201	0,204	16,794	72,960	14,592	145,920	
360	406,870	1,221	7,030		0,201	0,204	19,874	86,340	17,268	172,681	
435	489,939	1,470	8,465		0,201	0,203	23,931	103,968	20,794	207,937	
515	579,789	1,739	10,017		0,201	0,203	28,320	123,035	24,607	246,070	
620	698,163	2,094	12,063		0,200	0,202	34,102	148,155	29,631	296,310	
880	994,880	2,985	17,189		0,200	0,201	48,595	211,120	42,224	422,240	

Series Light Cam® / Light Cam® M – Switching Contacts 99

Revision number: 3.1.2.3-01

Revision date: 19.11.2019

Features

- Contacts with positiv opening
- For up to 10 million switching operations
- Gold plated contacts on request
- Push or snap action contacts

Application

- Silver contacts for Relais
- Gold contacts for PLC

Additional information

- Screw or flat plug connections

Circuit diagram

Type of contact

- 99
- 99C
- 99G
- 99P
- 99A
- 99T

Designation	Switching contact		Contact material		Switching system		Connection			Functionality		Electrical data		
	Change-Over (NC/NO)	Normally closed (NC)	Silver	Gold (PLC-Application)	Snap-action	Push-action	screw terminals; 0,5 - 1,5 mm ² / AWG 16 ... 22	Flatplugs 6,3mm	Standard wire output	Positive opening acc. to EN 60947-5-1 Annex K	Short circuit protection	Utilization category acc. to IEC 60947	Conventional thermal current I _{th}	Rated Insulation Voltage U _i
99	•		•		•		•			•	10A gG	AC-15: 1,5A, 230V DC-13: 0,5A, 60V	10A	250V
99P	•		•		•				•	10A gG				
99G	•			•	•				•	2A gR				
99T		•	•			•	•		•	10A gG				
99A		•		•		•	•		•	2A gG				
99C	•		•		•			•	•	10A gG				

Limit Switch Control Current

Worm / Bevel Geared Cam Limit Switches

Series Light Cam® / Light Cam® M – Switching Contacts 80 – 90

Revision number: 3.1.2.3-01

Revision date: 19.11.2019

Features

- Snap – and push action contacts available in silver and gold
- Galvanic isolated contacts possible
- All contacts with positive opening

Application

- Silver contacts for relays
- Gold contacts for PLC

Additional information

- Up to 3 contacts can be installed inside

Circuit diagram	Type of contact
	⊕ 80 ⊕ 90 ⊕ 90G
	⊕ 81
	⊕ 88

Designation	Switching contact		Contact material		Switching system		Connection screw terminals; 0,75 - 2,5 mm ² / AWG 14 ... 20	Functionality		Electrical data		
	Change-Over (NC / NO)	Normally closed (NC)	Silver	Gold (PLC- Application)	Snap- action	Push- action		Positive opening acc. to EN 60947-5-1 Annex K	Short circuit protection	Utilization category acc. to IEC 60947	Conventional thermal current I _{th}	Rated Insulation Voltage U _i
80	•		•		•		•	•	6A gG	AC-15: 3A, 230V DC-13: 1A, 110V	10A	400V
81	•		•			•	•	•	6A gG	AC-15: 3A, 230V DC-13: 1A, 110V		
90	•		•		•		•	•	6A gR	AC-15: 1A, 230V DC-13: 0,5A, 110V		
90G	•			•	•		•	•	2A gG	AC-12: 0,25A, 230V DC-12: 0,25A, 110V		
88		•		•	•		•	•	10A gG	AC-15: 1,5A, 230V DC-13: 1,5A, 24V		

Limit Switch Control Current

Worm / Bevel Geared Cam Limit Switches

Series Light Cam[®] – Light Cam[®] B3

Revision number: 3.1.1.4-01

Revision date: 19.11.2019

Features

- Synthetic housing IP65 for outdoor application

Application

- Crane
- Wind
- Stage

