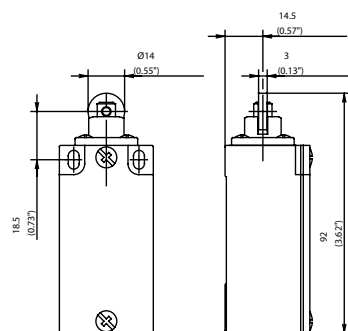
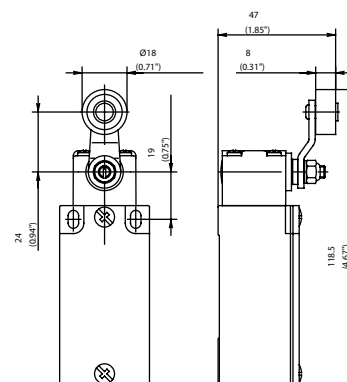


RIW



AH



Switching operation

Slow-action

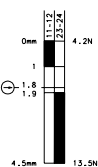
Snap-action

Slow-action

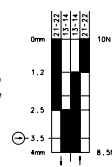
Snap-action

1 NC / 1 NO contact

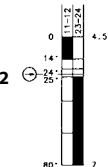
6021117029
GC-U1Z RIW



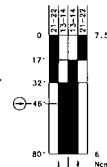
6021367626
GC-SU1Z RIW



6021135102
GC-U1Z AH

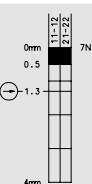


6021385634
GC-SU1Z AH



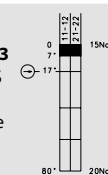
2 NC contacts

6021817172
GC-A2Z RIW



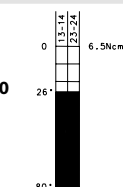
6121835833
GC-A2Z AH

See separate
datasheet

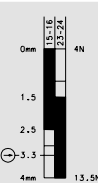


2 NO contacts

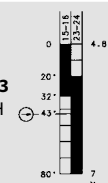
6021835160
GC-E2 AH

1 NC / 1 NO contact
Overlapping

6021317030
GC-UV1Z RIW



6021335133
GC-UV1Z AH



Approvals



Replacement actuator: 3912170518

Replacement actuator: 3912350722

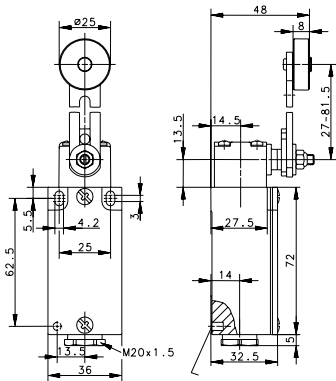
Special features / variants
(on request)

- Available for high temperature range and following contacts:
 - 2 NC / 1 NO contact
 - 2 NC / 2 NO contact (larger enclosure)

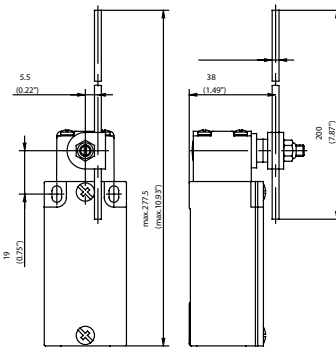
Special features / variants
(on request)

- Available with various roller diameters, cranked or straight lever and with various lever lengths
- With roller over switch and with following contacts:
 - 2 NC / 2 NO contact (larger enclosure)

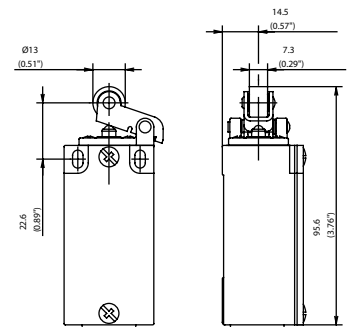
AV



AD



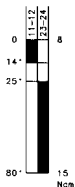
HIW



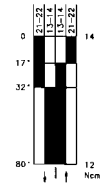
Slow-action

Snap-action

6021136104
GC-U1 AV



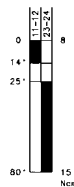
6021186118
GC-SU1 AV



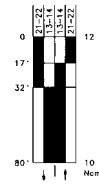
Slow-action

Snap-action

6021137103
GC-U1 AD



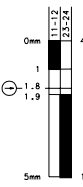
6021187125
GC-SU1 AD



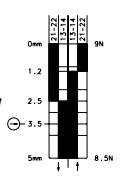
Slow-action

Snap-action

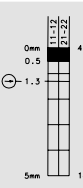
6021120057
GC-U1Z HIW



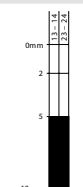
6021370629
GC-SU1Z HIW



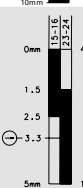
6021820175
GC-A2Z HIW



6021820157
GC-E2 HIW



6021320058
GC-UV1Z HIW



Replacement actuator: 3912360723

Replacement actuator: 3912370724

Replacement actuator: 3912200552

Special features / variants (on request)

- Various roller diameters
- Different lever lengths
- With roller over switch and with following contacts:
2 NC / 2 NO contact

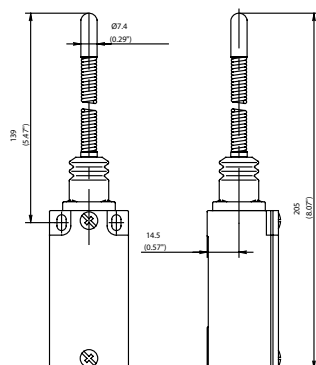
Special features / variants (on request)

- Available with various actuator lengths and actuator directions
- With following contacts:
2 NC / 1 NO with overlap
(larger enclosure)

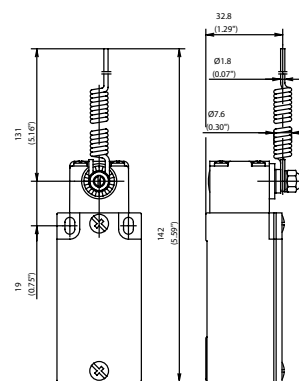
Special features / variants (on request)

- Available with different actuating directions
- Available with steel roller
- With following contacts:
2 NC / 2 NO contact
1 NC / 2 NO with overlap
(larger enclosure)

FF



AF



Switching operation

1 NC / 1 NO contact

2 NC contacts

2 NO contacts

1 NC / 1 NO contact
Overlapping

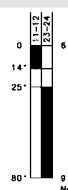
Slow-action

6021140476
GC-U1 FF

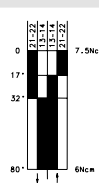
Snap-action

6021190100
GC-SU1 FF

Slow-action

6021139106
GC-U1 AF

Snap-action

6021189128
GC-SU1 AF

Approvals



Replacement actuator: 3912400510

Replacement actuator: 3912390725

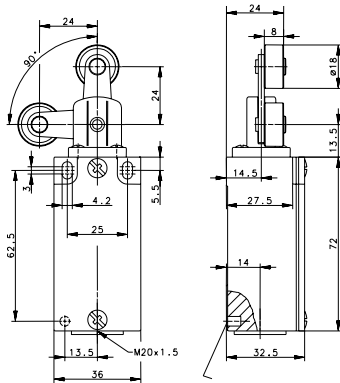
Special features / variants
(on request)

- Different spring lengths
- Different spring versions or spring rod

Special features / variants
(on request)

- Available with various actuator lengths and actuator directions

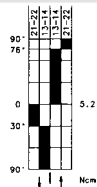
DR



Slow-action

Snap-action

6021191099
GC-SU1Z DR

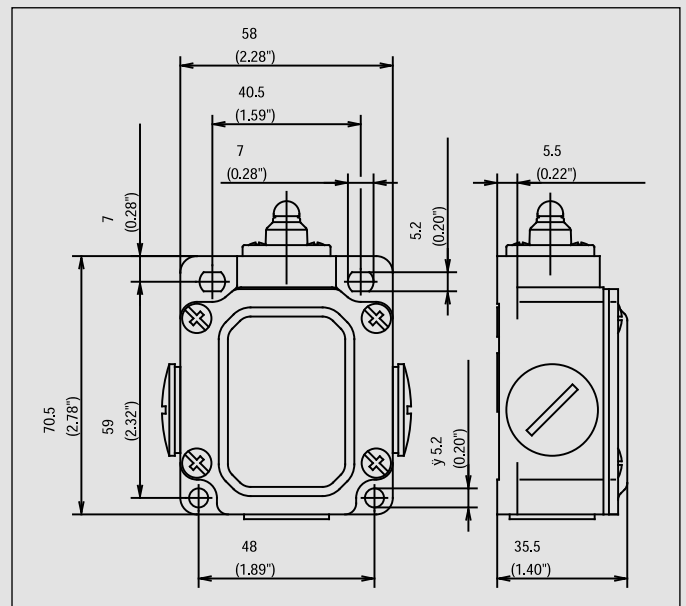


Replacement actuator: 3912410593

Special features / variants
(on request)

Metal-Enclosed Limit Switches

SN2



Recommended use

With its three cable entries and spacious connection area, the SN2 limit switch is the optimum solution for through-wiring or even branching off electrical circuits.

Product advantages

- Protection class IP 65 to VDE 0470 T1
- Enclosure: Aluminium pressure die-casting
- Cover: Sheet aluminium
- Actuator can be repositioned by 4 x 90°
- Cable entry 3x M20 x 1.5
- Connection designation conforming to DIN EN 50013
- Metal actuators for high loads
- Graduated adjustment of AH lever
- Selectable direction-dependent contact-making of AH actuator (basic setting: contact-making both sides)

Options

- AS interface versions on request
- Preassembled with customer-specific cables and connectors on request

Design layout

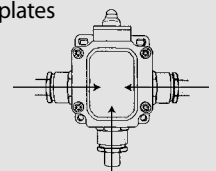
- Slow-action and snap-action contacts
- Versions: 1 NC / 1NO, 2 NC
- All NC contacts with \ominus in the circuit diagram are positively opening contacts
- Type: Zb (galvanically isolated changeover contact)
- Latching function on request

Mounting

- 2 adjustment slots for M5 screws
- 2 addition holes for M5 mounting screws in safety applications

Installation advantages

- 3 cable entries for through-wiring
- Generously dimensioned connection space
- Screw connections with self-lifting clamping plates
- Easy-to-change switching system thanks to snap-in retainer
- Finely adjustable switching point with adjusting screw

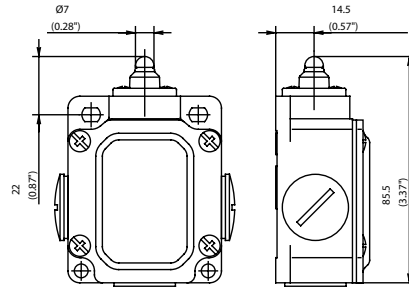


Technical data

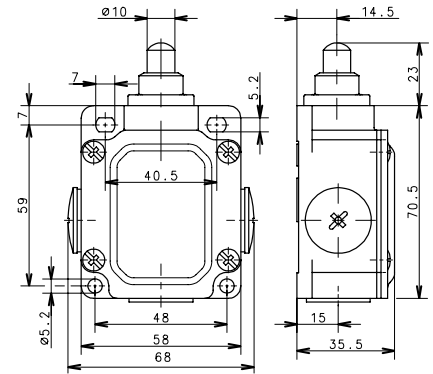
Electrical data		
Rated insulation voltage	U _i max.	400 V AC
Conventional thermal current	I _{the}	10 A
Rated operating voltage	U _e max.	240 V
Utilization category	AC-15, A300, U _e /I _e 240 V/3 A	
Short-circuit protection (up to) ^①	Fuse 10 A gL/gG	
Protection class	I	
Mechanical data		
Enclosure material	Aluminium pressure die-casting	
Ambient temperature	-30 °C to + 80 °C	
Mechanical service life	10 x 10 ⁶ switching cycles	
B10d (up to) ^①	20 Mill.	
Switching frequency	max. 100/min.	
Type of connection	Screw connections	
Conductor cross sections	Single-wire 0.5 – 1.5 mm ² or Stranded wire with ferrule 0.5 – 1.5 mm ²	
Cable entry	3 x M20 x 1.5	
Protection class	IP 65 conforming to EN 60529, DIN VDE 0470 T1	
Standards		
conforming to EN 60947-1; EN 60947-5-1		

^① Depending on switching system. See Table on Pages 70 – 73.

W



LIW

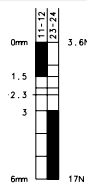


Switching operation

1 NC / 1 NO contact

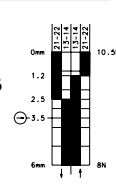
Slow-action

6033103023
SN2-U1Z W



Snap-action

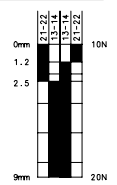
6033353016
SN2-SU1Z W



Slow-action

Snap-action

6033194022
SN2-SU1 LIW



2 NC contacts

2 NO contacts

1 NC / 1 NO contact
Overlapping

Approvals



Replacement actuator: 3913030537

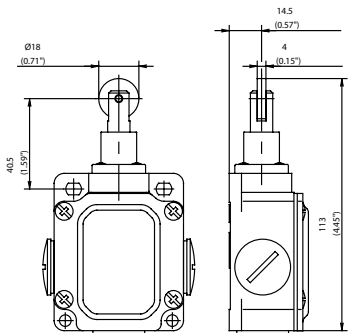
Replacement actuator: 3912440536

Special features / variants
(on request)

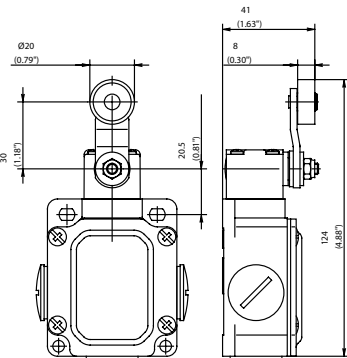
Special features / variants

- Telescopic plunger, particularly long actuation travel of 9 mm

RIW



AHS



Switching operation

1 NC / 1 NO contact

2 NC contacts

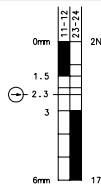
2 NO contacts

1 NC / 1 NO contact
Overlapping

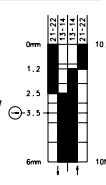
Slow-action

Snap-action

6033117025
SN2-U1Z RIW



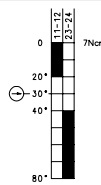
6033367017
SN2-SU1Z RIW



Slow-action

Snap-action

6033135002
SN2-U1Z AHS



6033385018
SN2-SU1Z AHS



Approvals



Replacement actuator: 3918170587

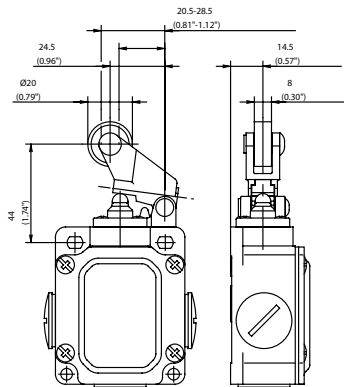
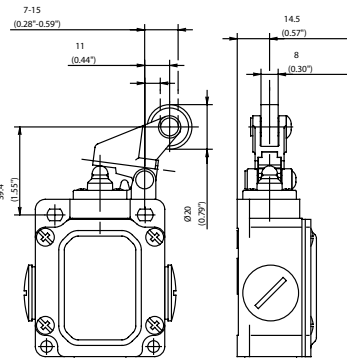
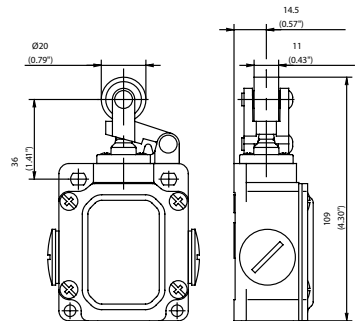
Replacement actuator: 3913351913

Special features / variants
(on request)

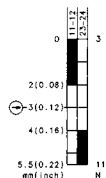
- Available with different actuating directions
- With latching function

Special features / variants
(on request)

- Available with different actuating directions

DGHW

DGKW

HW

Slow-action
Snap-action

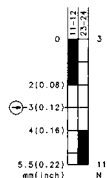
6033121005
SN2-U1Z
DGHW



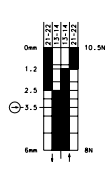
6033371004
SN2-SU1Z
DGHW


Slow-action
Snap-action

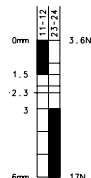
6033127010
SN2-U1Z
DGKW



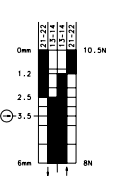
6033377011
SN2-SU1Z
DGKW


Slow-action
Snap-action

6033121007
SN2-U1Z HW



6033371006
SN2-SU1Z HW



Replacement actuator: 3918211656

Special features / variants
(on request)

- Available with different actuating directions



Replacement actuator: 3918271655

Special features / variants
(on request)

- Available with different actuating directions

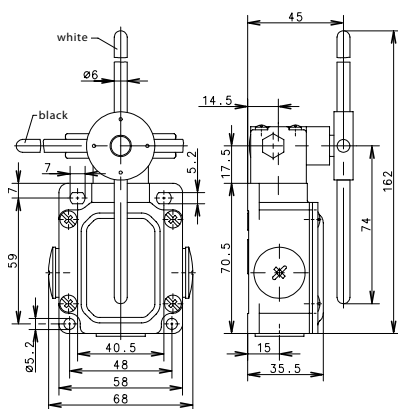


Replacement actuator: 3913210553

Special features / variants
(on request)

- Available with different actuating directions

AD4K



Switching operation

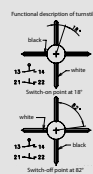
Slow-action

Snap-action

1 NC / 1 NO contact

2 NC contacts

6133887022
SN2-SA2Z
AD4K



2 NO contacts

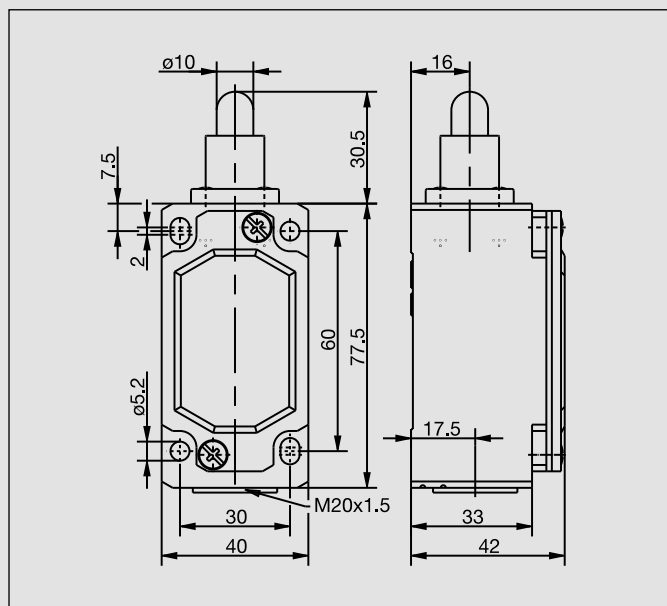
1 NC / 1 NO contact Overlapping

Approvals

Replacement actuator: 3913371712
without screws,
without seals
3992000042
accessory bag
(40 screws,
10 seals)

Special features / variants
(on request)

ENM2



Recommended use

With its standard enclosure, the ENM2 limit switch can be used universally in all industrial and safety applications.

Product advantages

- Standard switch conforming to DIN EN 50041
- Standard actuator conforming to DIN EN 50041 (see page 16)
- Protection class IP 65 to VDE 0470 T1
- Enclosure: Aluminium pressure die-casting
- Cover: Sheet aluminium
- Actuator can be repositioned by 4 x 90°
- Cable entry M20 x 1.5
- Connection designation conforming to DIN EN 50013
- Metal actuators for high loads

Options

- AS interface versions on request
- Preassembled with customer-specific cables and connectors on request

Design layout

- Slow-action and snap-action contacts
- Versions: 1 NC / 1NO, 2 NC, overlapping contacts
- All NC contacts with \rightarrow in the circuit diagram are positively opening contacts
- Type: Zb (galvanically isolated changeover contact)

Mounting

- Two M5 adjustment screws with slots
- Two M5 screws for safety applications without additional securing element

Installation advantages

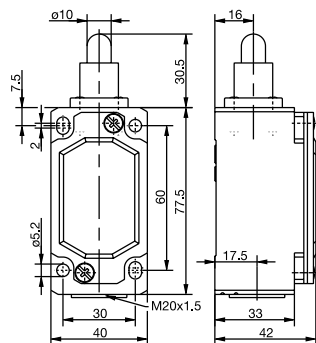
- Screw connections with self-lifting clamping plates
- Easy-to-change switching system thanks to snap-in retainer (depending on type)
- Finely adjustable switching point with adjusting screw
- Captive cover screws
- Enlarged connection space
- Earthing surface on same level as switching system

Technical data

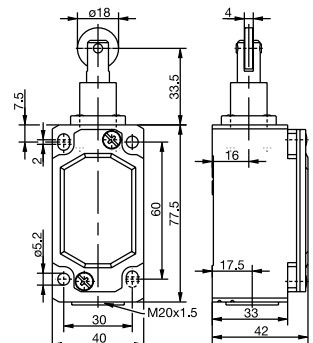
Electrical data	
Rated insulation voltage (up to) ^①	U _i max. 400 V AC
Conventional thermal current (up to) ^①	I _{the} 10 A
Rated operating voltage	U _e max. 240 V
Utilization category (up to) ^①	A300, AC-15, U _e /I _e 240 V/3 A
Short-circuit protection (up to) ^①	Fuse 10 A gL/gG
Protection class	I
Mechanical data	
Enclosure material	Aluminium pressure die-casting
Ambient temperature	-30 °C to + 80 °C
Mechanical service life (up to) ^①	10 x 10 ⁶ switching cycles
B10d (up to) ^①	20 Mill.
Switching frequency	≤ 100/min.
Type of connection	Screw connections
Conductor cross sections	Single-wire 0.5 – 1.5 mm ² or Stranded wire with ferrule 0.5 – 1.5 mm ²
Cable entry	1 x M20 x 1.5
Protection class	IP 65 conforming to IEC/EN 60529
Standards	
VDE 0660 T100, DIN EN 60947-1, IEC 60947-1 VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1	

① Depending on switching system. See Table on Pages 70 – 73.

IW (Form B)



RIW (Form C)



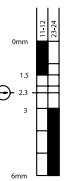
Switching operation

1 NC / 1 NO contact

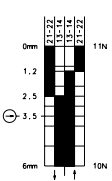
Slow-action

Snap-action

6087102001
ENM2-U1Z IW



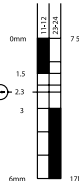
6087352002
ENM2-SU1Z IW



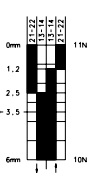
Slow-action

Snap-action

6087117004
ENM2-U1Z RIW



6087367005
ENM2-SU1Z RIW

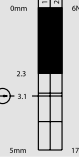


2 NC contacts

6087802003
ENM2-A2Z IW



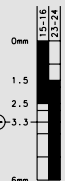
6087817006
ENM2-A2Z RIW



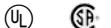
2 NO contacts

1 NC / 1 NO contact
Overlapping

6087302027
ENM2-UV1Z IW



Approvals



Replacement actuator: 3918020584

Replacement actuator: 3918170587

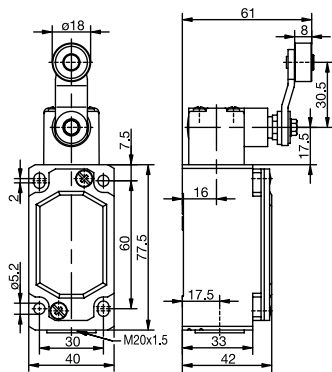
Special features / variants
(on request)

- Also available with following contacts:
2 NC / 1 NO with overlap
1 NC / 2 NO with overlap

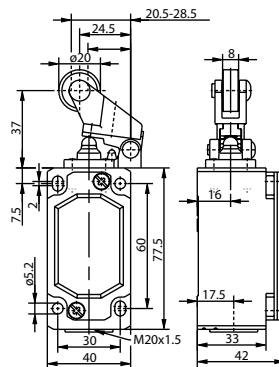
Special features / variants
(on request)

- Available with different actuating directions
- High temperature range
- Various roller diameters
- Also available with following contacts:
2 NC / 1 NO with overlap
1 NC / 2 NO with overlap

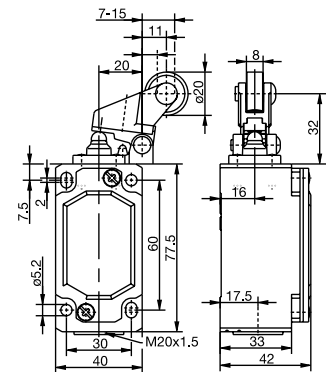
AHS-V (Form A)



DGHW RO20



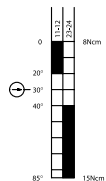
DGKW RO20



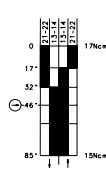
Slow-action

Snap-action

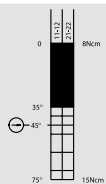
6087135013
ENM2-U1Z
AHS-V



6087385014
ENM2-SU1Z
AHS-V



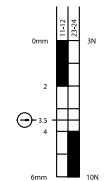
6087835015
ENM2-A2Z
AHS-V



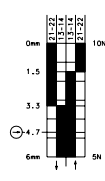
Slow-action

Snap-action

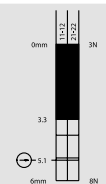
6087121007
ENM2-U1Z
DGHW RO20



6087371008
ENM2-SU1Z
DGHW RO20



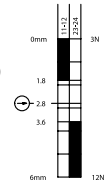
6087821009
ENM2-A2Z
DGHW RO20



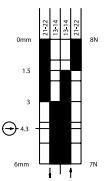
Slow-action

Snap-action

6087127010
ENM2-U1Z
DGKW RO20



6087377011
ENM2-SU1Z
DGKW RO20



Replacement actuator: 3918350729

Replacement actuator: 3918211656

Replacement actuator: 3918271655

Special features / variants (on request)

- Available with different actuating directions

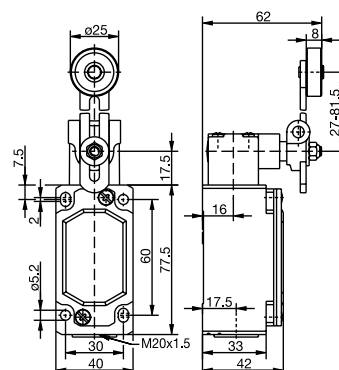
Special features / variants (on request)

- Available with different actuating directions

Special features / variants (on request)

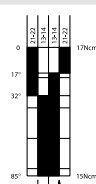
- Available with different actuating directions

AV



Snap-action

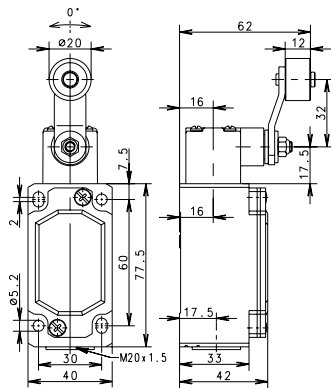
6087386017
ENM2-SU1 AV



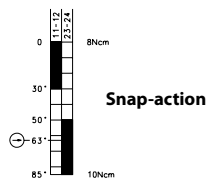
6187836060
ENM2-E2 AV

Replacement actuator: 3918360730

- Available with different actuating directions
- Various roller diameters
- Different lever lengths
- With roller over switch

AHZ

Slow-action

6087135030
ENM2-U1Z
AHZ



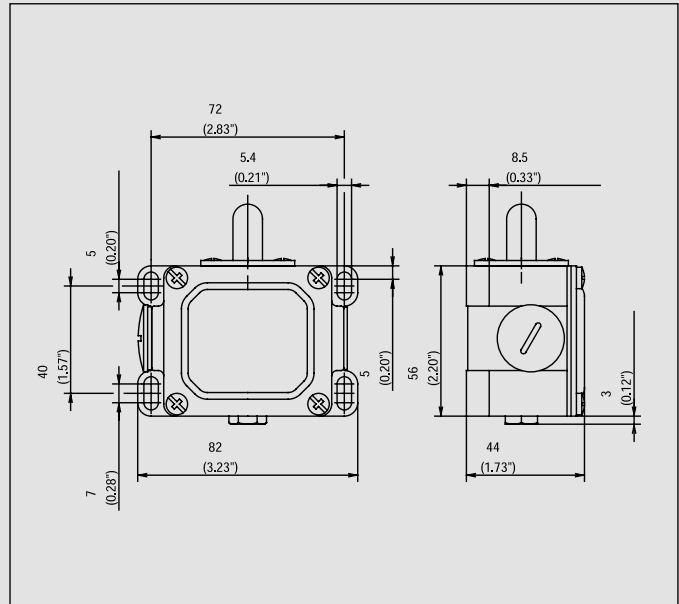
Replacement actuator: –

Special features / variants

- Positively opening action, forward and return AHZ
- For special safety applications, the positive opening action of the normally-closed contacts takes place both in forward (moving in one direction) as well as in return (moving back to home position) direction
- For personal protection applications movement of the roller must be restrained in a guide block in both directions

Metal-Enclosed Limit Switches

D



Recommended use

Heavy duty enclosure for harsh operating conditions with particularly tough design of actuator and switching systems.

Product advantages

- Protection class IP 65 to VDE 0470 T1
- Enclosure: Aluminium pressure die-casting
- Cover: Sheet aluminium
- Actuator can be repositioned by 4 x 90° (depending on type)
- Cable entries 2x M20 x 1.5
- Connection designation conforming to DIN EN 50013
- Sturdy contacts
- Hard wearing guide bushes

Options

- AS interface versions on request
- Preassembled with customer-specific cables and connectors on request

Design layout

- Slow-action and snap-action contacts
- Versions: 1 NC / 1NO, 2 NC, 2 NO, 3 NC, 3 NO, overlapping contacts
- All NC contacts with \ominus in the circuit diagram are positively opening contacts
- Latching function on request

Mounting

- 4 slots for M5 screws

Installation advantages

- 2 cable entries for through-wiring
- Generously dimensioned connection space
- Captive cover screws

Technical data

Electrical data		
Rated insulation voltage	U _i max.	400 V AC
Conventional thermal current (up to) ^①	I _{the}	10 A
Rated operating voltage	U _e max.	240 V
Utilization category	AC-15, U _e /I _e 240 V/3 A	
Short-circuit protection (up to) ^①	Fuse 10 A gL/gG	
Protection class	I	
Mechanical data		
Enclosure material	Aluminium pressure die-casting	
Ambient temperature	-30 °C to + 80 °C	
Mechanical service life	10 x 10 ⁶ switching cycles	
B10d	20 Mill.	
Switching frequency	≤ 100/min.	
Type of connection	Screw connections	
Conductor cross sections	Single-wire 0.5 – 1.5 mm ² or Stranded wire with ferrule 0.5 – 1.5 mm ²	
Cable entry	2 x M20 x 1.5	
Protection class	IP 65 conforming to IEC/EN 60529	
Standards		
VDE 0660 T100, DIN EN 60947-1, IEC 60947-1		
VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1		

^① Depending on switching system. See Table on Pages 70 – 73.