



Switch
disconnectors
KNZ Series
XNA Series
XNF Series

KNZ series
XNA series
XNF series

Enclosed
versions

Switch-disconnectors

KNZ Series page 98

16 - 30 - 40A

3-4 pole

IP20 terminals protection

IP66 handle protection

Mounting: • rear mounting with screws

• base mounting with screws or on DIN rail

XNA Series page 98

16 ÷ 100A

3-4 pole

IP20 terminals protection

IP66 handle protection

Auxiliary contacts and/or additional pole

Mounting: • rear mounting with screws

• base mounting with screws or on DIN rail

XNF Series page 98

16 - 32A with fuse holders

3-4 pole

IP20 terminals protection

IP66 handle protection

Auxiliary contact and/or additional pole

Mounting: • base mounting with screws or on DIN rail

Enclosed versions page 107

Rating 16 ÷ 40A










3-4 pole

IP66 protection degree

Auxiliary contact and/or additional pole

Switch disconnectors

International Standards and approvals

Country	USA / Canada	Canada	Germany	Switzerland	Denmark	Norway	Sweden	Finland	Austria	Great Britain	IEC International electrical Commission	Russian Federation
Authority	UL investigated according to CSA	CSA International	Verband Deutscher Elektrotechniker	Schweizerischer Elektrotechnischer Verein	Danmarks Elektriske Materiekontrol	Norges Elektriske Materiekontrol	Svenska Elektriske Materiekontroll-anstalten	Sähötär-kastuskeskus	Österreichischer Verband für Elektrotechnik	British Standards Institution	IEC International electrical Commission	GOST
Mark of standard			VDE 0660 ⁽¹⁾							BS EN 60947 ⁽¹⁾	IEC 60947 ⁽²⁾	
KNZ016		+	+	+	+	+	+	+	+	+	+	+
KNZ030		+	+	+	+	+	+	+	+	+	+	+
KNZ040	•	+	+	+	+	+	+	+	+	+	+	+
XNA016	•	+	+	+	+	+	+	+	+	+	+	+
XNA032	•	+	+	+	+	+	+	+	+	+	+	+
XNA050	•	+	+	+	+	+	+	+	+	+	+	+
XNA063	•	+	+	+	+	+	+	+	+	+	+	+
XNA100	•	+	+	+	+	+	+	+	+	+	+	+
XNF016		+	+	+	+	+	+	+	+	+	+	+
XNF032		+	+	+	+	+	+	+	+	+	+	+

- Approved
- + Conforms to requirements

Notes:

- 1) UL Approval File E101686
- 2) CSA Approval File 039540-0-000
- 3) It is not required to bear a symbol but switches must conform to requirements.
- 4) IEC does not operate an approval scheme

Technical data IEC 947-3 EN 60947-3

Rated operating voltage	Ue	V
Rated insulation voltage	Ui	V
Rated impulse withstand voltage	Uimp	kV
Rated thermal current for open switch	Ith	A
Rated thermal current for enclosed switch	Ithe	V
Rated operation frequency		Hz
Power dissipation for each pole		W
Rated operating current Ie		
AC-21A Switching resistive loads, including moderate overloads	690V	A
AC-22A Switching of mixed resistive and inductive loads, including moderate overloads	690V	A
Rated operating power		
AC-23A Switching of motor loads or other highly inductive loads	230V	Kw (A)
	400V	Kw (A)
	500V	Kw (A)
	690V	Kw (A)
AC-3 Squirrel cage motors: starting, switching off motors during running	230V	Kw (A)
	400V	Kw (A)
	500V	Kw (A)
	690V	Kw (A)
Rated breaking capability in category in AC-23A (cos φ= 0,45)	230V	A
	400V	A

Short circuit protection		
Rated short time withstand current (1s)	Icw	A
Rated short-circuit make capacity	Icm	A
Rated conditional short-circuit current		kA
With fuses class gG	500V	A

Mechanical characteristics

Mechanical life (120 cycles/hour)		Cycles x 10 ⁶
Connection according to IEC 9471-1 and EN 60947-1		
Connecting capability with flexible wires	Min-Max	mm ²
Connecting capability with solid wires	Min-Max	mm ²
Connection terminal screw dimensions		
Screw tightening torque		Nm

Technical data UL/CSA

General Use	600Vac	A
Rated operating power		
1 phase - 2 pole	120V	Hp/FLA
	240V	Hp/FLA
3 phase - 3 pole	200V	Hp/FLA
	240V	Hp/FLA
	480V	Hp/FLA
	600V	Hp/FLA

Mechanical characteristics

Connecting capability with flexible wires	Min-Max	AWG
Connecting capability with solid wires	Min-Max	AWG
Screw tightening torque		lb.in.
Protection degree IEC 529 EN 60529		
Terminals		
Handle		
Ambient conditions		
Operating ambient temperature		°C
Storage ambient temperature		°C
Withstand to constant humid according to IEC 60068		
Withstand to cyclic humid according to IEC 60068		

Technical data IEC 947-3-5 EN 60947-3-5




Auxiliary contacts		
Rated insulation voltage	Ui	V
Rated thermal current for open switch	Ith	A
AC-21A Switching resistive loads, including moderate overloads	690V	A
AC-15 Control of a.c. electromagnetic loads	230V	A

* power dissipation for each single fuse



KNZ16	KNZ30	KNZ40	XNA16	XNA32	XNA050	XNA063	XNA100	XNF16	XNF32
690	690	690	690	690	690	690	690	690	690
690	690	690	690	690	690	690	690	690	690
6	6	6	6	6	6	6	6	6	6
25	32	40	25	40	50	63	100	16	32
25	32	40	16	32	50	63	80	16	32
50	50	50	50	50	50	50	50	50	50
1	1,1	1,6	0,9	1,6	-	-	-	1,8*	3,5*
20	30	40	20	40	50	63	100	16	32
16	20	32	16	32	50	63	100	16	32
5,5 (22)	7,5 (24)	10 (31)	7,5 (24)	10 (33)	11 (40)	15 (47)	22 (70)	7,5 (24)	10 (33)
9 (18)	12 (20)	18,5 (33)	13 (24)	18,5 (33)	22 (40)	25 (47)	35 (63)	13 (24)	18,5 (33)
9 (14)	11 (16)	22 (32)	13 (16)	18,5 (32)	22 (32)	30 (43)	45 (65)	13 (16)	18,5 (32)
11 (14)	15 (16)	22 (23)	15 (16)	22 (23)	18,5 (19)	18,5 (19)	30 (31)	15 (16)	22 (23)
4 (16)	6 (17)	8 (27)	6 (19)	9 (28)	11 (35)	11 (35)	18,5 (58)	16 (19)	9 (28)
7,5 (14)	9,5 (15)	17 (27)	10 (18)	15 (27)	18,5 (33)	18,5 (33)	30 (54)	10 (18)	15 (27)
7,5 (12)	9 (14)	19 (28)	10(14)	15 (27)	18,5 (28)	22 (32)	37 (53)	10 (14)	15 (27)
9 (10)	10,5 (12)	22 /24	12 (13)	18,5 (23)	15 (16)	15 (16)	22 (23)	12 (13)	18,5 (23)
176	192	248	192	256	320	376	560	192	256
144	160	264	192	264	320	376	504	240	330
600	600	800	400	800	1500	1500	1500	400	800
1500	1500	2000	1500	2000	2000	2000	2500		
10	10	10	10	10	15	15	15	10	10
16	16	32	16	32	63	63	100	16	32
2	2	2	2	2	2	2	2	2	2
B6	B6	B6	B6	B6	B9	B9	B9	B6	B6
1,5-10	1,5-10	1,5-10	1,5-10	1,5-10	6-35	6-35	6-35	1,5-10	1,5-10
1,5-16	1,5-16	1,5-16	1,5-16	1,5-16	10-50	10-50	10-50	1,5-16	1,5-16
M4	M4	M4	M4	M4	M5	M5	M5	M4	M4
1,4	1,4	1,4	1,4	1,4	2,8	2,8	2,8	1,4	1,4
25	25	30	20	40	80	80	100	-	-
-/-	-/-	2/24	1,5/20	3/34	3/34	3/34	5/56	-	-
-/-	-/-	3/17	2/12	5/28	3/17	5/28	10/50	-	-
2/-	2/-	5/-	2/13,6	5/30,5	7,5/25,3	10/32	20/62	-	-
5/-	5/-	7,5/22	5/15,2	10/28	15/42	20/54	25/68	-	-
7,5/-	7,5/-	10/14	10/14	15/21	20/27	25/34	50/65	-	-
7,5/-	7,5/-	10/11	10/11	15/17	30/32	30/32	50/52	-	-
16-8	16-8	16-8	16-8	16-8	10-1	10-1	10-1	-	-
16-6	16-6	16-6	16-6	16-6	8-1	8-1	8-1	-	-
12	12	12	12	12	24	24	24	-	-
IP20						IP20			
IP66						IP66			
-25 / +55						-30 / +70			
-25 / +55						-30 / +70			
2-78						2-78			
2-30						2-30			
			XC16AN	XC32AN		XC012AB			
			XC16CN	XC32CN		XC012CB			
			690	690		690			
			20	40		12			
			20	40					
						6			

Overview

The range of Bremas switch disconnectors includes KNZ, XNA and XNF series with current ratings from 16A to 100A. The double break contacts, made of silver alloy, have positive opening to guarantee high electrical efficiency and security. The terminals are provided with captive screws in open position to reduce wiring time and the contact blocks are designed to facilitate wiring: rear access to terminal connections for rear mounting versions and front access for base mounting versions. The terminals have IP20 protection degree, terminal covers are optionally available.

	<p>KNZ</p>	<ul style="list-style-type: none"> • 16-30-40A • Rear or base mounting • max 4 pole
	<p>XNA</p>	<ul style="list-style-type: none"> • 16-32-50-63-100A • rear or base mounting • max 2 additional pole (one on each side) and 2 auxiliary contacts (one on each side) can be added
	<p>XNF</p>	<ul style="list-style-type: none"> • 16-32A • with fuse holders • base mounting • 1 additional pole and/or 1 auxiliary contact can be added • designed for cylindrical fuses type gG or aM sizes 10,3x38 for series XNF16 and 14x51 for series XNF32

Plates and knobs

 <p>Rear mounting with screws</p>		<p>RL6</p>	<p>Rear mounting with screws, yellow plate 67x67mm (2.64x2.64"), red padlockable knob (max 3 padlocks), IP66</p>
 <p>Rear mounting with screws</p>		<p>RK6</p>	<p>Rear mounting with screws, grey plate 67x67mm (2.64x2.64"), black padlockable knob (max 3 padlocks), IP66</p>
 <p>Base mounting with screws or snap mounting on DIN rail</p>		<p>BL6</p>	<p>Base mounting with screws or with snap mount on DIN rail, yellow plate 67x67mm (2.64x2.64"), red padlockable knob (max 3 padlocks), door interlock in "ON" position, IP66</p>
 <p>Base mounting with screws or snap mounting on DIN rail</p>		<p>BK6</p>	<p>Base mounting with screws or with snap mount on DIN rail, grey plate 67x67mm (2.64x2.64"), black padlockable knob (max 3 padlocks), door interlock in "ON" position, IP66</p>



KNZ

Rated nom. current	Pole	Part no.	Pack.	Part no.	Pack.	Part no.	Pack.	Part no.	Pack.
16A	3	KNZ0163RL6	1	KNZ0163RK6	1	KNZ0163BL6	1	KNZ0163BK6	1
	4	KNZ0164RL6	1	KNZ0164RK6	1	KNZ0164BL6	1	KNZ0164BK6	1
30A	3	KNZ0303RL6	1	KNZ0303RK6	1	KNZ0303BL6	1	KNZ0303BK6	1
	4	KNZ0304RL6	1	KNZ0304RK6	1	KNZ0304BL6	1	KNZ0304BK6	1
40A	3	KNZ0403RL6	1	KNZ0403RK6	1	KNZ0403BL6	1	KNZ0403BK6	1
	4	KNZ0404RL6	1	KNZ0404RK6	1	KNZ0404BL6	1	KNZ0404BK6	1



XNA 16 - 32A

Rated nom. current	Pole	Part no.	Pack.	Part no.	Pack.	Part no.	Pack.	Part no.	Pack.
16A	3	XNA0163RL6	1	XNA0163RK6	1	XNA0163BL6	1	XNA0163BK6	1
	4	XNA0164RL6	1	XNA0164RK6	1	XNA0164BL6	1	XNA0164BK6	1
32A	3	XNA0323RL6	1	XNA0323RK6	1	XNA0323BL6	1	XNA0323BK6	1
	4	XNA0324RL6	1	XNA0324RK6	1	XNA0324BL6	1	XNA0324BK6	1

* Base mounting switches are supplied with standard 175mm (6.89") shaft.

Base mounting *



BL6



BK6

■ XNA 50 - 63 - 100A

Rated nom. current	Pole	Part no.	Conf.	Part no.	Conf.
50A	3	XNA0503BL6	1	XNA0503BK6	1
	4	see pag. 102		see pag. 102	
63A	3	XNA0633BL6	1	XNA0633BK6	1
	4	see pag. 102		see pag. 102	
100A	3	XNA1003BL6	1	XNA1003BK6	1
	4	see pag. 102		see pag. 102	

Base mounting *



BL6



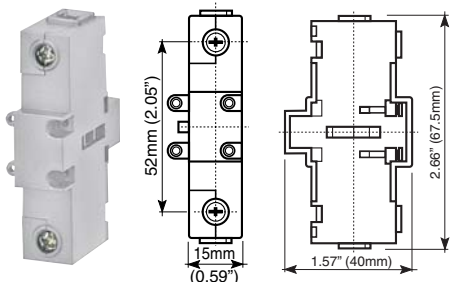
BK6

■ XNF

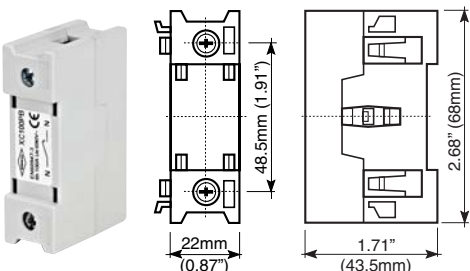
Rated nom. current	Pole	Part no.	Conf.	Part no.	Conf.
16A	3	XNF0163BL6	1	XNF0163BK6	1
	4	XNF0164BL6	1	XNF0164BK6	1
32A	3	XNF0323BL6	1	XNF0323BK6	1
	4	XNF0324BL6	1	XNF0324BK6	1

* Base mounting switches are supplied with standard 175mm (6.89") shaft.

■ Additional pole and auxiliary contacts for XNA-XNF 16-32A

	Part no.	Description	Pack.
	XC16AN	4th pole / NO auxiliary contact for 16A base mounting NC auxiliary contact for 16A rear mounting	10
	XC16CN	NC auxiliary contact for 16A base mounting 4th pole / NO auxiliary contact for 16A rear mounting	10
	XC32AN	4th pole / NO auxiliary contact for 32A base mounting NC auxiliary contact for 32A rear mounting	10
	XC32CN	NC auxiliary contact for 32A base mounting 4th pole / NO auxiliary contact for 32A rear mounting	10
	XC32GN	Earth pole for 16-32A base mounting	10

■ Additional pole XNA 50-63-100A

	Part no.	Description	Pack.
	XC012AB	NO auxiliary contact for 50-63-100A	10
	XC012CB	NC auxiliary contact for 50-63-100A	10
	XC050PB	4th pole for 50A	10
	XC063PB	4th pole for 63A	10
	XC100PB	4th pole for 100A	10
	XC100GB	Earth pole for 50-63-100A	10

Optional shafts



Part no.	Description	Pack.
PALBL300	L=300mm (18.81") □ 5mm (0.2")	5
PALBL500	L=500mm (19.68") □ 5mm (0.2")	5

Terminal covers



KNZ G1280



XNA G1304



XNA G1305



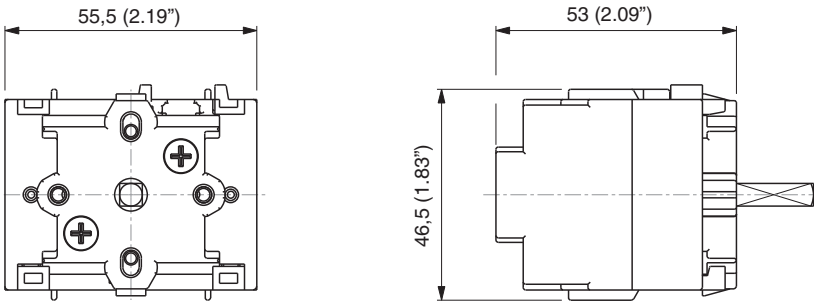
XNA-XNF G813

Part no.	Description	Pack.
KNZG1280	Couple of terminal covers for KNZ 16-40A 3 or 4 pole	10
XNAG813	Couple of terminal covers for XNA-XNF 16-40A 3 or 4 pole	10
XNAG1305	Couple of terminal covers for XNA 50-100A 3 pole	10
XNAG1304	Couple of terminal covers for additional pole XNA 50-100A	10

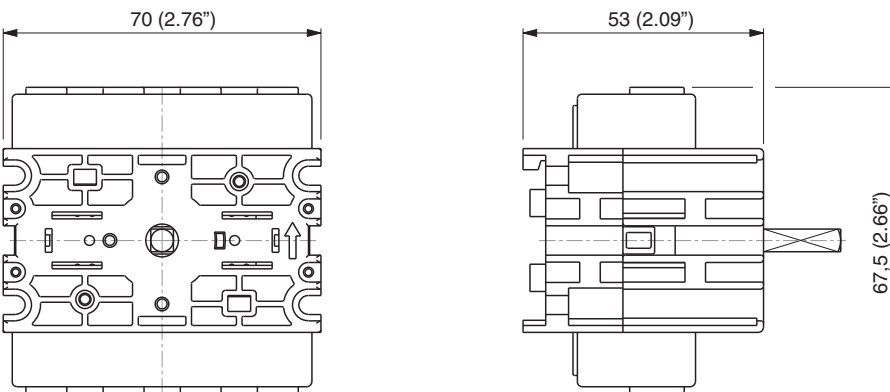
Dimensions

■ Rear mounting

KNZ 16-30-40A

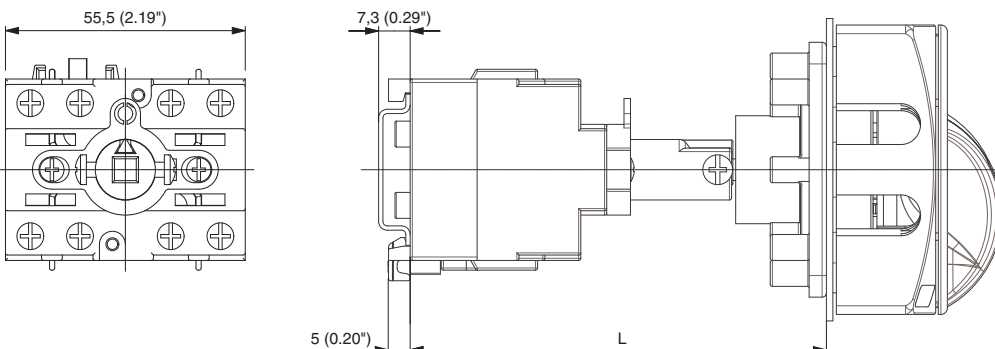


XNA 16-32A



■ Base mounting

KNZ 16-30-40A

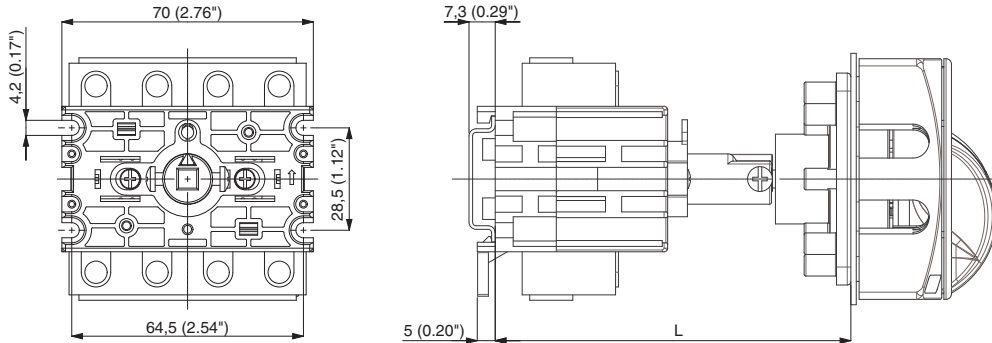


Overall length (min-max)**
for different shaft length (L1):

L1		
175*	L (mm)	96,5 - 240,5
6.89*	L (in)	3.80 - 9.47
300	L (mm)	96,5 - 365,5
11.81	L (in)	3.80 - 14.39
500	L (mm)	96,5 - 565,5
19.68	L (in)	3.80 - 22.26

* Standard shaft, bundled
** Minimum length obtainable
by cutting the shaft.

XNA 16-32A

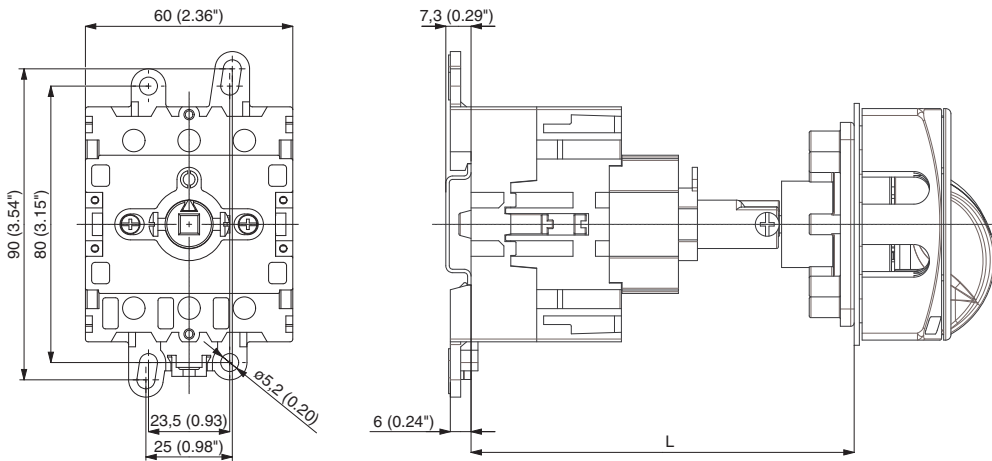


Overall length (min-max)**
for different shaft length (L1):

L1		L (mm)	L (in)
175*	6.89*	99 - 243	3.90 - 9.57
300	11.81	99 - 368	3.90 - 14.49
500	19.68	99 - 568	3.90 - 22.36

* Standard shaft, bundled
** Minimum length obtainable
by cutting the shaft.

XNA 50-63-100A

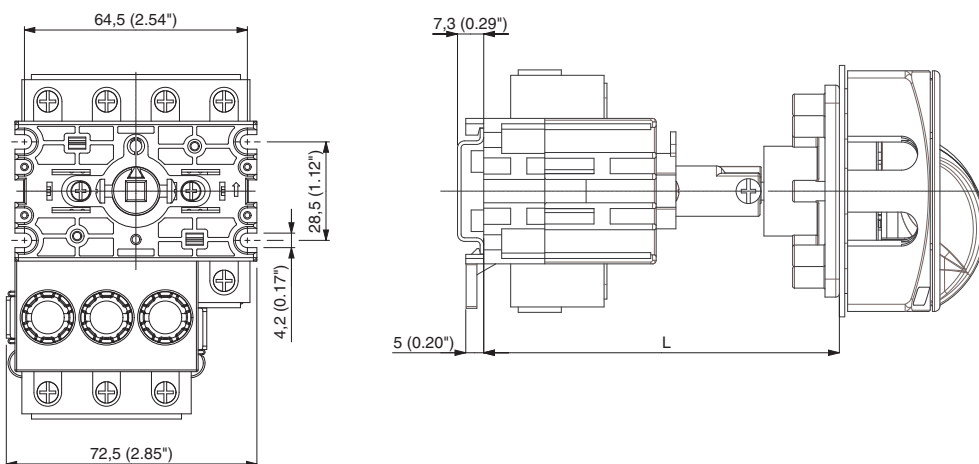


Overall length (min-max)**
for different shaft length (L1):

L1		L (mm)	L (in)
175*	6.89*	111 - 255	4.37 - 10.04
300	11.81	111 - 380	4.37 - 14.96
500	19.68	111 - 580	4.37 - 22.83

* Standard shaft, bundled
** Minimum length obtainable
by cutting the shaft.

XNF 16A



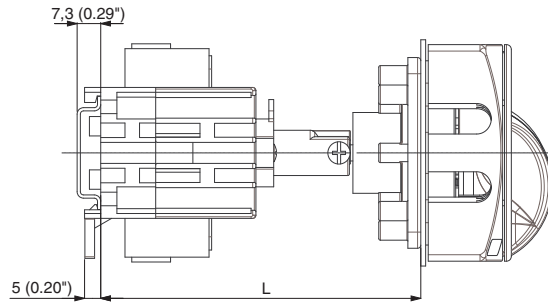
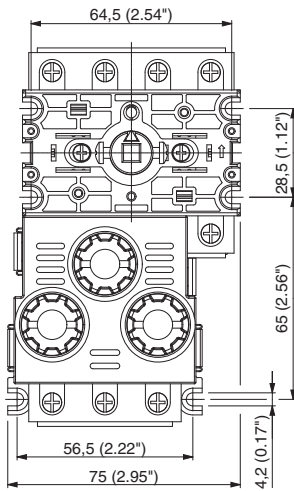
Overall length (min-max)**
for different shaft length (L1):

L1		L (mm)	L (in)
175*	6.89*	99 - 243	3.90 - 9.57
300	11.81	99 - 368	3.90 - 14.49
500	19.68	99 - 568	3.90 - 22.36

* Standard shaft, bundled
** Minimum length obtainable
by cutting the shaft.

■ Base mounting

XNF 32A



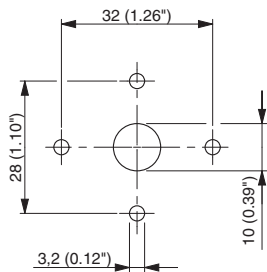
Overall length (min-max)**
for different shaft length (L1):

L1		
175*	L (mm)	99 - 243
6.89*	L (in)	3.90 - 9.57
300	L (mm)	99 - 368
11.81	L (in)	3.90 - 14.49
500	L (mm)	99 - 568
19.68	L (in)	3.90 - 22.36

* Standard shaft, bundled
** Minimum length obtainable
by cutting the shaft.

■ Drilling templates - Rear mounting

(KNZ - XNA - RT - RL - RK - RY)

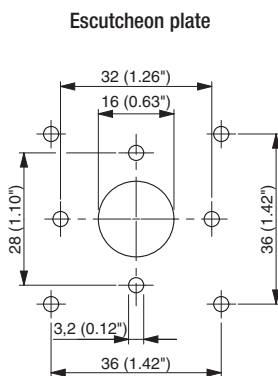


Mounting options:

- 1) 2 holes with vertical distance 28mm (1.10")
- 2) 2 holes with horizontal distance 32mm (1.26")

■ Drilling templates - Base mounting

(KNZ - XNA - XNF - BL - BK)



Escutcheon plate

Escutcheon plate mounting options:

- 1) 2 holes with vertical distance 28mm (1.10")
- 2) 2 holes with horizontal distance 32mm (1.26")
- 3) 4 holes with distance 36 mm (1.42")

16 mm (0.63") central hole is common to all series listed.

Switch mounting options:

- 1) Mounting with screws (see pages 104 - 105 for details)
- 2) snap mount on DIN 46277/3 rail