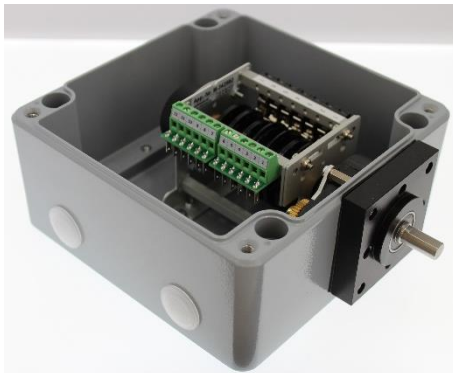


KWG160 SERIE



For Industrial, Crane's and Lockings



- ➔ Heavy Duty Limit Switch
- ➔ Up to 10 Channels
- ➔ Different micro switches
- ➔ 1x PG16 Cable output
- ➔ Protection class IP64
- ➔ Protection against contact

Product description

Heavy duty geared limit switch in an aluminium housing easy and variable to mount. 100% guard and interlocking drive concept up to the cam. Available in different ratios. The cover is provided with a sealing ring and fixable with 4 screws..

Application

This heavy duty geared limit switch could be used to control every end switch application in cranes, mining, automotives and wind power.

Technical specifications

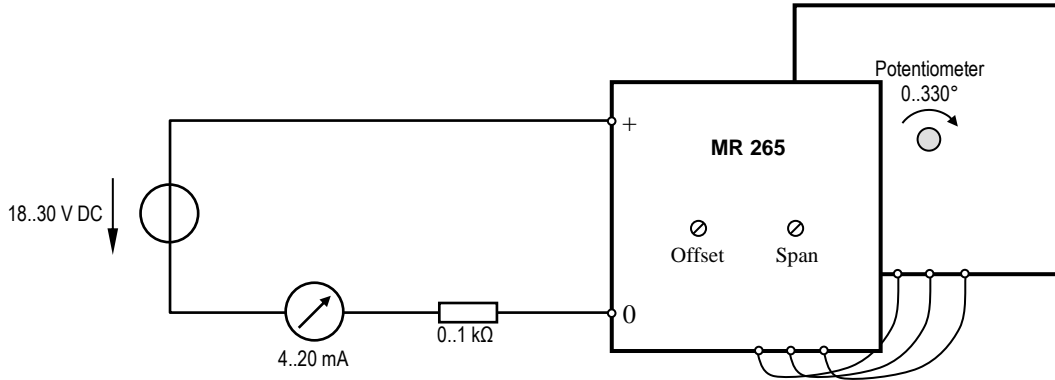
Usable Gear Ratio	1:1 – 2500:1	(more on request)
Program channels	2 - 10	(more on request)
Mechanical life time	> 20 Mill.	
Switching frequency	5 Hz	
Contact chatter time	<4 ms	
Actuating speed	>10 µm/s	
Contact break	0,6 mm	
Contact pressure	0,2 N	
Temperature range	-40 °C +85 °C	
Hysteresis	depend of ratio	
Repeatability	depend of ratio	
Weight	ca. 1,5 Kg	
MTBF (IEC 60050)	ON/OFF 10 Mio cycles 200'000 hours	
Rotation speed	max. 1500 U/min	
Shaft load	radial 450N, axial 200N	
Protection	IP 64 EN 60 529	
Shock resistance	2500m/s ² , 6ms IEC 68-2-27	
Vibrations resistance	200 m/s ² , 10....2000 Hz IEC 68-2-6	
Humidity	40% rh	

KWG160 SERIE



Interface MR265

MR265 Adjustable current interface 4...20 mA (2- wire system)



Connection
 Power supply:
 Current consumption:
 Max. Output power:
 Max. load:
 Output current:
 Linearity:
 Temperature coefficient:
 Temperature range:

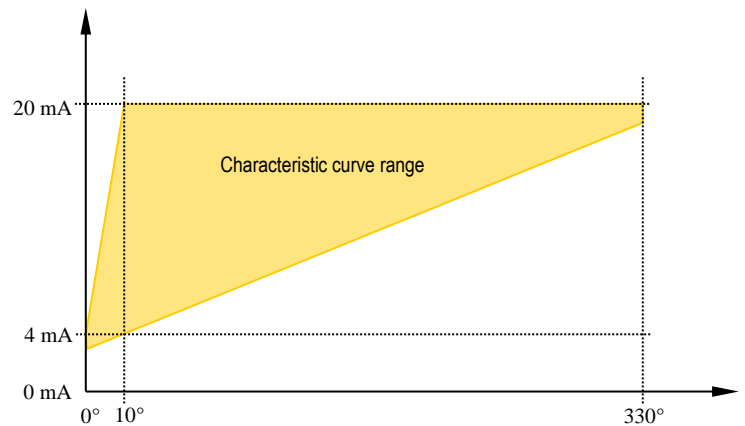
2- wire system
 18...30V DC (Specifications apply at 24V)
 4...20 mA
 400 mW
 1 kΩ
 4...20 mA
 ± 0.5 %
 100 ppm/K
 0...70°C

Adjustment:

The shaft of the potentiometer can be rotated a maximum of 330°. The output characteristic of 4..20 mA can be set as follows..

Min. Offset: 0°
 Max. Offset: 10°
 Min. Span: 48.5 μA/°
 Max. Span: 1.6 mA/°





With this values we get a range for the output characteristic that is shown in the graphic aside.



KWG160 SERIE



Microswitch Type

Order code	Picture	Description
0		KS25B4 changeover contact for cable shoe 2.8x0.55mm silver contact switching current 4A 250 VAC / 1A 60VDC
		Max. Number of switches without MR265= 10 / with MR265= 8
1		KS26B4 changeover contact for cable shoe 2.8x0.55mm gold contact switching current 4A 250 VAC / 1A 60VDC
		Max. Number of switches without MR265= 10 / with MR265= 8
2		S840 V20 changeover contact for cable shoe 6.3x0.9mm silver contact switching current 10A 250V AC / 6A 24V DC
		Max. Number of switches without MR265= 5 / with MR265= 4
4		S845 controlled opening switch gold contact switching current 10A 250V AC / 6A 24V DC
		Max. Number of switches without MR265= 5 / with MR265= 4

KWG160 SERIE



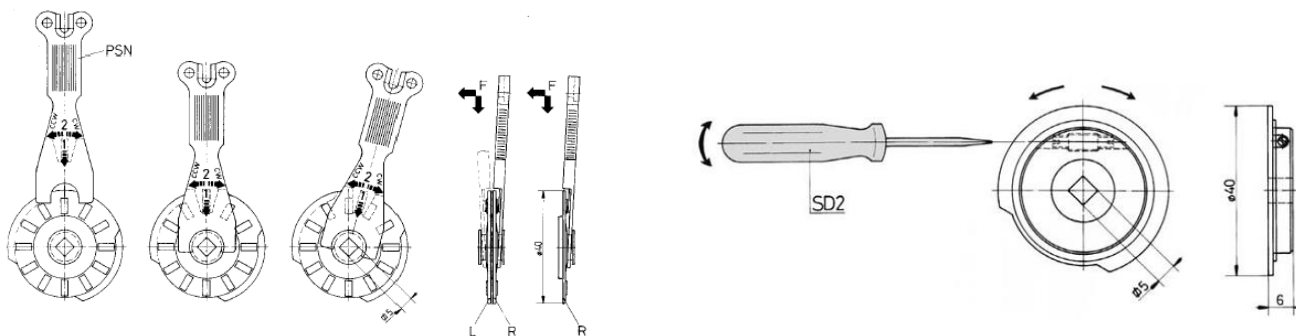
Cam types and adjustment

Type	Order code	Picture	Description
NK Cams	0		single cam
			adjustable with included PSN Key
			available with 20° / 60° / 90° / 180° opening angle
	1		double cam adjustable with included PSN Key free programmable from 6° - 180°
NV Cams	2		single cam
			adjustable with included screwdriver
			available with 20° / 60° / 90° / 180° / opening angle
	3		double cam adjustable with included screwdriver free programmable from 6° - 180°

Adjusting guideline of NV / NK cams

To adjust the NK pulley - insert the PSN key into the cam, press lightly and adjust the cam pulley by turning the key.

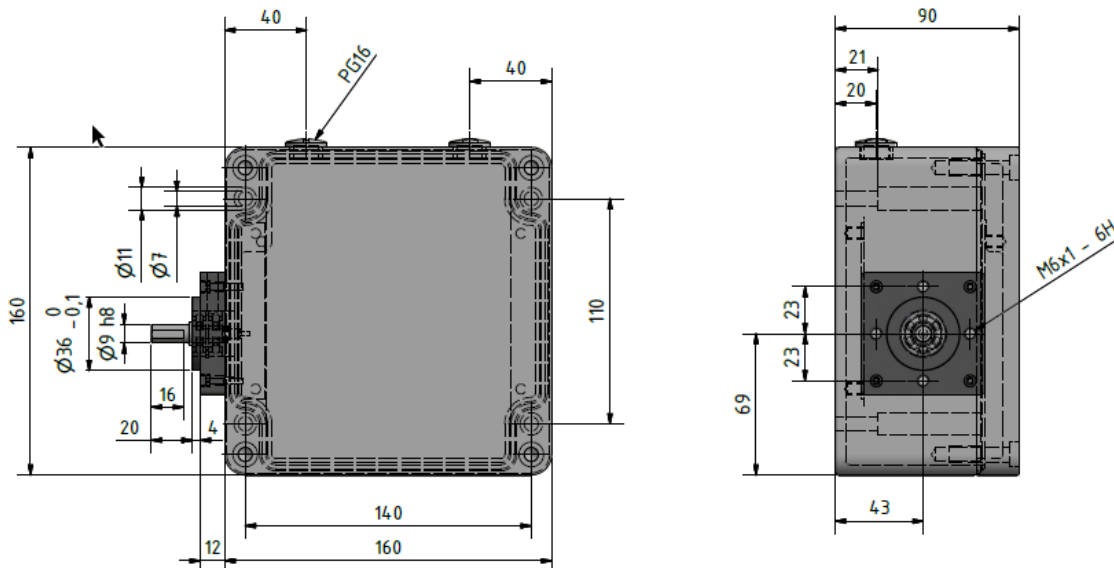
To adjust the NV washer - turn the screw located radially on the side of the cam with the supplied SD screwdriver until the cam is in the desired position.



KWG160 SERIE



Reference drawing in mm



Connection terminal + connection cable

The gear limit switch is supplied with a connection terminal and suitable connection cables and jumpers for the COMs. For pre-wired versions please contact our sales department.

Up to 3 switches = 6 pole terminal

supplied: connecting cables and jumpers

Pin	1	2	3	4	5	6
Signal	Signal switch 1	Signal switch 2	Signal switch 3	COM switch 1-3	MR265 GND	MR265 4-20mA

Up to 5 switches = 8 pole terminal

supplied: connecting cables and jumpers

Pin	1	2	3	4	5	6	7	8
Signal	Signal switch 1	Signal switch 2	Signal switch 3	Signal switch 4	Signal switch 5	COM switch 1-5	MR265 GND	MR265 4-20mA

Up to 10 Switches = 2x8 pole terminal

supplied: connecting cables and jumpers

Pin	1	2	3	4	5	6	7	8
Anschluss	Signal switch 1	Signal switch 2	Signal switch 3	Signal switch 4	Signal switch 5	Signal switch 6	Signal switch 7	Signal switch 8

Pin	9	10	11	12	13	14	15	16
Anschluss	Signal switch 9	Signal switch 10	COM switch 1-10	N/C	N/C		MR265 GND	MR265 4-20mA

KWG160 SERIE



Order code

921 x x x x x x

RATIO	
0	1 : 1
1	2 : 1
2	4 : 1
3	12,5 : 1
4	25 : 1
5	40 : 1
6	100 : 1
7	200 : 1
8	750 : 1
9	2500 : 1

INTERFACE	
0	none
1	MR 265 current Interface 4-20mA

NUMBER OF SWITCH	
0	6 switches
1	7 switches
2	8 switches
3	9 switches
4	10 switches
5	5 switches
6	4 switches
7	3 switches
8	2 switches

TYPE OF SWITCH		
0	KS25B4 changeover contact for cable shoe 2.8x0.55mm silver contact	2)
1	KS26B4 changeover contact for cable shoe 2.8x0.55mm gold contact	2)
2	S840 V20 changeover contact for cable shoe 6.3x0.9mm silver contact	1) 3)
4	S845 controlled opening switch gold contact	1) 3)

CAM	
0	Single cam NK4101
1	Double cam NK4201
2	Single cam NV4101
3*	Double cam NV4201

CAM PROFILE	
0	20° recess
3	180° recess

- 1) Max. 4 Switches with MR265
- 2) Max. 8 Switches mit MR265
- 3) Max. 5 Switches without MR265
- 4) More on request (20° / 40° / 60° / 90° / etc.)
- 5) Double Cam Disk Series NV4201 after request



Do you have any Questions ? Phone: +41 (0)44 843 40 20 or Mail: sales@micronor.ch