

4. Switch sockets ZI

General description

Switch socket ZI

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Switch socket ZI with disconnecter 0-I or changeover switch I-O-II in housing with protection level IP44 or IP 67, fitted with 1, 2 or 3 fixed sockets

Switch receptacle ZO

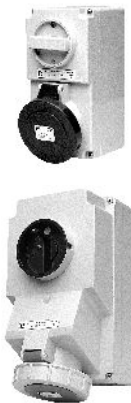
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Switch receptacle ZO with disconnecter 0-I or changeover switch I-O-II, in housing with protection level IP44, fitted with fixed receptacle plug, meant for connecting to receiving device. Connection through a remote socket.

Interlocked switch socket GB

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Interlocked switch GB with fixed socket, protected by disconnecter and interlock mechanism, in housing with protection level IP44 or IP 67

Motor start unit RZ

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Motor start unit RZ for starting and protecting 3-phase motors, in housing with protection level IP44 or IP 55

Mounting on nonflammable walls

Switch sockets ZI

Construction and application

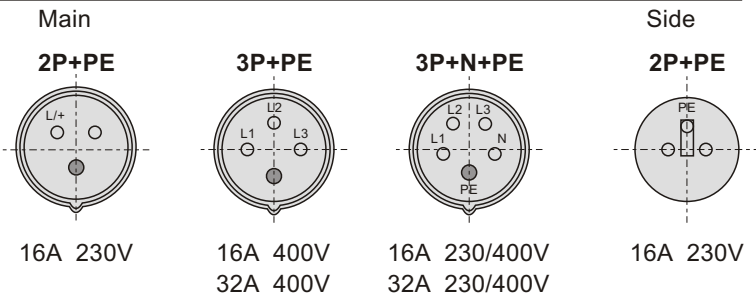


Socket switches ZI with disconnectors 0-I or changeover switches I-0-II in housing with protection level IP44 or IP 67 are fitted with 1,2 or 3 fixed sockets. There is a variety of versions regarding the type and current rating of sockets. Socket switches ZI with main socket 16A are fitted with a cam switch ŁK16R in function of a disconnector 0-I or a changeover switch I-0-II. Socket switches with main socket 32A are fitted with a cam switch ŁK32R. ZI units conform to regulations: PN-EN 60439-3 PN-EN 60439-1

Technical specifications

Rated insulation voltage U_i	V	500
Rated thermal current	A	max 32
Rated frequency	Hz	50-60
Rated operational voltage U_e	V	230/400
Impulse voltage U_{imp}	kV	6
Wire cross-section	mm ²	2,5...4
Protection level		IP44; IP67
Protection class		II

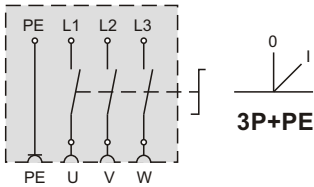
Socket outlet - front view



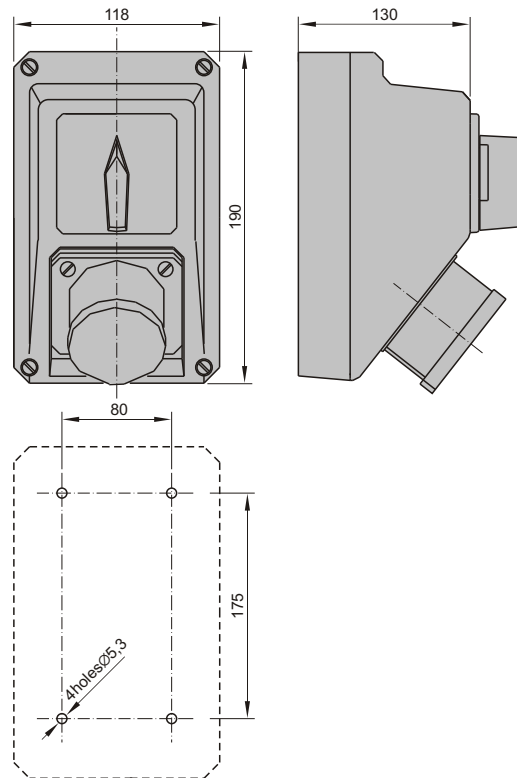
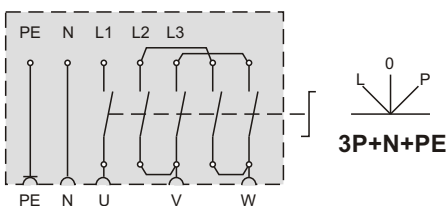
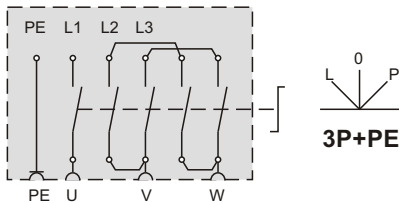
Electrical diagrams of switch sockets ZI (examples)

Housing dimensions: ZI, ZO





With disconnector 0-I



With changeover switch I-0-II



Technical specifications

Current	Type and number of fixed sockets				Glands			Code	
	Main			Side	rubber	M25 x 1,5	M32 x 1,5		
	 3P+PE	 3P+N+PE	 2P+PE	 2P+PE					
Switch sockets with disconnector 0-I								NEW IP67	
16A	1	-	-	-	1	-	-	ZI 01R111	-
	1	-	-	-	-	1	-	ZI 02R111	ZI 12R111
	-	1	-	-	-	1	-	ZI 01R211	-
	-	1	-	-	-	-	1	ZI 02R211	ZI 12R211
	-	-	1	-	-	-	1	ZI 02R571	ZI 12R571
	1	-	-	1	1	-	1	ZI 03R111	-
	-	1	-	-	1	-	1	ZI 03R211	-
	-	-	1	1	1	-	1	ZI 03R581	-
	1	-	-	-	2	-	1	ZI 04R111	-
-	1	-	-	2	-	1	ZI 04R211	-	
-	-	-	1	2	-	1	ZI 04R511	-	
32A	1	-	-	-	1	-	-	ZI 01R341	-
	1	-	-	-	-	-	1	ZI 02R341	ZI 12R341
	-	1	-	-	-	1	-	ZI 01R441	-
	-	1	-	-	-	-	1	ZI 02R441	ZI 12R441
	1	-	-	-	1*	-	1	ZI 05R341	-
	1	-	-	-	2*	-	1	ZI 05R342	-
	-	1	-	-	1*	-	1	ZI 05R441	-
-	1	-	-	2*	-	1	ZI 05R442	-	
Switch sockets with changeover switch I-0-II									
16A	1	-	-	-	1	-	-	ZI 01R121	-
	1	-	-	-	-	1	-	ZI 02R121	ZI 12R121
	-	1	-	-	-	1	-	ZI 01R221	-
	-	1	-	-	-	-	1	ZI 02R221	ZI 12R221
	1	-	-	-	1	-	1	ZI 03R121	-
	-	1	-	-	1	-	1	ZI 03R221	-
	1	-	-	-	2	-	1	ZI 04R121	-
-	1	-	-	2	-	1	ZI 04R221	-	
32A	1	-	-	-	1	-	-	ZI 01R361	-
	1	-	-	-	-	-	1	ZI 02R361	ZI 12R361
	-	1	-	-	-	1	-	ZI 01R461	-
	-	1	-	-	-	-	1	ZI 02R461	ZI 12R461
	1	-	-	-	1*	-	1	ZI 05R361	-
	1	-	-	-	2*	-	1	ZI 05R362	-
	-	1	-	-	1*	-	1	ZI 05R461	-
-	1	-	-	2*	-	1	ZI 05R462	-	

*) Protected 10A/250V - fuse link breaking capacity - AC 1500A.

Switch receptacles ZO

Construction and application



Switch receptacles of ZO family are used for loading and unloading or changing over the rotation of connected devices. Connection through a remote socket plugged into a receptacle plug (male inlet) fixed on the housing with protection level IP44.

Switch receptacles ZO conform to standards:

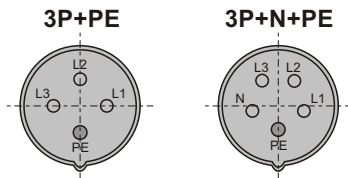
PN-EN 60439-3

PN-EN 60439-1

Technical specifications

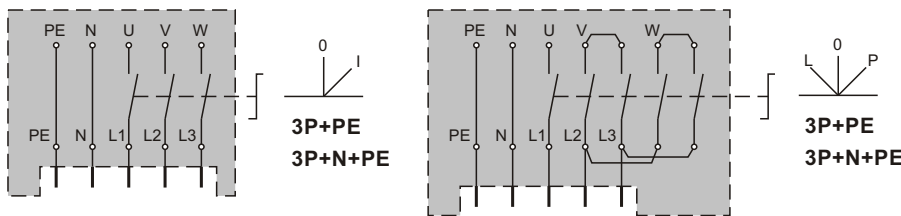
Rated insulation voltage U_i	V	500
Rated thermal current I_U	A	max 32
Rated frequency	Hz	50-60
Rated operational voltage U_e	V	230/400
Rated impulse voltage U_{imp}	kV	6
Wire section	mm ²	2,5...4
Protection level		IP44
Protection class		II

Pin layout of receptacle plug (male inlet) - front view.



16A 400V 16A 230/400V
32A 400V 32A 230/400V

Electric diagrams of ZO units (examples)



Types of switch receptacles

Amperage	Receptacle plug	Switch type	Glands	Code
16A	3P+PE 3P+N+PE	0-I	M25 x 1,5	ZO02R111 ZO02R211
	3P+PE 3P+N+PE	L-0-P		ZO02R121 ZO02R221
32A	3P+PE 3P+N+PE	0-I	M32 x 1,5	ZO01R341 ZO01R441
	3P+PE 3P+N+PE	L-0-P		ZO01R361 ZO01R461

Interlocked switch sockets with mechanical blockade GB

Construction and application



GB01

GB02

Interlocked switches GB are intended for industry use. Currents: 16A and 32A.

Protection level: IP44, IP67

Mechanically interlocked: the plug cannot be withdrawn when the switch is on and cannot be switched on unless the plug is fully inserted. Padlockable.

Large mounting space.

Housing made of shock-resistant composition of polycarbonate and ABS.

Two sizes: GB01 and GB02

GB01 - bigger housing, feed-through optional - 30mm distance between housing and mounting plate.




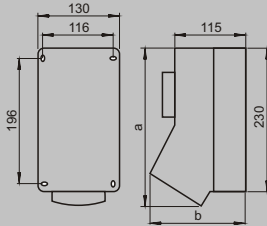
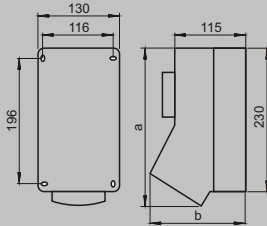
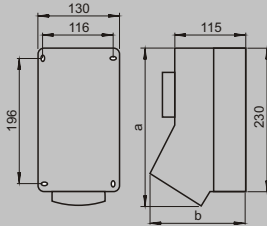
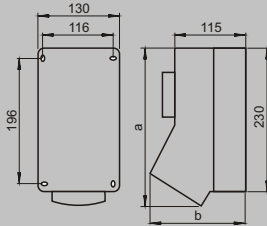
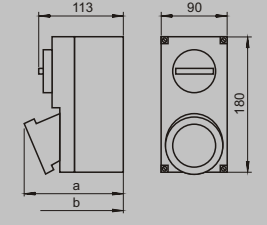
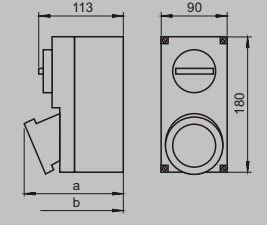
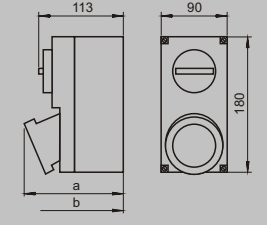
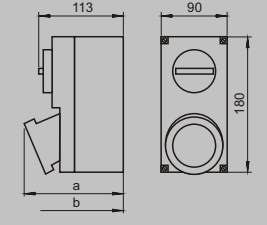
GB02 - bottom part symmetrical.

Interlocked switch sockets GB01 and GB02 conform to standards:

PN-EN 60439-3

PN-EN 60439-1.

Product range

Amp-er-age [A]	Types and number of sockets			Protection level	Dimensions [mm]			Wei-ght [g]	Code
	 2P+PE	 3P+PE	 3P+N+PE		a	b			
16	1	1	1	IP44		248	146	1123	GB01R511
						249	146	1143	GB01R111
						250	146	1183	GB01R211
32	1	1	1	IP44		253	150	1203	GB01R541
						253	150	1213	GB01R341
						254	157	1263	GB01R441
16	1	1	1	IP67		248	146	1130	GB01R512
						249	146	1150	GB01R112
						250	146	1190	GB01R212
32	1	1	1	IP67		253	150	1210	GB01R542
						253	150	1220	GB01R342
						254	157	1270	GB01R442
16	1	1	1	IP44		122	207	506	GB02R511
						123	212	552	GB02R111
						126	232	568	GB02R211
32	1	1	1	IP44		131	251	591	GB02R541
						131	251	640	GB02R341
						134	256	657	GB02R441
16	1	1	1	IP67		125	213	524	GB02R512
						126	216	562	GB02R112
						129	222	572	GB02R212
32	1	1	1	IP67		135	244	610	GB02R542
						135	244	652	GB02R342
						137	245	669	GB02R442

48 Switch sockets

Motor start unit RZ

Construction and application



This protective and starting switch socket is mainly intended for private customers to install 3-phase motors. Apart from thermal protection, it is sensitive to single-phasing or voltage unbalancing. Damages caused by voltage unbalancing are quite common and the cost of repair may be very high.

The unit is fitted with On/Off pushbuttons and easily accessible emergency button what conforms to new safety regulations.

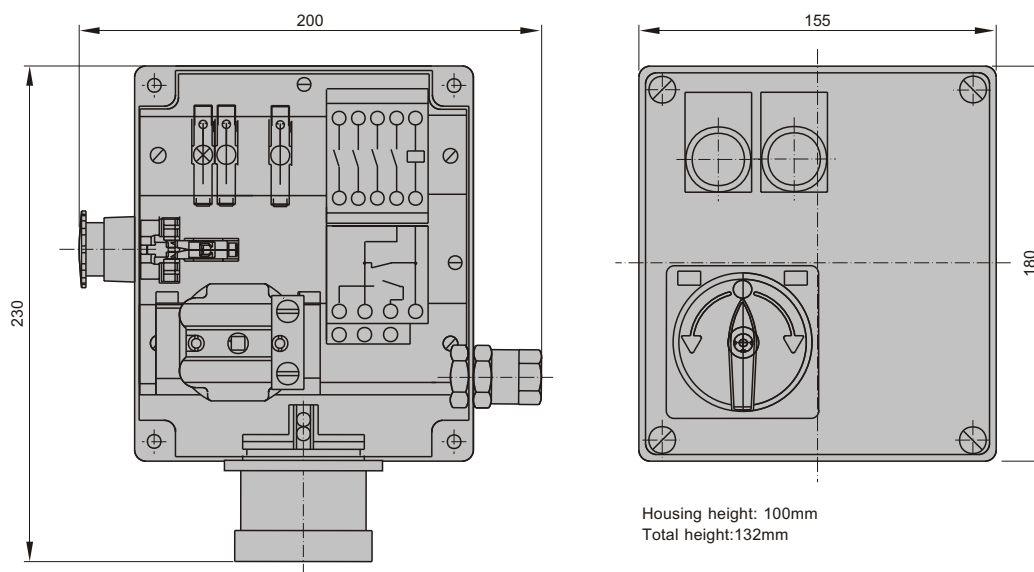
In case the unit controls more than one workstation, additional emergency buttons can be fitted.

The units are compliant with norms:
PN-EN 60439-1

Technical specifications

Rated insulation voltage U_i	V	500
Rated thermal current I_U	A	max 14/18 *)
Rated frequency	Hz	50-60
Rated operational voltage U_e	V	230/400
Rated impulse voltage U_{imp}	kV	6
Wire section	mm ²	2,5...4
Protection level		IP44; IP55
Protection class		II

Dimensions



*) Depending on thermal relay LR2 see table p.54

Table 1. Assemblies of motor start units **RZ**

ŁK16R 16A	ŁK25R 25A	LC1-K0610 2,2kW	LC1-K0910 4,0kW	LC1-K1210 5,5kW	LC1-K1610 7,5kW	Thermal range [A]	Gland DP-P16 DP-P21	Accessories	Code	
									Switch function 0-I	I-0-II
X		X				3,7-5,5	X	16A/3P+PE *)	RZ01-R114	RZ01-L114
X			X			8-11,5	X	16A/3P+PE *)	RZ01-R214	RZ01-L214
X				X		10-14	X	16A/3P+PE *)	RZ01-R314	RZ01-L314
X	X					3,7-5,5	X	16A/3P+N+PE *)	RZ01-R115	RZ01-L115
X			X			8-11,5	X	16A/3P+N+PE *)	RZ01-R215	RZ01-L215
X				X		10-14	X	16A/3P+N+PE *)	RZ01-R315	RZ01-L315
X	X					3,7-5,5	X	16A/3P+PE **)	RZ02-R114	RZ02-L114
X			X			8-11,5	X	16A/3P+PE **)	RZ02-R214	RZ02-L214
X				X		10-14	X	16A/3P+PE **)	RZ02-R314	RZ02-L314
X	X					3,7-5,5	X	16A/3P+N+PE**)	RZ02-R115	RZ02-L115
X			X			8-11,5	X	16A/3P+N+PE**)	RZ02-R215	RZ02-L215
X				X		10-14	X	16A/3P+N+PE**)	RZ02-R315	RZ02-L315
X	X					3,7-5,5	X	DP-P16 ***)	RZ03-R120	RZ03-L120
X			X			8-11,5	X	DP-P16 ***)	RZ03-R220	RZ03-L220
X				X		10-14	X	DP-P16 ***)	RZ03-R320	RZ03-L320
	X				X	12-18	X	DP-P21 ***)	RZ03-R420	RZ03-L420

Protection level: IP44 - assemblies **RZ01...**; **RZ02...**
IP55 - assemblies **RZ03...**

*) Fixed plug
**) Fixed socket
***) Gland

Use 4-pole plugs and sockets in TNC wiring.

Standard accessories are set according to thermal range in Table 1.

In individual orders use thermal relays shown in Table 2.

Table 2. Types of thermal relays **LR2**

No.	Code	Range [A]
1	LR2-K0301	0,11...0,16
2	LR2-K0302	0,16...0,23
3	LR2-K0303	0,23...0,36
4	LR2-K0304	0,36...0,54
5	LR2-K0305	0,54...0,80
6	LR2-K0306	0,80...1,20
7	LR2-K0307	1,20...1,80
8	LR2-K0308	1,80...2,60
9	LR2-K0310	2,60...3,70
10	LR2-K0312	3,70...5,50
11	LR2-K0314	5,50...8,00
12	LR2-K0316	8,00...11,50
13	LR2-K0321	10,00...14,00
14	LR2-K0322	12,00...18,00

Ordering

Example: Switch socket (**ZI**)
amperage 16A with
disconnecter 0-I, with main
socket 3P+N+PE (230/400V)
and side socket 2P+PE with
gland M25x1,5

SWITCH SOCKET
ZI 03R211

Example: Switch socket (**ZO**)
amperage 32A, with socket
3P+PE (400V), and reversing
switch (I-0-II):

SWITCH SOCKET
ZO 01R361

Example: Interlocked switch
socket (**GB**) - in smaller
housing (GB02) with
protection level IP44,
amperage up to 32A, 5-pole
socket :

INTERLOCKED SWITCH
SOCKET **GB02R441**

Example: motor start unit **RZ**
for motors up to 5,5kW with
thermal relay setting 10...14A,
gland M25x1,5 and fixed plug
16A/3P+PE

MOTOR START UNIT
RZ01-R314

