

IN Switches Separate Parts



Housings with Contact Block Only (without Actuator)

		Standard Switch Body	Standard Switch Body with M12	Latch Switch Body with Reset
Snap Action	1 NC / 1NO	608.3000.271 IN65-SU1Z M20	608.3000.293 IN65-SU1Z M12	608.3000.314 I81-SU1Z M20
Slow Action	1 NC / 1NO	608.3000.272 IN65-U1Z M20	608.3000.289 IN65-U1Z M12	608.3000.315 I81-U1Z M20
Snap Action	2NC	608.3000.273 IN65-SA2Z M20	608.3000.294 IN65-SA2Z M12	608.3000.316 I81-SA2Z M20
Slow Action	2NC	608.3000.274 IN65-A2Z M20	608.3000.290 IN65-A2Z M12	608.3000.317 I81-A2Z M20
Snap Action	2NO	608.3000.275 IN65-SE2 M20	608.3000.295 IN65-SE2 M12	608.3000.318 I81-SE2 M20
Slow Action	2NO	608.3000.276 IN65-E2 M20	608.3000.291 IN65-E2 M12	608.3000.319 I81-E2 M20
Slow Action	1 NC / 1NO Overlapping	608.3000.277 IN65-UV1Z M20	608.3000.292 IN65-UV1Z M12	608.3000.320 I81-UV1Z M20

Actuators (Mounts into switch body without Tools)

PLUNGER



391.8052.341
SM Actuator
(Metal Plunger)

ROLLER PLUNGERS



391.8172.342
RK Actuator
(Plastic Roller)



391.8172.362
RM Actuator
(Metal Roller)

ROLLER LEVER



391.8202.343
HK Actuator
(Plastic Roller)

SIDE MOUNT ROLLER LEVERS



391.8352.345
AHK Actuator
(Plastic Roller)



391.8352.364
AHM Actuator
(Metal Roller)

SWIVEL POINT LEVER



391.8202.344
DGHK Actuator
(Plastic Roller)

SWIVEL KNEE LEVER



391.8202.348
DGKK Actuator
(Plastic Roller)

SWIVEL KNEE LEVER



391.8262.349
KNK Actuator
(Plastic Roller)

SIDE MOUNTED ROLLER



391.8352.359
AHSGU RO50 Actuator
(Rubber Roller)

ADJUSTABLE HEIGHT ROLLERS



391.8362.358
AVZK Actuator
(Plastic Roller)



391.8362.365
AVZM Actuator
(Metal Roller)

OTHER SAFETY PRODUCTS



ENCLOSURES



FOOT SWITCHES

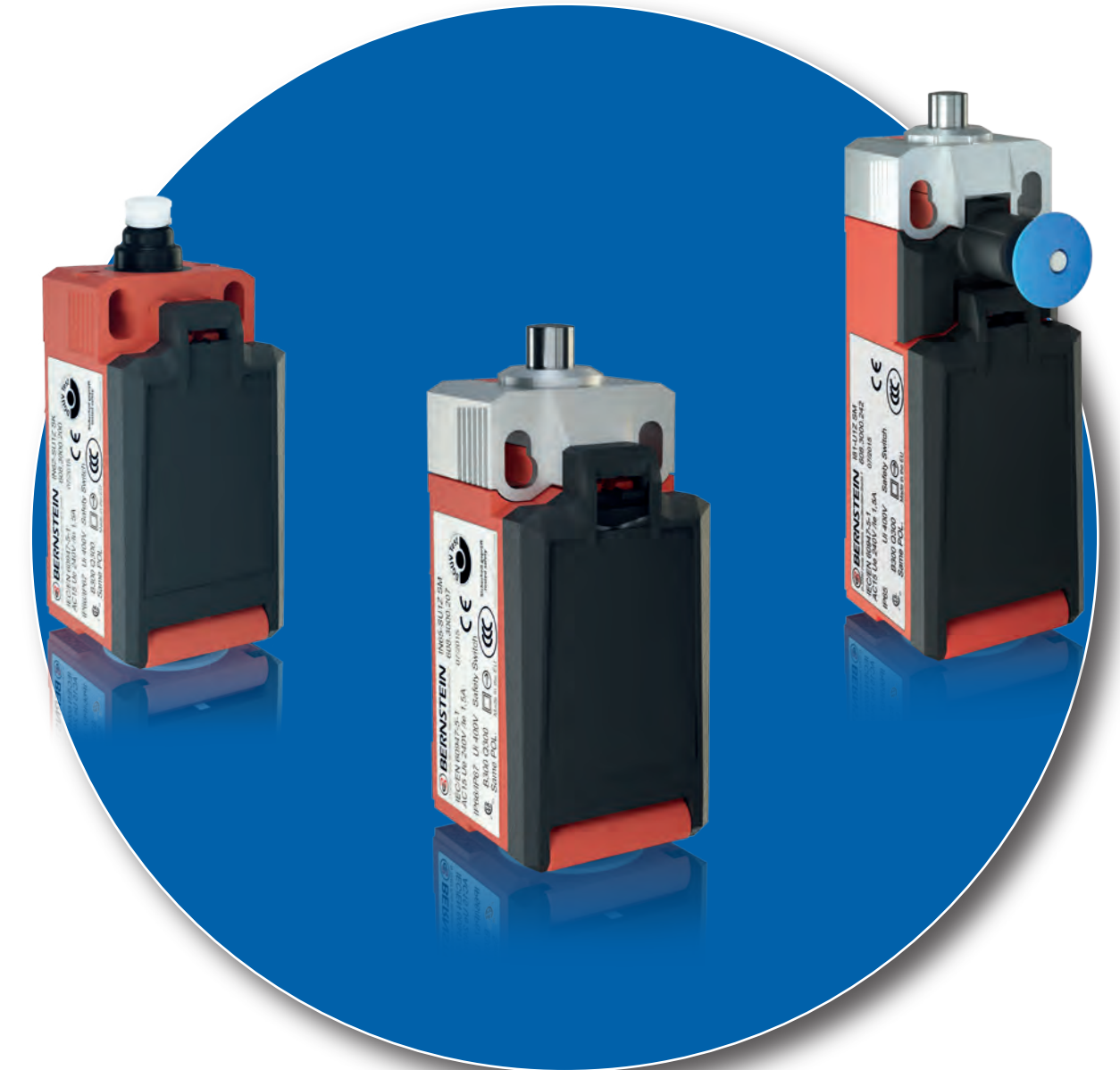


SAFETY SWITCHES

Learn More @ www.altechcorp.com

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Altech Corp.® 580IN-2000
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**Double Insulated Position Switches
IN62, IN65 and I81**

IN65 Limit Switches

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The Advantages

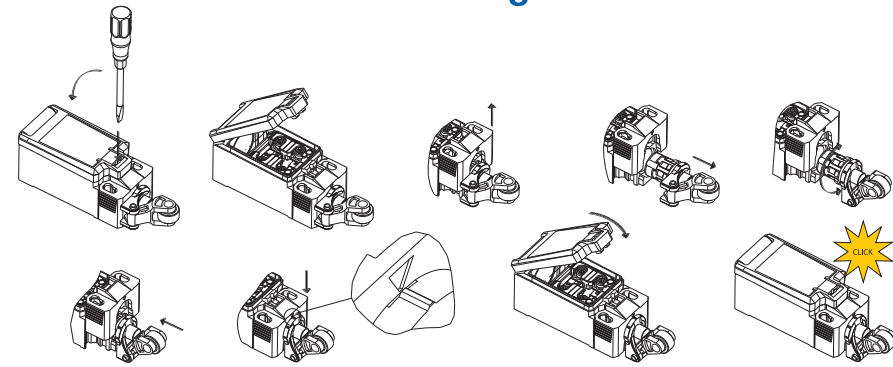
Metal mounting and actuators components offer the benefits of a metal switch at plastic switch prices.

- Actuators can be changed or adjusted without tools
- 30 million switching cycles
- Highly reliable at low current switching (1 mA at 24V)

IP66 IP67



Tool Free Actuator Change & Rotation



Technical Information

Rated operating voltage	240VAC / 24VDC
Conv. thermal current	5 A
Minimum current	1 mA
Rated AC frequency	50/60 Hz
Utilization category	AC15, Ue/Ie 240V/1.5A
DC13, Ue/Ie 24V/1.5A	
Conductor sizes	22AWG - 16AWG
Cover & Enclosure	Thermoplastic (UL94-V0)
Operating temperature	-30°C...+75°C
Protection rating	IP66 / IP67 acc. EN60529
Contact material	Silver
B10d N.C.	20x10 ⁶ cycles to ISO 13849-1

IN65...SM	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z SM	608.3000.207	1 NC / 1 NO	Snap action
	IN65-U1Z SM	608.3000.208	1 NC / 1 NO	Slow action
	IN65-SA2Z SM	608.3000.209	2 NC	Snap action
	IN65-A2Z SM	608.3000.210	2 NC	Slow action
	IN65-SE2 SM	608.3000.211	2 NO	Snap action
	IN65-E2 SM	608.3000.212	2 NO	Slow action
	IN65-UV1Z SM	608.3000.213	1 NC / 1 NO overlapping	Slow action

IN65...RK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z RK	608.3000.214	1 NC / 1 NO	Snap action
	IN65-U1Z RK	608.3000.215	1 NC / 1 NO	Slow action
	IN65-SA2Z RK	608.3000.216	2 NC	Snap action
	IN65-A2Z RK	608.3000.217	2 NC	Slow action
	IN65-SE2 RK	608.3000.218	2 NO	Snap action
	IN65-E2 RK	608.3000.219	2 NO	Slow action
	IN65-UV1Z RK	608.3000.220	1 NC / 1 NO overlapping	Slow action

IN65...HK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z HK	608.3000.221	1 NC / 1 NO	Snap action
	IN65-U1Z HK	608.3000.222	1 NC / 1 NO	Slow action
	IN65-SA2Z HK	608.3000.223	2 NC	Snap action
	IN65-A2Z HK	608.3000.224	2 NC	Slow action
	IN65-SE2 HK	608.3000.225	2 NO	Snap action
	IN65-E2 HK	608.3000.226	2 NO	Slow action
	IN65-UV1Z HK	608.3000.227	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches

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IN65...DGHK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z DGHK	608.3000.228	1 NC / 1 NO	Snap action
	IN65-U1Z DGHK	608.3000.229	1 NC / 1 NO	Slow action
	IN65-SA2Z DGHK	608.3000.230	2 NC	Snap action
	IN65-A2Z DGHK	608.3000.231	2 NC	Slow action
	IN65-SE2 DGHK	608.3000.232	2 NO	Snap action
	IN65-E2 DGHK	608.3000.233	2 NO	Slow action
	IN65-UV1Z DGHK	608.3000.234	1 NC / 1 NO overlapping	Slow action

IN65...DGKK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z DGKK	608.3000.254	1 NC / 1 NO	Snap action
	IN65-U1Z DGKK	608.3000.255	1 NC / 1 NO	Slow action
	IN65-SA2Z DGKK	608.3000.256	2 NC	Snap action
	IN65-A2Z DGKK	608.3000.257	2 NC	Slow action
	IN65-SE2 DGKK	608.3000.258	2 NO	Snap action
	IN65-E2 DGKK	608.3000.259	2 NO	Slow action
	IN65-UV1Z DGKK	608.3000.260	1 NC / 1 NO overlapping	Slow action

IN65...KNK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z KNK	608.3000.261	1 NC / 1 NO	Snap action
	IN65-U1Z KNK	608.3000.262	1 NC / 1 NO	Slow action
	IN65-SA2Z KNK	608.3000.263	2 NC	Snap action
	IN65-A2Z KNK	608.3000.264	2 NC	Slow action
	IN65-SE2 KNK	608.3000.265	2 NO	Snap action
	IN65-E2 KNK	608.3000.266	2 NO	Slow action
	IN65-UV1Z KNK	608.3000.267	1 NC / 1 NO overlapping	Slow action

IN65...AHK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHK	608.3000.235	1 NC / 1 NO	Snap action
	IN65-U1Z AHK	608.3000.236	1 NC / 1 NO	Slow action
	IN65-SA2Z AHK	608.3000.237	2 NC	Snap action
	IN65-A2Z AHK	608.3000.238	2 NC	Slow action
	IN65-SE2 AHK	608.3000.239	2 NO	Snap action
	IN65-E2 AHK	608.3000.240	2 NO	Slow action
	IN65-UV1Z AHK	608.3000.241	1 NC / 1 NO overlapping	Slow action

IN65...AHSGU R050	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHSGU R050	608.3000.300	1 NC / 1 NO	Snap action
	IN65-U1Z AHSGU R050	608.3000.296	1 NC / 1 NO	Slow action
	IN65-SA2Z AHSGU R050	608.3000.302	2 NC	Snap action
	IN65-A2Z AHSGU R050	608.3000.297	2 NC	Slow action
	IN65-SE2 AHSGU R050	608.3000.302	2 NO	Snap action
	IN65-E2 AHSGU R050	608.3000.298	2 NO	Slow action
	IN65-UV1Z AHSGU R050	608.3000.299	1 NC / 1 NO overlapping	Slow action

IN65...AHDM	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHDM	608.3000.307	1 NC / 1 NO	Snap action
	IN65-U1Z AHDM	608.3000.303	1 NC / 1 NO	Slow action
	IN65-SA2Z AHDM	608.3000.308	2 NC	Snap action
	IN65-A2Z AHDM	608.3000.304	2 NC	Slow action
	IN65-SE2 AHDM	608.3000.309	2 NO	Snap action
	IN65-E2 AHDM	608.3000.305	2 NO	Slow action
	IN65-UV1Z AHDM	608.3000.306	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches

Altech Corp.®

IN65...AVK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AVK	608.3000.280	1 NC / 1 NO	Snap action
	IN65-U1Z AVK	608.3000.284	1 NC / 1 NO	Slow action
	IN65-SA2Z AVK	608.3000.286	2 NC	Snap action
	IN65-A2Z AVK	608.3000.279	2 NC	Slow action
	IN65-SE2 AVK	608.3000.288	2 NO	Snap action
	IN65-E2 AVK	608.3000.287	2 NO	Slow action
	IN65-UV1Z AVK	608.3000.285	1 NC / 1 NO overlapping	Slow action

I81... (Latching Style)	Description	Part Number	Contact Type	Contact Action
	I81-U1Z SM	608.3000.242	1 NC / 1 NO	Slow action
	I81-U1Z RK	608.3000.243	1 NC / 1 NO	Slow action
	I81-U1Z HK	608.3000.244	1 NC / 1 NO	Slow action
	I81-U1Z DGHK	608.3000.245	1 NC / 1 NO	Slow action
	I81-U1Z DGKK	608.3000.268	1 NC / 1 NO	Slow action
	I81-U1Z KNK	608.3000.269	1 NC / 1 NO	Slow action
	I81-U1Z AHK	608.3000.246	1 NC / 1 NO	Slow action

* The actuator type is identified by the last group of letters.

IN62 Plastic Plunger Limit Switches

Technical Information

Rated insulation voltage (Ui)	400 V
Rated impulse voltage (Uimp)	4 kV
Rated operational voltage (Ue)	240 V AC / 24 V DC
Rated supply frequency AC	50 / 60 Hz
Overvoltage category	II acc. EN 60947-1 annex H table H1
Conv. thermal current (Ithe)	5 A
Minimum current	1 mA
Reliability	acc. EN 60947-5-4 @ 24 V DC, 10 mA, 1 mA, Ukd 2,4 V DC
Utilization category	AC 15, Ue/Ie 240 V / 1,5 A DC 13, Ue/Ie 24 V / 1,5 A (B300 table A.1)
Direct opening action	acc. IEC/EN 60947-5-1, annex K; direct opening force: 18 N
Enclosure & Cover	glass fibre reinforced (UL 94-V0)
Actuator	Thermoplastic (UL 94-HB)
Actuating force	FB 10 N ≤ FB ≤ 30 N
Operating temperature	-30 °C ... +75 °C
Protection type	IP67 acc. EN 60529
Contact material	Silver
Switching frequency	≤ 60 / min.
Mechanical life	10 x 10 ⁶ operating cycles
Mission time	≤ 20 years
Conductor (solid or stranded)	AWG 22-16 (0,34 mm ² - 1,5 mm ²)
B10d N.C.	20 x 10 ⁶ cycles to ISO 13849-1

IN62...	Description	Part Number	Contact Type	Contact Action
	IN62-SU1Z SK	608.3000.200	1 NC / 1 NO	Snap action
	IN62-U1Z SK	608.3000.201	1 NC / 1 NO	Slow action
	IN62-SA2Z SK	608.3000.202	2 NC	Snap action
	IN62-A2Z SK	608.3000.203	2 NC	Slow action
	IN62-SE2 SK	608.3000.204	2 NO	Snap action
	IN62-E2 SK	608.3000.205	2 NO	Slow action
	IN62-UV1Z SK	608.3000.206	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches

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The Advantages

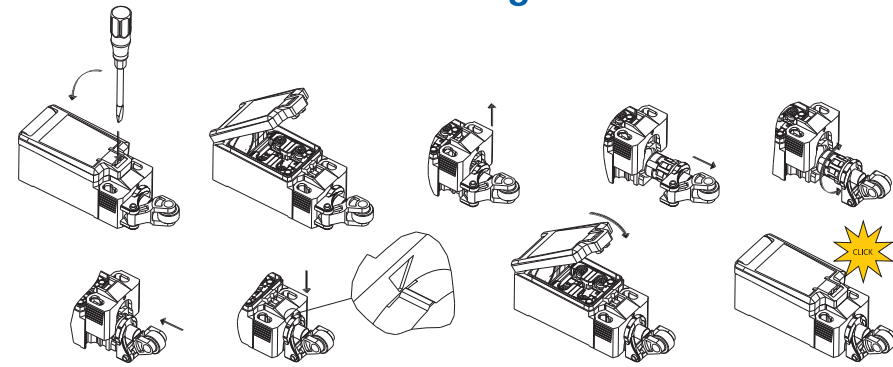
Metal mounting and actuators components offer the benefits of a metal switch at plastic switch prices.

- Actuators can be changed or adjusted without tools
- 30 million switching cycles
- Highly reliable at low current switching (1 mA at 24V)

IP66 IP67



Tool Free Actuator Change & Rotation



Technical Information

Rated operating voltage	240VAC / 24VDC
Conv. thermal current	5 A
Minimum current	1 mA
Rated AC frequency	50/60 Hz
Utilization category	AC15, Ue/Ie 240V/1.5A
DC13, Ue/Ie 24V/1.5A	
Conductor sizes	22AWG - 16AWG
Cover & Enclosure	Thermoplastic (UL94-V0)
Operating temperature	-30°C...+75°C
Protection rating	IP66 / IP67 acc. EN60529
Contact material	Silver
B10d N.C.	20x10 ⁶ cycles to ISO 13849-1

IN65...SM	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z SM	608.3000.207	1 NC / 1 NO	Snap action
	IN65-U1Z SM	608.3000.208	1 NC / 1 NO	Slow action
	IN65-SA2Z SM	608.3000.209	2 NC	Snap action
	IN65-A2Z SM	608.3000.210	2 NC	Slow action
	IN65-SE2 SM	608.3000.211	2 NO	Snap action
	IN65-E2 SM	608.3000.212	2 NO	Slow action
	IN65-UV1Z SM	608.3000.213	1 NC / 1 NO overlapping	Slow action

IN65...RK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z RK	608.3000.214	1 NC / 1 NO	Snap action
	IN65-U1Z RK	608.3000.215	1 NC / 1 NO	Slow action
	IN65-SA2Z RK	608.3000.216	2 NC	Snap action
	IN65-A2Z RK	608.3000.217	2 NC	Slow action
	IN65-SE2 RK	608.3000.218	2 NO	Snap action
	IN65-E2 RK	608.3000.219	2 NO	Slow action
	IN65-UV1Z RK	608.3000.220	1 NC / 1 NO overlapping	Slow action

IN65...HK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z HK	608.3000.221	1 NC / 1 NO	Snap action
	IN65-U1Z HK	608.3000.222	1 NC / 1 NO	Slow action
	IN65-SA2Z HK	608.3000.223	2 NC	Snap action
	IN65-A2Z HK	608.3000.224	2 NC	Slow action
	IN65-SE2 HK	608.3000.225	2 NO	Snap action
	IN65-E2 HK	608.3000.226	2 NO	Slow action
	IN65-UV1Z HK	608.3000.227	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches

Altech Corp.®

IN65...DGHK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z DGHK	608.3000.228	1 NC / 1 NO	Snap action
	IN65-U1Z DGHK	608.3000.229	1 NC / 1 NO	Slow action
	IN65-SA2Z DGHK	608.3000.230	2 NC	Snap action
	IN65-A2Z DGHK	608.3000.231	2 NC	Slow action
	IN65-SE2 DGHK	608.3000.232	2 NO	Snap action
	IN65-E2 DGHK	608.3000.233	2 NO	Slow action
	IN65-UV1Z DGHK	608.3000.234	1 NC / 1 NO overlapping	Slow action

IN65...DGKK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z DGKK	608.3000.254	1 NC / 1 NO	Snap action
	IN65-U1Z DGKK	608.3000.255	1 NC / 1 NO	Slow action
	IN65-SA2Z DGKK	608.3000.256	2 NC	Snap action
	IN65-A2Z DGKK	608.3000.257	2 NC	Slow action
	IN65-SE2 DGKK	608.3000.258	2 NO	Snap action
	IN65-E2 DGKK	608.3000.259	2 NO	Slow action
	IN65-UV1Z DGKK	608.3000.260	1 NC / 1 NO overlapping	Slow action

IN65...KNK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z KNK	608.3000.261	1 NC / 1 NO	Snap action
	IN65-U1Z KNK	608.3000.262	1 NC / 1 NO	Slow action
	IN65-SA2Z KNK	608.3000.263	2 NC	Snap action
	IN65-A2Z KNK	608.3000.264	2 NC	Slow action
	IN65-SE2 KNK	608.3000.265	2 NO	Snap action
	IN65-E2 KNK	608.3000.266	2 NO	Slow action
	IN65-UV1Z KNK	608.3000.267	1 NC / 1 NO overlapping	Slow action

IN65...AHK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHK	608.3000.235	1 NC / 1 NO	Snap action
	IN65-U1Z AHK	608.3000.236	1 NC / 1 NO	Slow action
	IN65-SA2Z AHK	608.3000.237	2 NC	Snap action
	IN65-A2Z AHK	608.3000.238	2 NC	Slow action
	IN65-SE2 AHK	608.3000.239	2 NO	Snap action
	IN65-E2 AHK	608.3000.240	2 NO	Slow action
	IN65-UV1Z AHK	608.3000.241	1 NC / 1 NO overlapping	Slow action

IN65...AHSGU R050	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHSGU R050	608.3000.300	1 NC / 1 NO	Snap action
	IN65-U1Z AHSGU R050	608.3000.296	1 NC / 1 NO	Slow action
	IN65-SA2Z AHSGU R050	608.3000.302	2 NC	Snap action
	IN65-A2Z AHSGU R050	608.3000.297	2 NC	Slow action
	IN65-SE2 AHSGU R050	608.3000.302	2 NO	Snap action
	IN65-E2 AHSGU R050	608.3000.298	2 NO	Slow action
	IN65-UV1Z AHSGU R050	608.3000.299	1 NC / 1 NO overlapping	Slow action

IN65...AHDM	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHDM	608.3000.307	1 NC / 1 NO	Snap action
	IN65-U1Z AHDM	608.3000.303	1 NC / 1 NO	Slow action
	IN65-SA2Z AHDM	608.3000.308	2 NC	Snap action
	IN65-A2Z AHDM	608.3000.304	2 NC	Slow action
	IN65-SE2 AHDM	608.3000.309	2 NO	Snap action
	IN65-E2 AHDM	608.3000.305	2 NO	Slow action
	IN65-UV1Z AHDM	608.3000.306	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches

Altech Corp.®

IN65...AVK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AVK	608.3000.280	1 NC / 1 NO	Snap action
	IN65-U1Z AVK	608.3000.284	1 NC / 1 NO	Slow action
	IN65-SA2Z AVK	608.3000.286	2 NC	Snap action
	IN65-A2Z AVK	608.3000.279	2 NC	Slow action
	IN65-SE2 AVK	608.3000.288	2 NO	Snap action
	IN65-E2 AVK	608.3000.287	2 NO	Slow action
	IN65-UV1Z AVK	608.3000.285	1 NC / 1 NO overlapping	Slow action

I81... (Latching Style)	Description	Part Number	Contact Type	Contact Action
	I81-U1Z SM	608.3000.242	1 NC / 1 NO	Slow action
	I81-U1Z RK	608.3000.243	1 NC / 1 NO	Slow action
	I81-U1Z HK	608.3000.244	1 NC / 1 NO	Slow action
	I81-U1Z DGHK	608.3000.245	1 NC / 1 NO	Slow action
	I81-U1Z DGKK	608.3000.268	1 NC / 1 NO	Slow action
	I81-U1Z KNK	608.3000.269	1 NC / 1 NO	Slow action
	I81-U1Z AHK	608.3000.246	1 NC / 1 NO	Slow action

* The actuator type is identified by the last group of letters.

IN62 Plastic Plunger Limit Switches

Technical Information

Rated insulation voltage (Ui)	400 V
Rated impulse voltage (Uimp)	4 kV
Rated operational voltage (Ue)	240 V AC / 24 V DC
Rated supply frequency AC	50 / 60 Hz
Overvoltage category	II acc. EN 60947-1 annex H table H1
Conv. thermal current (Ithe)	5 A
Minimum current	1 mA
Reliability	acc. EN 60947-5-4 @ 24 V DC, 10 mA, 1 mA, Ukd 2,4 V DC
Utilization category	AC 15, Ue/Ie 240 V / 1,5 A DC 13, Ue/Ie 24 V / 1,5 A (B300 table A.1)
Direct opening action	acc. IEC/EN 60947-5-1, annex K; direct opening force: 18 N
Enclosure & Cover	glass fibre reinforced (UL 94-V0)
Actuator	Thermoplastic (UL 94-HB)
Actuating force	FB 10 N ≤ FB ≤ 30 N
Operating temperature	-30 °C ... +75 °C
Protection type	IP67 acc. EN 60529
Contact material	Silver
Switching frequency	≤ 60 / min.
Mechanical life	10 x 10 ⁶ operating cycles
Mission time	≤ 20 years
Conductor (solid or stranded)	AWG 22-16 (0,34 mm ² - 1,5 mm ²)
B10d N.C.	20 x 10 ⁶ cycles to ISO 13849-1

IN62...	Description	Part Number	Contact Type	Contact Action
	IN62-SU1Z SK	608.3000.200	1 NC / 1 NO	Snap action
	IN62-U1Z SK	608.3000.201	1 NC / 1 NO	Slow action
	IN62-SA2Z SK	608.3000.202	2 NC	Snap action
	IN62-A2Z SK	608.3000.203	2 NC	Slow action
	IN62-SE2 SK	608.3000.204	2 NO	Snap action
	IN62-E2 SK	608.3000.205	2 NO	Slow action
	IN62-UV1Z SK	608.3000.206	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches



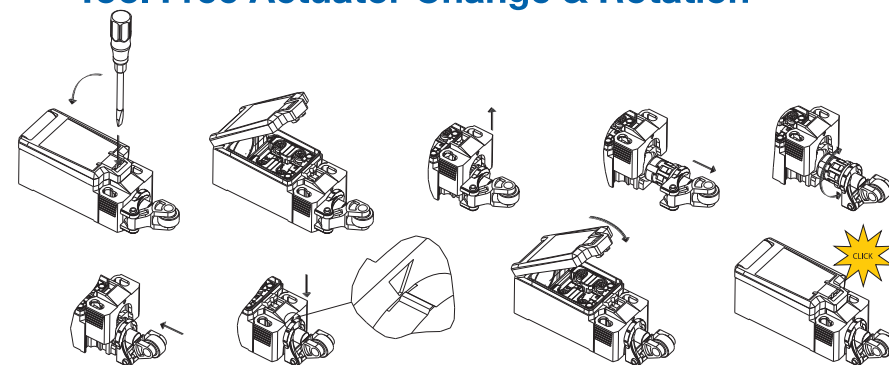
The Advantages

Metal mounting and actuators components offer the benefits of a metal switch at plastic switch prices.

- Actuators can be changed or adjusted without tools
- 30 million switching cycles
- Highly reliable at low current switching (1 mA at 24V)



Tool Free Actuator Change & Rotation



Technical Information

Rated operating voltage	240VAC / 24VDC
Conv. thermal current	5 A
Minimum current	1 mA
Rated AC frequency	50/60 Hz
Utilization category	AC15, Ue/Ie 240V/1.5A
DC13, Ue/Ie 24V/1.5A	
Conductor sizes	22AWG - 16AWG
Cover & Enclosure	Thermoplastic (UL94-V0)
Operating temperature	-30°C...+75°C
Protection rating	IP66 / IP67 acc. EN60529
Contact material	Silver
B10d N.C.	20x10 ⁶ cycles to ISO 13849-1

IN65...SM	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z SM	608.3000.207	1 NC / 1 NO	Snap action
	IN65-U1Z SM	608.3000.208	1 NC / 1 NO	Slow action
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	IN65-A2Z SM	608.3000.210	2 NC	Slow action
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	IN65-SU1Z RK	608.3000.214	1 NC / 1 NO	Snap action
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	IN65-SA2Z RK	608.3000.216	2 NC	Snap action
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	IN65-SE2 RK	608.3000.218	2 NO	Snap action
	IN65-E2 RK	608.3000.219	2 NO	Slow action
IN65-UV1Z RK	608.3000.220	1 NC / 1 NO overlapping	Slow action	

IN65...HK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z HK	608.3000.221	1 NC / 1 NO	Snap action
	IN65-U1Z HK	608.3000.222	1 NC / 1 NO	Slow action
	IN65-SA2Z HK	608.3000.223	2 NC	Snap action
	IN65-A2Z HK	608.3000.224	2 NC	Slow action
	IN65-SE2 HK	608.3000.225	2 NO	Snap action
	IN65-E2 HK	608.3000.226	2 NO	Slow action
IN65-UV1Z HK	608.3000.227	1 NC / 1 NO overlapping	Slow action	

IN65 Limit Switches



IN65...DGHK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z DGHK	608.3000.228	1 NC / 1 NO	Snap action
	IN65-U1Z DGHK	608.3000.229	1 NC / 1 NO	Slow action
	IN65-SA2Z DGHK	608.3000.230	2 NC	Snap action
	IN65-A2Z DGHK	608.3000.231	2 NC	Slow action
	IN65-SE2 DGHK	608.3000.232	2 NO	Snap action
	IN65-E2 DGHK	608.3000.233	2 NO	Slow action
	IN65-UV1Z DGHK	608.3000.234	1 NC / 1 NO overlapping	Slow action

IN65...DGKK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z DGKK	608.3000.254	1 NC / 1 NO	Snap action
	IN65-U1Z DGKK	608.3000.255	1 NC / 1 NO	Slow action
	IN65-SA2Z DGKK	608.3000.256	2 NC	Snap action
	IN65-A2Z DGKK	608.3000.257	2 NC	Slow action
	IN65-SE2 DGKK	608.3000.258	2 NO	Snap action
	IN65-E2 DGKK	608.3000.259	2 NO	Slow action
	IN65-UV1Z DGKK	608.3000.260	1 NC / 1 NO overlapping	Slow action

IN65...KNK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z KNK	608.3000.261	1 NC / 1 NO	Snap action
	IN65-U1Z KNK	608.3000.262	1 NC / 1 NO	Slow action
	IN65-SA2Z KNK	608.3000.263	2 NC	Snap action
	IN65-A2Z KNK	608.3000.264	2 NC	Slow action
	IN65-SE2 KNK	608.3000.265	2 NO	Snap action
	IN65-E2 KNK	608.3000.266	2 NO	Slow action
	IN65-UV1Z KNK	608.3000.267	1 NC / 1 NO overlapping	Slow action

IN65...AHK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHK	608.3000.235	1 NC / 1 NO	Snap action
	IN65-U1Z AHK	608.3000.236	1 NC / 1 NO	Slow action
	IN65-SA2Z AHK	608.3000.237	2 NC	Snap action
	IN65-A2Z AHK	608.3000.238	2 NC	Slow action
	IN65-SE2 AHK	608.3000.239	2 NO	Snap action
	IN65-E2 AHK	608.3000.240	2 NO	Slow action
	IN65-UV1Z AHK	608.3000.241	1 NC / 1 NO overlapping	Slow action

IN65...AHSGU R050	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHSGU R050	608.3000.300	1 NC / 1 NO	Snap action
	IN65-U1Z AHSGU R050	608.3000.296	1 NC / 1 NO	Slow action
	IN65-SA2Z AHSGU R050	608.3000.302	2 NC	Snap action
	IN65-A2Z AHSGU R050	608.3000.297	2 NC	Slow action
	IN65-SE2 AHSGU R050	608.3000.302	2 NO	Snap action
	IN65-E2 AHSGU R050	608.3000.298	2 NO	Slow action
	IN65-UV1Z AHSGU R050	608.3000.299	1 NC / 1 NO overlapping	Slow action

IN65...AHDM	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AHDM	608.3000.307	1 NC / 1 NO	Snap action
	IN65-U1Z AHDM	608.3000.303	1 NC / 1 NO	Slow action
	IN65-SA2Z AHDM	608.3000.308	2 NC	Snap action
	IN65-A2Z AHDM	608.3000.304	2 NC	Slow action
	IN65-SE2 AHDM	608.3000.309	2 NO	Snap action
	IN65-E2 AHDM	608.3000.305	2 NO	Slow action
	IN65-UV1Z AHDM	608.3000.306	1 NC / 1 NO overlapping	Slow action

IN65 Limit Switches



IN65...AVK	Description	Part Number	Contact Type	Contact Action
	IN65-SU1Z AVK	608.3000.280	1 NC / 1 NO	Snap action
	IN65-U1Z AVK	608.3000.284	1 NC / 1 NO	Slow action
	IN65-SA2Z AVK	608.3000.286	2 NC	Snap action
	IN65-A2Z AVK	608.3000.279	2 NC	Slow action
	IN65-SE2 AVK	608.3000.288	2 NO	Snap action
	IN65-E2 AVK	608.3000.287	2 NO	Slow action
	IN65-UV1Z AVK	608.3000.285	1 NC / 1 NO overlapping	Slow action

I81... (Latching Style)	Description	Part Number	Contact Type	Contact Action
	I81-U1Z SM	608.3000.242	1 NC / 1 NO	Slow action
	I81-U1Z RK	608.3000.243	1 NC / 1 NO	Slow action
	I81-U1Z HK	608.3000.244	1 NC / 1 NO	Slow action
	I81-U1Z DGHK	608.3000.245	1 NC / 1 NO	Slow action
	I81-U1Z DGKK	608.3000.268	1 NC / 1 NO	Slow action
	I81-U1Z KNK	608.3000.269	1 NC / 1 NO	Slow action
	I81-U1Z AHK	608.3000.246	1 NC / 1 NO	Slow action

* The actuator type is identified by the last group of letters.

IN62 Plastic Plunger Limit Switches

Technical Information

Rated insulation voltage (Ui)	400 V
Rated impulse voltage (Uimp)	4 kV
Rated operational voltage (Ue)	240 V AC / 24 V DC
Rated supply frequency AC	50 / 60 Hz
Overvoltage category	II acc. EN 60947-1 annex H table H1
Conv. thermal current (Ithe)	5 A
Minimum current	1 mA
Reliability	acc. EN 60947-5-4 @ 24 V DC, 10 mA, 1 mA, Ukd 2,4 V DC
Utilization category	AC 15, Ue/Ie 240 V / 1,5 A DC 13, Ue/Ie 24 V / 1,5 A (B300 table A.1)
Direct opening action	acc. IEC/EN 60947-5-1, annex K; direct opening force: 18 N
Enclosure & Cover	glass fibre reinforced (UL 94-V0)
Actuator	Thermoplastic (UL 94-HB)
Actuating force	FB 10 N ≤ FB ≤ 30 N
Operating temperature	-30 °C ... +75 °C
Protection type	IP67 acc. EN 60529
Contact material	Silver
Switching frequency	≤ 60 / min.
Mechanical life	10 x 10 ⁶ operating cycles
Mission time	≤ 20 years
Conductor (solid or stranded)	AWG 22-16 (0,34 mm ² - 1,5 mm ²)
B10d N.C.	20 x 10 ⁶ cycles to ISO 13849-1

IN62...	Description	Part Number	Contact Type	Contact Action
	IN62-SU1Z SK	608.3000.200	1 NC / 1 NO	Snap action
	IN62-U1Z SK	608.3000.201	1 NC / 1 NO	Slow action
	IN62-SA2Z SK	608.3000.202	2 NC	Snap action
	IN62-A2Z SK	608.3000.203	2 NC	Slow action
	IN62-SE2 SK	608.3000.204	2 NO	Snap action
	IN62-E2 SK	608.3000.205	2 NO	Slow action
IN62-UV1Z SK	608.3000.206	1 NC / 1 NO overlapping	Slow action	

IN Switches Separate Parts



Housings with Contact Block Only (without Actuator)

		Standard Switch Body	Standard Switch Body with M12	Latch Switch Body with Reset
Snap Action	1 NC / 1NO	608.3000.271 IN65-SU1Z M20	608.3000.293 IN65-SU1Z M12	608.3000.314 I81-SU1Z M20
Slow Action	1 NC / 1NO	608.3000.272 IN65-U1Z M20	608.3000.289 IN65-U1Z M12	608.3000.315 I81-U1Z M20
Snap Action	2NC	608.3000.273 IN65-SA2Z M20	608.3000.294 IN65-SA2Z M12	608.3000.316 I81-SA2Z M20
Slow Action	2NC	608.3000.274 IN65-A2Z M20	608.3000.290 IN65-A2Z M12	608.3000.317 I81-A2Z M20
Snap Action	2NO	608.3000.275 IN65-SE2 M20	608.3000.295 IN65-SE2 M12	608.3000.318 I81-SE2 M20
Slow Action	2NO	608.3000.276 IN65-E2 M20	608.3000.291 IN65-E2 M12	608.3000.319 I81-E2 M20
Slow Action	1 NC / 1NO Overlapping	608.3000.277 IN65-UV1Z M20	608.3000.292 IN65-UV1Z M12	608.3000.320 I81-UV1Z M20

Actuators (Mounts into switch body without Tools)

PLUNGER



391.8052.341
SM Actuator
(Metal Plunger)

ROLLER PLUNGERS



391.8172.342
RK Actuator
(Plastic Roller)



391.8172.362
RM Actuator
(Metal Roller)

ROLLER LEVER



391.8202.343
HK Actuator
(Plastic Roller)

SIDE MOUNT ROLLER LEVERS



391.8352.345
AHK Actuator
(Plastic Roller)



391.8352.364
AHM Actuator
(Metal Roller)

SWIVEL POINT LEVER



391.8202.344
DGHK Actuator
(Plastic Roller)

SWIVEL KNEE LEVER



391.8202.348
DGKK Actuator
(Plastic Roller)

SWIVEL KNEE LEVER



391.8262.349
KNK Actuator
(Plastic Roller)

SIDE MOUNTED ROLLER



391.8352.359
AHSGU RO50 Actuator
(Rubber Roller)

ADJUSTABLE HEIGHT ROLLERS



391.8362.358
AVZK Actuator
(Plastic Roller)



391.8362.365
AVZM Actuator
(Metal Roller)

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Double Insulated Position Switches
IN62, IN65 and I81

IN Switches Separate Parts



Housings with Contact Block Only (without Actuator)

		Standard Switch Body	Standard Switch Body with M12	Latch Switch Body with Reset
Snap Action	1 NC / 1NO	608.3000.271 IN65-SU1Z M20	608.3000.293 IN65-SU1Z M12	608.3000.314 I81-SU1Z M20
Slow Action	1 NC / 1NO	608.3000.272 IN65-U1Z M20	608.3000.289 IN65-U1Z M12	608.3000.315 I81-U1Z M20
Snap Action	2NC	608.3000.273 IN65-SA2Z M20	608.3000.294 IN65-SA2Z M12	608.3000.316 I81-SA2Z M20
Slow Action	2NC	608.3000.274 IN65-A2Z M20	608.3000.290 IN65-A2Z M12	608.3000.317 I81-A2Z M20
Snap Action	2NO	608.3000.275 IN65-SE2 M20	608.3000.295 IN65-SE2 M12	608.3000.318 I81-SE2 M20
Slow Action	2NO	608.3000.276 IN65-E2 M20	608.3000.291 IN65-E2 M12	608.3000.319 I81-E2 M20
Slow Action	1 NC / 1NO Overlapping	608.3000.277 IN65-UV1Z M20	608.3000.292 IN65-UV1Z M12	608.3000.320 I81-UV1Z M20

Actuators (Mounts into switch body without Tools)

<p>PLUNGER</p> <p>391.8052.341 SM Actuator (Metal Plunger)</p>	<p>ROLLER PLUNGERS</p> <p>391.8172.342 RK Actuator (Plastic Roller)</p> <p>391.8172.362 RM Actuator (Metal Roller)</p>	<p>ROLLER LEVER</p> <p>391.8202.343 HK Actuator (Plastic Roller)</p>
<p>SIDE MOUNT ROLLER LEVERS</p> <p>391.8352.345 AHK Actuator (Plastic Roller)</p>	<p>SWIVEL POINT LEVER</p> <p>391.8352.364 AHM Actuator (Metal Roller)</p>	<p>SWIVEL KNEE LEVER</p> <p>391.8202.344 DGHK Actuator (Plastic Roller)</p> <p>391.8202.348 DKKK Actuator (Plastic Roller)</p>
<p>SWIVEL KNEE LEVER</p> <p>391.8262.349 KNK Actuator (Plastic Roller)</p>	<p>SIDE MOUNTED ROLLER</p> <p>391.8352.359 AHSGU RO50 Actuator (Rubber Roller)</p>	<p>ADJUSTABLE HEIGHT ROLLERS</p> <p>391.8362.358 AVZK Actuator (Plastic Roller)</p> <p>391.8362.365 AVZM Actuator (Metal Roller)</p>

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