

# Metal-bodied limit switches

## ENM 2

Standard switch according to DIN EN 50041  
Protection class IP 65



- Increased number of switching functions for safety applications
- Galvanically separated contacts
- Forced disconnection of NC contacts (type dependant)
- Person-protection function ⊕ (depending on model)
- Protection class IP 65
- Aluminum body and lid
- Operating device: 4 x 90° actuator positions
- Cable entry M 20 x 1.5
- International approvals

### Mounting

- 2 x M 5 screws, adjustment via elongated holes
- 2 x M 5 screws for safety applications without additional attachment

### Mounting advantages

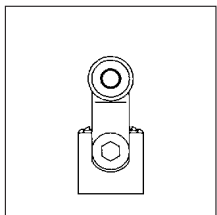
- Increased wiring space
- Earthing surface on same level as switching system
- Turret  
Lever: 7.5° / 15° adjustable
- Contact made independent of direction
- Screw terminals with self lifting clamps for easy wiring
- Fine adjustment of switching point via adjusting screw
- Captive lid screws

### Options

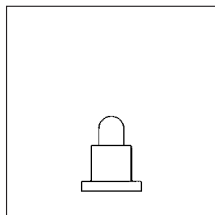
- Latching with contact locking (strain lock-release for safety reasons)
- LED indication of switching status
- EEx certificated versions available acc. ATEX 100 a guideline 94/9/EG  
⊕ II 2 G EEx d II C T6  
TÜV 03 ATEX 2043 X



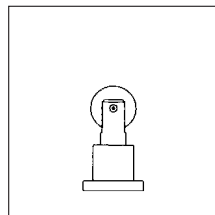
### Standard actuating element DIN EN 50041



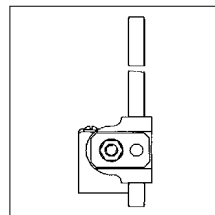
Form A



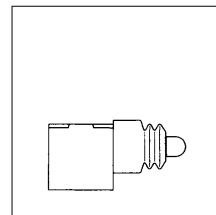
Form B



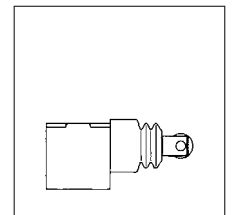
Form C



Form D



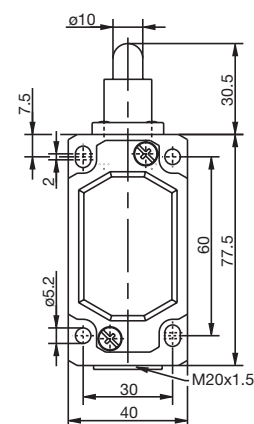
Form F  
(available upon request)



Form G  
(available upon request)

### Standard contact configuration

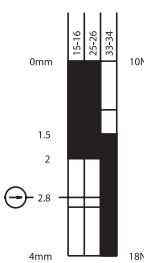
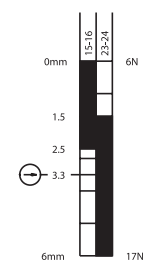
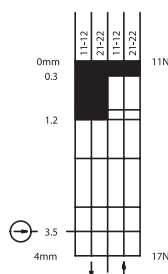
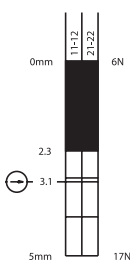
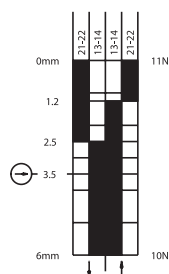
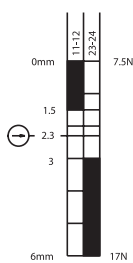
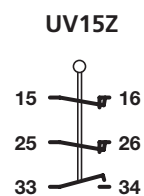
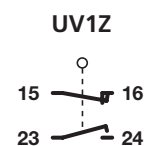
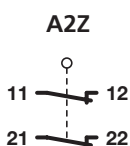
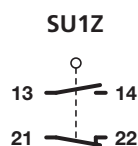
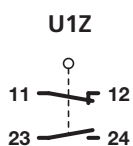
Switching element	Switch function	Switch contact	Designation	Voltage	Continuous current
Slow-action	changeover	1NC/1NO	U1/U1Z	400 V	10 A
Snap-action	changeover	1NC/1NO	SU1/SU1Z	400 V	10 A
Slow-action	normally-closed	2NC	A2/A2Z	400 V	10 A
Snap-action	normally-closed	2NC	SA2/SA2Z	250 V	10 A
Slow-action (overlapping)	changeover	1NC/1NO	UV1/UV1Z	400 V	10 A
Slow-action (overlapping)	changeover	2NC/1NO	UV15/UV15Z	400 V	5 A



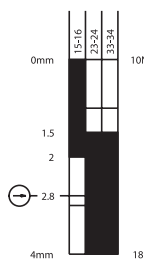
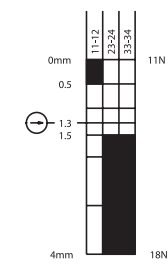
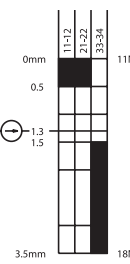
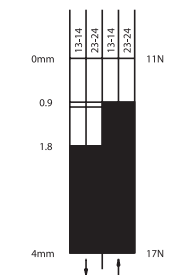
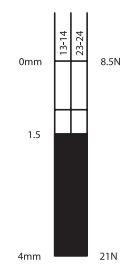
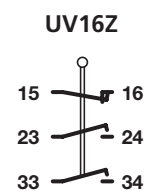
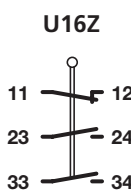
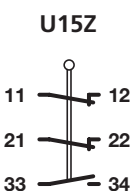
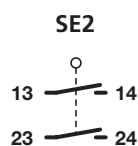
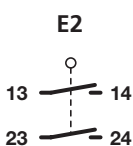
### Optional contact configuration

Switching element	Switch function	Switch contact	Designation	Voltage	Continuous current
Slow-action	normally-open	2NO	E2	250 V	10 A
Snap-action	normally-open	2NO	SE2	250 V	10 A
Slow-action	changeover	2NC/1NO	U15/U15Z	400 V	5 A
Slow-action	changeover	1NC/2NO	U16/U16Z	400 V	5 A
Slow-action (overlapping)	changeover	1NC/2NO	UV16/UV16Z	400 V	5 A

### Contact travel diagrams and graphic symbols



### On request

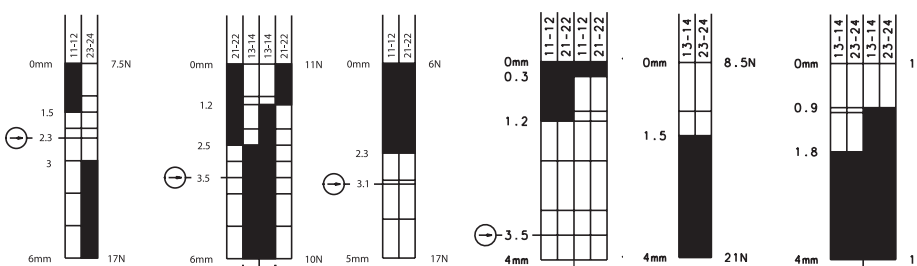




Designation  
**Part number**  
 Switching diagram  
 ⊕ Positive break according to IEC 947-5-1 Chap. 3  
 Za: changeover contact is not galvanically isolated  
 Zb: changeover contact is galvanically isolated  
 Slow-action contact / snap-action contact  
 Gasket inside (iw)/outside (w)

ENM2-U1Z iw	ENM2-SU1Z iw	ENM2-A2Z iw	ENM2-SA2Z iw	ENM2-E2 iw	ENM2-SE2 iw
<b>608.7102.001</b>	<b>608.7352.002</b>	<b>608.7802.003</b>	<b>608.7852.020</b>	<b>608.7802.021</b>	<b>608.7852.022</b>
●/-	-/●	●/-	-/●	●/-	-/●
iw	iw	iw	iw	iw	iw

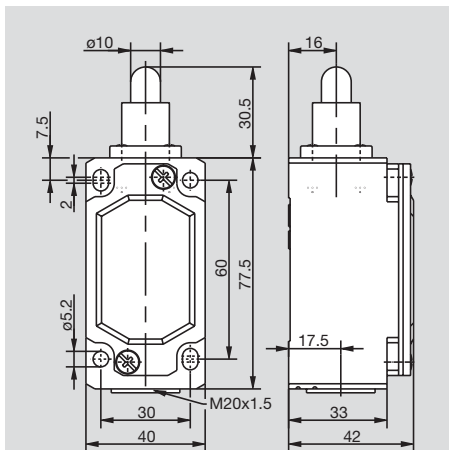
Contact travel mm  
 Tol. ± 0.25 mm  
 Actuating force N  
 Tol. ± 10%  
 Switch angle degree  
 Tol. ± 3.5°  
 Actuating torque Ncm  
 Tol. ± 10%  
 In Out



Voltage	max.	400 V AC
Continuous current	max.	10 A
Making current, acc. to IEC 947-5-1 AC 15/DC 13		●
Switching frequency	max.	100/min.
Mech. operational life – number of switching cycles		10 x 10 <sup>6</sup>
Ambient temperature	min./max.	-30 °C/+80 °C -22 °F/+176 °F
Standard actuating element	Form	B
Approvals (applied for)		UL, CSA
Weight		0.20 kg
Delivery: ex-stock/built to order		●/-

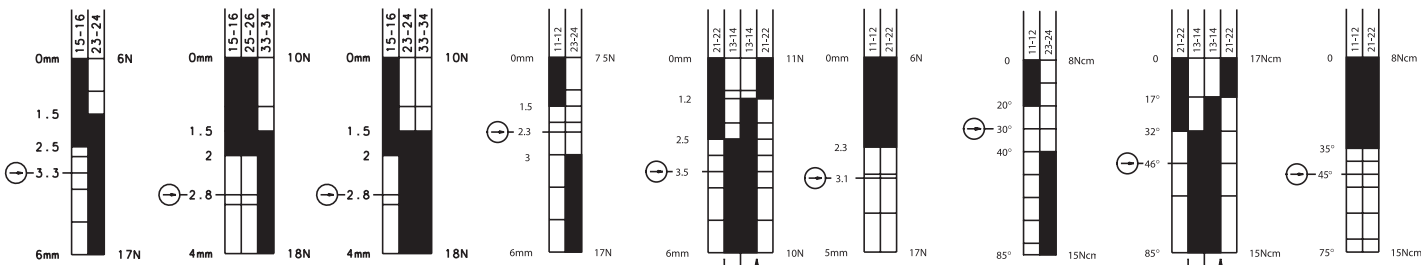
400 V AC	400 V AC	400 V AC	250 V AC	250 V AC	250 V AC
10 A	10 A	10 A	10 A	10 A	10 A
●	●	●	●	●	●
100/min.	100/min.	100/min.	100/min.	100/min.	100/min.
10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	3 x 10 <sup>6</sup>	3 x 10 <sup>6</sup>	3 x 10 <sup>6</sup>
-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F
B	B	B	C	C	C
UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA
0.20 kg	0.20 kg	0.20 kg	0.20 kg	0.20 kg	0.20 kg
●/-	●/-	●/-	-/●	●/-	-/●

All dimensions in mm

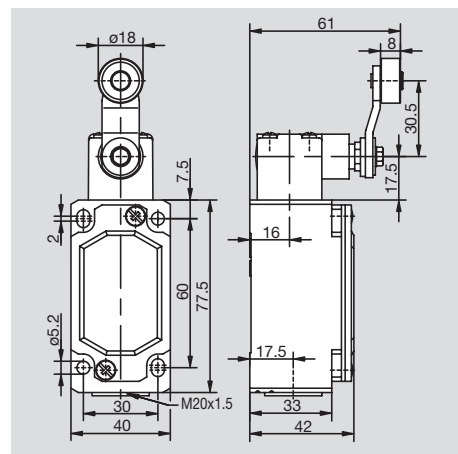
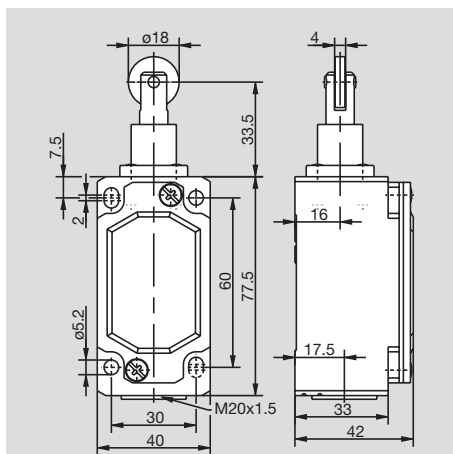




ENM2-UV1Z iw 608.7302.027	ENM2-UV15Z iw 608.7602.024	ENM2-UV16Z iw 608.7602.026	ENM2-U1Z Riw 608.7117.004	ENM2-SU1Z Riw 608.7367.005	ENM2-A2Z Riw 608.7817.006	ENM2-U1Z AHS-V 608.7135.013	ENM2-SU1Z AHS-V 608.7385.014	ENM2-A2Z AHS-V 608.7835.015
●/- iw	●/- iw	●/- iw	●/- iw	-/● iw	●/- iw	●/- iw	-/● iw	●/- iw



400 V AC 10 A ●	400 V AC 5 A ●	400 V AC 5 A ●	400 V AC 10 A ●	400 V AC 10 A ●	400 V AC 10 A ●	400 V AC 10 A ●	400 V AC 10 A ●	400 V AC 10 A ●
100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 1 x 10 <sup>5</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 1 x 10 <sup>5</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F	100/min. 10 x 10 <sup>6</sup> -30 °C/+80 °C -22 °F/+176 °F
C UL, CSA	C UL, CSA	C UL, CSA	C UL, CSA	C UL, CSA	C UL, CSA	A UL, CSA	A UL, CSA	A UL, CSA
0.20 kg ●/-	0.20 kg ●/-	0.20 kg ●/-	0.21 kg ●/-	0.21 kg ●/-	0.21 kg ●/-	0.28 kg ●/-	0.28 kg ●/-	0.28 kg ●/-

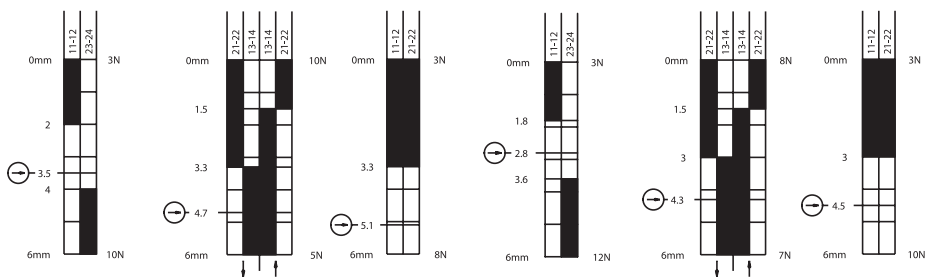




Designation  
**Part number**  
 Switching diagram  
 ⊕ Positive break according to IEC 947-5-1 Chap. 3  
 Za: changeover contact is not galvanically isolated  
 Zb: changeover contact is galvanically isolated  
 Slow-action contact / snap-action contact  
 Gasket inside (iw)/outside (w)

ENM2-U1Z DGHW	ENM2-SU1Z DGHW	ENM2-A2Z DGHW	ENM2-U1Z DGKW	ENM2-SU1Z DGKW	ENM-A2Z DGKW
<b>608.7121.007</b>	<b>608.7371.008</b>	<b>608.7821.009</b>	<b>608.7127.010</b>	<b>608.7377.011</b>	<b>608.7827.012</b>
⊕ Zb	⊕ Zb	⊕ Zb	⊕ Zb	⊕ Zb	⊕ Zb
●/-	-/●	●/-	●/-	-/●	●/-
W	W	W	W	W	W

Contact travel mm  
 Tol. ± 0.25 mm  
 Actuating force N  
 Tol. ± 10%  
 Switch angle degree  
 Tol. ± 3.5°  
 Actuating torque Ncm  
 Tol. ± 10%  
 In Out

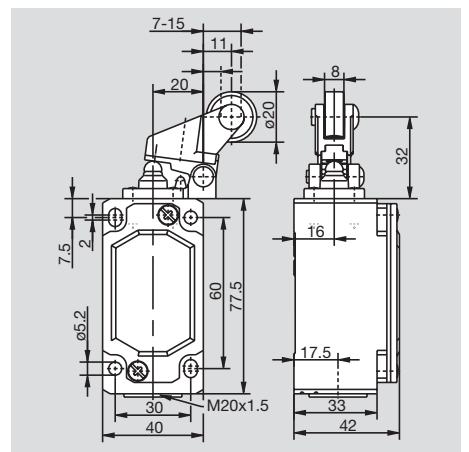
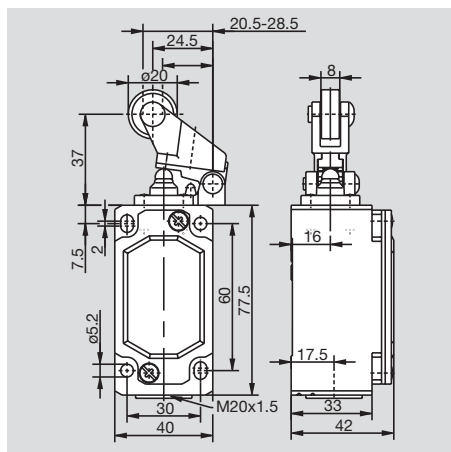


Voltage max.  
 Continuous current max.  
 Making current, acc. to IEC 947-5-1 AC 15/DC 13  
 Switching frequency max.  
 Mech. operational life – number of switching cycles  
 Ambient temperature min./max.  
 Standard actuating element Form  
 Approvals (applied for)  
 Weight  
 Delivery: ex-stock/built to order

400 V AC	400 V AC	400 V AC	400 V AC	400 V AC	400 V AC
10 A	10 A	10 A	10 A	10 A	10 A
●	●	●	●	●	●
100/min.	100/min.	100/min.	100/min.	100/min.	100/min.
10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>
-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C
-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F
-	-	-	-	-	-
UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA
0.23 kg	0.23 kg	0.23 kg	0.23 kg	0.23 kg	0.23 kg
-/●	-/●	-/●	-/●	-/●	-/●

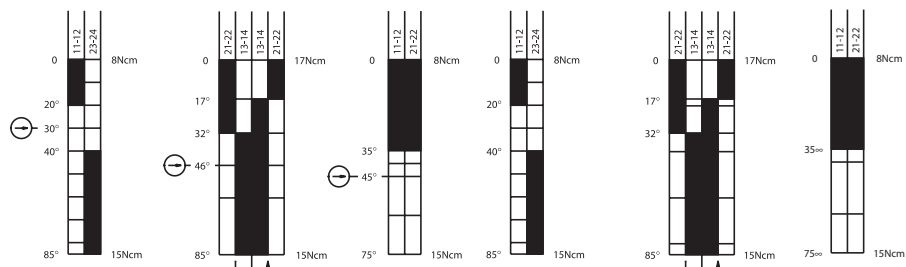
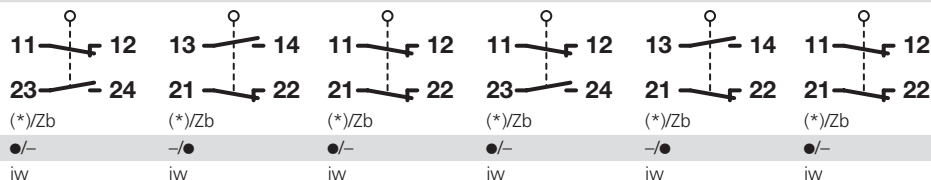
All dimensions in mm

(\*) Adjustable operating devices are not recommended for safety applications.





ENM2-U1 AD 608.7137.018	ENM2-SU1 AD 608.7387.019	ENM2-A2 AD 608.7837.029	ENM2-U1 AV 608.7136.016	ENM2-SU1 AV 608.7386.017	ENM2-A2 AV 608.7836.028
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400 V AC	400 V AC	400 V AC	400 V AC	400 V AC	400 V AC
10 A	10 A	10 A	10 A	10 A	10 A
●	●	●	●	●	●
100/min.	100/min.	100/min.	100/min.	100/min.	100/min.
10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>	10 x 10 <sup>6</sup>
-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C	-30 °C/+80 °C
-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F	-22 °F/+176 °F
D	D	D	-	-	-
UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA
0.29 kg	0.29 kg	0.29 kg	0.30 kg	0.30 kg	0.30 kg
V-	●/-	-/●	●/-	●/-	-/●

