MSW DISCONNECT SWITCHES

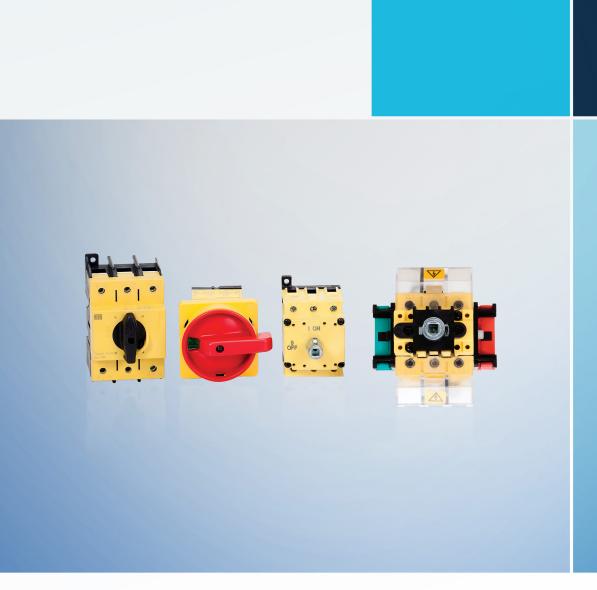
Motors

Automation

Energy

Transmission and Distribution

Coatings



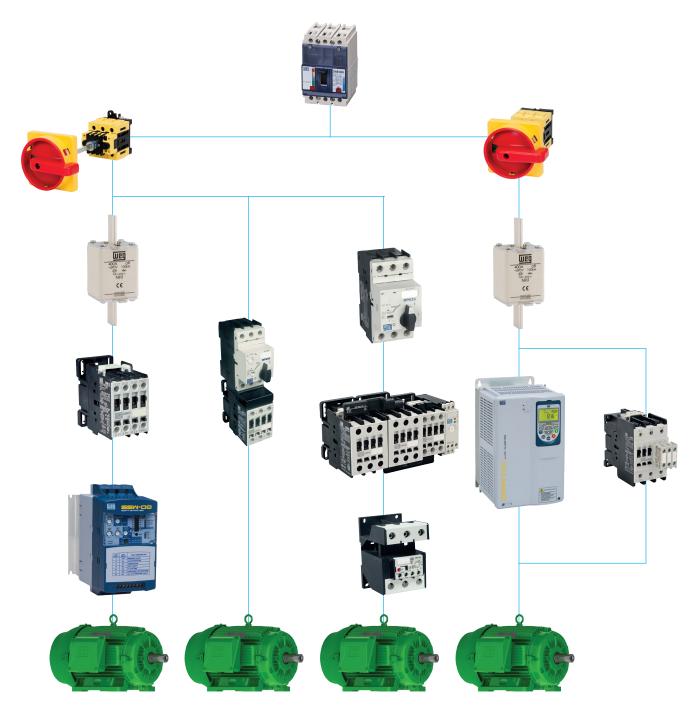




Disconnect Switches

The MSW Disconnect Switches were developed according to IEC 60947-3/UL 508, and enable the manual drive of motors, machines and other equipment. Besides carrying and interrupting electric currents under normal or overload conditions, the design of the MSW Disconnect Switches provides complete physical insulation between the circuit and the power supply when in the OFF position. In this position, it is possible to use three padlocks in order to prevent inadvertent actuation, increasing the safety of operators and maintenance personnel.

The MSW Disconnect Switches are CE and UL certified, and can be used as the supply disconnecting device, meeting the requirements of IEC 60204-1, and as the emergency switching off device.





How to Select a MSW Disconnect Switch for your Application



The MSW line presents a series of accessories and configurations. WEG offers the full set with a standard configuration. The customer can select the Disconnect Switches and accessories according to the requirements of each application. Below are described the four steps necessary for the proper selection of the MSW Disconnect Switch.

1 - Mounting

The MSW Disconnect Switches are mounted on panel doors or bases according to the selected model.

- Mounting on door: in this system, the Disconnect Switch is mounted on panel doors by means of screws. The Disconnect Switch and the handle are always coupled.
- Mounting on base: the Disconnect Switch is mounted on a base, like panel plates, by screws or DIN rail. There is a shaft to couple the Disconnect Switch to the handle. The uncoupling of the Disconnect Switch and of the handle is only possible when the Disconnect Switch is in the OFF position.

The user must define the Disconnect Switch considering the wiring, access, simple mounting or any other criteria which may be deemed necessary.

2 - Current

The Disconnect Switch must present a rated current capacity equal to or above the rated current of the circuit/load. The MSW Disconnect Switches stand currents (lth) up to 160 A for base mounting and up to 100 A for door mounting, according to the selected model. In order to select the Disconnect Switch, some currents are presented in the references according to the load characteristics. Other current values are presented in the table of technical data (page 8).

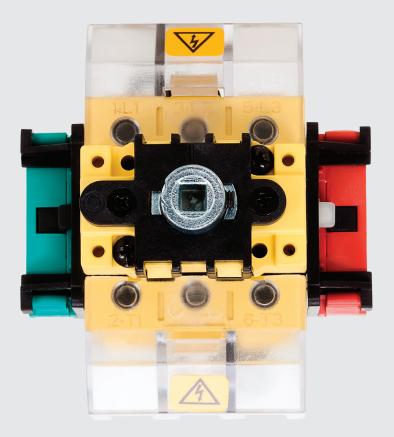
3 - Handle and Shaft

The handles of the MSW Disconnect Switches, developed with IP65 degree of protection, allow the use of up to three padlocks when in the OFF position, ensuring safety during maintenance. The handles of the MSW line are available in the colors red/yellow and black/gray.

For Disconnect Switches with base mounting, besides the handle, it is necessary to use a shaft. The shaft must have a length equal to or longer than the distance between the Disconnect Switch and the handle.

With those characteristics, it is possible to define a standard Disconnect Switch, but WEG offers other accessories that may be required for each application.





Disconnect Switch with 2 auxiliary contacts and 2 terminal covers.

Accessories

Neutral Pole

For applications that require neutral disconnection the MSW line has an additional pole with early make contact, that can be assembled on the side of the Disconnect Switch.

Auxiliary Contacts

The MSW line provides auxiliary contacts for mounting on the sides of the Disconnect Switch. On each side of the Disconnect Switch, it is possible to mount an auxiliary contact, or a neutral pole, as shown in the figure on the left.

Terminal Cover

Aiming at enhancing the safety of machinery and equipment, the MSW line provides terminal covers that reduce the risk of inadvertent contact with the terminals. The terminal covers must cover all the poles with live conductors.

Overview

Mounting	Current	Har	ndle		Shaft (mm)		Neutral pole	Noutral pala		uxiliary contact	
Woulding	(A)	Red/yellow	Black/gray	85	185	300	Neutral pole	1NO	1NC	1NOC	cover
	32	•	•				-	•	•		•
	40	•	•				-	•	•		•
Panel door	63	•	•				•	•	•		•
	80	•	•				-	•	•		•
	100	•									•
	32	•	•	•	•	•	•	•	•		•
	40	•	•	•	•	•	•	•	•		•
Base	63	•	•	•	•	•	-	•	•		•
Dase	80	•	•	•	•	•	•	•	•		•
	125	•			•	•				•	•
	160	•			•	•				•	•

Notes: lacktriangle - Only available as part of the standard configuration.

- - Available as part of the standard configuration or it can be supplied separately.
- - Only available to be supplied separately.



Disconnect Switches for Panel Door Mounting

Standard Configuration (Disconnect Switch + Handle Red/Yellow)

Туре	Ith (A)		Poles	List Price	Multiplier		
	Ith (A)	AC21 (690 V)	AC22 (690 V)	AC23 (690 V)	Fules	LIST FILE	Multiplici
MSW 25 P-3 H	32	32	25	16	3	\$80	Z13
MSW 40 P-3 H	40	40	32	20	3	\$85	Z13
MSW 63 P-3 H	63	63	63	26	3	\$137	Z13
MSW 80 P-3 H	80	80	80	32	3	\$148	Z13
MSW 100 P-3 H	100	100	86	38	3	\$185	Z13



Disconnect Switches and Accessories

Disconnect Switch

Туре	Ith (A)		le (A)		Poles	List Price	Multiplier
	iui (A)	AC21 (690 V)	AC22 (690 V)	AC23 (690 V)	1 0100		
MSW 25 P-3	32	32	25	16	3	\$53	Z13
MSW 40 P-3	40	40	32	20	3	\$58	Z13
MSW 63 P-3	63	63	63	26	3	\$110	Z13
MSW 80 P-3	80	80	80	32	3	\$122	Z13
RotaryM9Wintelle-3	100	100	86	38	3	\$158	Z13



Туре	Disconnect Switch	Color	List Price	Multiplier
MSW H 40 P	MSW25/MSW40	Red/Yellow	\$27	Z13
MSW H 100 P	MSW63/MSW80/MSW100	Red/Yellow	\$30	Z13
MSW H 40-P-B	MSW25/MSW40	Black/Gray	\$27	Z13
Neutral Pole	MSW63/MSW80/MSW100	Black/Gray	\$30	Z13
Neutral Fole	·	·		



Туре	Disconnect Switch	Contact	List Price	Multiplier
MSW AP 25-P-1 NA	MSW25	1 NO early make	\$42.00	Z13
MSW AP 40-P-1 NA	MSW40	1 NO early make	\$42.00	Z13
MSW AP 63-P-1 NA	MSW63	1 NO early make	\$49.00	Z13
MSW AP 80-P-1 NA	MSW80	1 NO early make	\$49.00	Z13
Auxiliary Contact				



Туре	Disconnect Switch	Contact	List Price	Multiplier
MSW AC-40 P 1NC	MSW25/MSW40	1NC	\$35.00	Z13
MSW AC-40 P 1NO	MSW25/MSW40	1NO	\$35.00	Z13
MSW AC-80 P 1NC	MSW63/MSW80	1NC	\$37.00	Z13
MSW AC-80 P 1N0	MSW63/MSW80	1NO	\$37.00	Z13
Terminal Cover	·	`		





Туре	Disconnect Switch	Poles	List Price	Multiplier
MSW TS-40 P	MSW25/MSW40	3	\$14.00	Z13
MSW TS-80 B/P	MSW63/MSW80	3	\$28.00	Z13
MSW TS-100 P 1)	MSW100	2	\$70.00	Z13



Note: 1) Necessary 2 pieces of MSW TS-100P to cover 3 poles. Terminal cover to line or load side (1 piece supplied).





Disconnect Switch for Base Mounting (Screw or Din Rail)

Standard Configuration (Disconnect Switch + Handle Red/Yellow + Shaft)

T	III- (A)	le (A)			Shaft	Doloo	List Price	Multiplier
Туре	Ith (A)	AC21 (690 V)	AC22 (690 V)	AC23 (690 V)	length (mm)	Poles	LIST Price	Multiplier
MSW 25 B-3 H	32	32	25	16	85	3	\$96.00	Z13
MSW 40 B-3 H	40	40	32	20	85	3	\$102.00	Z13
MSW 63 B-3 H	63	63	63	26	85	3	\$156.00	Z13
MSW 80 B-3 H	80	80	80	32	85	3	\$167.00	Z13
MSW 125 B-3 H	125	125	125	80	300	3	\$352.00	Z13
MSW 160 B-3 H	160	160	160	100	300	3	\$443.00	Z13



Disconnect Switches and Accessories

Tuno	Ith (A)	le (A)			Poles	List Price	Multiplier
Туре	IIII (A)	AC21 (690 V)	AC22 (690 V)	AC23 (690 V)	Pules	LISTITICE	wuuupiici
MSW 25 B-3	32	32	25	16	3	\$53.00	Z13
MSW 40 B-3	40	40	32	20	3	\$59.00	Z13
MSW 63 B-3	63	63	63	26	3	\$112.00	Z13
MSW 80 B-3	80	80	80	32	3	\$124.00	Z13
MSW 125 B-3	125	125	125	80	3	\$286.00	Z13
MSW 160 B-3	160	160	160	100	3	\$376.00	Z13



Rotary Handle + Shaft

Туре	Disconnect Switch	Color	Shaft (mm)	List Price	Mulitplier Synbol
MSW H 40 B	MSW25/MSW40	Red/Yellow	85	\$42.00	Z13
MSW H 80 B	MSW63/MSW80	Red/Yellow	85	\$45.00	Z13
MSW H 160 B	MSW125/MSW160	Red/Yellow	300	\$65.00	Z13
MSW H 40-B-B	MSW25/MSW40	Black/Gray	85	\$42.00	Z13
MSW H 80-B-B	MSW63/MSW80	Black/Gray	85	\$45.00	Z13



Shaft

Onart				
Туре	Disconnect Switch	Length (mm)	List Price	Multiplier
MSW HS 185-40	MSW25/MSW40	185	\$12.00	Z13
MSW HS 300-40	MSW25/MSW40	300	\$17.00	Z13
MSW HS 185-160	MSW63/MSW80/ MSW125/MSW160	185	\$20.00	Z13
MSW HS 300-160	MSW63/MSW80/ MSW125/MSW160	300	\$26.00	Z13



Neutral Pole

Туре	Disconnect Switch	Contact	List Price	Multiplier
MSW AP 25-B-1 NA	MSW25	1 NO early make	\$42.00	Z13
MSW AP 40-B-1 NA	MSW40	1 NO early make	\$42.00	Z13
MSW AP 63-B-1 NA	MSW63	1 NO early make	\$49.00	Z13
MSW AP 80-B-1 NA	MSW80	1 NO early make	\$49.00	Z13



Auxiliary Contact

Туре	Disconnect Switch	Contact	List Price	Multiplier
MSW AC-40 B 1NC	MSW25/MSW40	1NC	\$35.00	Z13
MSW AC-40 B 1N0	MSW25/MSW40	1NO	\$35.00	Z13
MSW AC-80 B 1NC	MSW63/MSW80	1NC	\$37.00	Z13
MSW AC-80 B 1N0	MSW63/MSW80	1NO	\$37.00	Z13
MSW AC-160 B 1NONC	MSW125/MSW160	1NOC	\$70.00	Z13





Terminal Cover

	Torrinia Gov	OI .				
_	Туре	Disconnect Switch	Poles	List Price	Multiplier	
Ī	MSW TS-40 B	MSW25/MSW40	3	\$16.00	Z13	
	MSW TS-80 B/P	MSW63/MSW80	3	\$32.00	Z13	
	MSW TS-160 B	MSW125/MSW160	3	\$78.00	Z13	



Note: Terminal cover to line or load side (1 piece supplied).



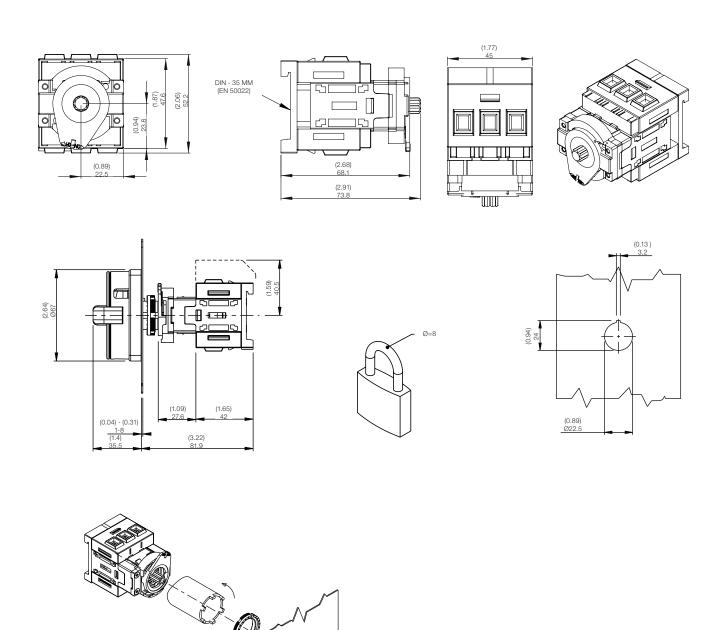
Technical Data

IEC 6	60947-3 charact	prietice		MSW 25	MSW 40	MSW 63	MSW 80	MSW 100	MSW 125	MSW 160	Auxiliary contact
Rated operating voltage U	10347-3 Cilaracti	51131103	V	WOW 25	10000 40	141344 03	10000	690	W3W 123	100	Auxiliary contact
Rated insulation voltage U _i			V	690	690	690	690	690	800	800	690
Rated impulse withstand voltage	ne II (sections	ihle)	kV	8	8	8	8	8	8	8	4
Rated thermal current Ith	ge o _{imp} (sections	ibic)	A	32	40	63	80	100	125	160	16
Rated thermal current in enclose	end I		A	32	40	63	80	86	125	160	10
	seu i _{the}		Hz	32	40	03	00	50/60	123	100	10
Frequency				Lourront I	: altornato	current		30/00			
AC-21A switching resistive loa	do	690 V	Rated operating	32	40	63	80	100	105	160	AC-15 240 V-5 A
		500 V	A A	-	- 40	-	-	100	125 125	160	DC-13 250 V-0.44 A
AC-22A switching mixed resist tive loads	ive and induc-	690 V	A	25	32	63	80	86	125	160	DU-13 230 V-0.44 A
110 10440			A/kW	25/7.5	32/10	63/20	80/25	70/22		160/45	-
		230 V							125/30	160/45	-
AC-23A periodic switching of motors	3 phase 3 poles	400 V	A/kW	25/15	32/18.5	50/28	75/42	67/37	125/55		-
inotors		500 V	A/kW	22/15	27/18.5	50/35	75/52	67/45	100/63	125/80	-
		690 V	A/kW	16/15	20/18.5	26/25	32/31	38/37	80/75	100/90	-
AC3 starting of cage motors (interruption while running)		230 V	A/kW	22/5.5	27/7.5	45/14	60/19	60/18.5	-	-	-
	3 phase	400 V	A/kW	22/11	27/15	40/22	55/30	55/30	-	-	-
	3 poles	500 V	A/kW	22/11	22/15	35/24	45/31	55/37	-	-	-
		690 V	A/kW	16/11	16/15	22/21	25/24	32/30	-	-	-
Rated interruption		230 V	A	200	256	360	600	560	1 000	1 000	-
current AC-23A		400 V	A	200	256	320	536	536	1,000	1,280	-
(cosfi 0.45)		500 V	A	176	216	280	536	536	-	-	-
		690 V	Α	128	160	176	256	304	800	800	-
				1	acteristics	1			T		I
Rated short-time short circuit		nt Icw (1s)	A	800	800	1,200	1,500	1,500	3,000	3,000	-
Rated short circuit making cap			A	1,500	1,500	2,200	2,800	2,840	4,500	4,500	-
Conditional rated short circuit	withstand curre		kA	10	10	10/5	10/5	10	15	15	1
Fuse rating gG		500 V	Α	-	-	-	-	100	125	125	10
33		690 V	Α	40	40	63/80	63/80	-	-	-	-
			UL 50	08 charact	eristics		1	1	1		
General use		600 V ac	Α	32	40	60	80	100	125	160	HD A600 ac
	I	400 W	LID (EL A)	1.5 (00)	0 (0.4)	0	0	0 (0.4)			Q600 dc
	Single phase	120 V ac	HP (FLA)	1.5 (20)	2 (24)	2	3	3 (34)	-	-	-
	2 poles	240 V ac	HP (FLA)	3 (17)	5 (28)	5	7.5	10 (50)	-	- 40 (40.0)	-
Standard motors load	3 phase 3 poles	240 V ac	HP (FLA)	7.5 (22)	10 (28)	10	15	10 (28)	40 (104)	40 (104)	-
		480 V ac	HP (FLA)	10 (14)	15 (21)	25	30	25 (34)	100 (124)	· · ·	-
		600 V ac	HP (FLA)	15 (17)	20 (22)	30	40	30 (32)	125 (125)	125 (125)	-
General characteristics											I
Protection degree		Handle	EN 60529/UL 50	IP65 / Type 1-4-4X-NEMA 4X							
		Terminals	EN 60529	IP20							
Material group		EN 60947-1				II			Illa	Illa	ll ll
Pollution grade		EN 60947-1		3							
Flammability		UL 94						V0			
Ambient temperature		Operation	°C					-25 +55			
, ,		Storage	°C	-30 +70							
		IEC 68 part 2-3						Hot damp			
Climate withstand											
IEC 68		part 2-30					Uns	etted hot d	amp		
Switching force (3 poles)			0.8 Nm /	7.1 lb.in.)	1 Nm (8	.85 lb.in.)	1.5 Nm	26/29	3 lb.in.)	_	
		EN 60947-1		J.J. 14111 (10.111.)	(0.			2.0 (20		
Terminal block caliber				\6		A8		_	_	A2	
Terminal block camper Terminal screw			M4			M5		M8	M8	M3.5	
		EN 60947-1			Nm		3 Nm	-	6 Nm	6 Nm	0.8 Nm
Tightening torque		UL 508			i. (1.2 Nm)	22	Ib.in. (3.6 I	(lm)		1. (6Nm)	7.1 lb.in.
		UL 308	mm²		i. (1.2 Nm) 5-10	32	6-25	vill)	10-70	10-70	7.1 ID.III. 1-2.5
Main terminal capacity			AWG				10-25				18-12
Flexible conductors					2-6			-	3/0-6	3/0-6	
Colid conductors			mm²		i-16		10-35		10-70	10-70	1-2.5
Solid conductors			AWG	12	2-6		10-2		3/0-6	3/0-6	18-12
Opening angles				I			90°				-



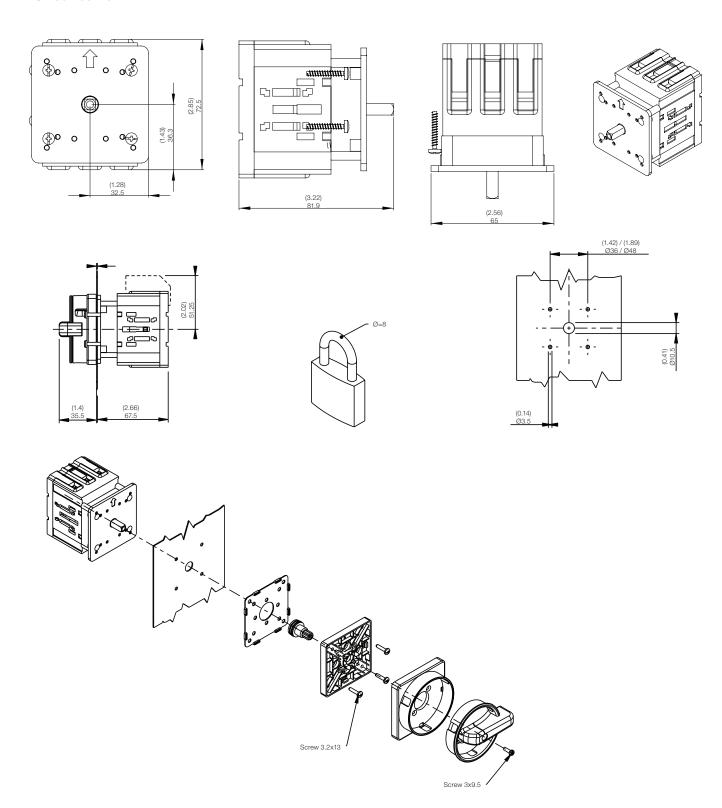
Disconnect Switches for Panel Door Mounting

MSW25...40P-3



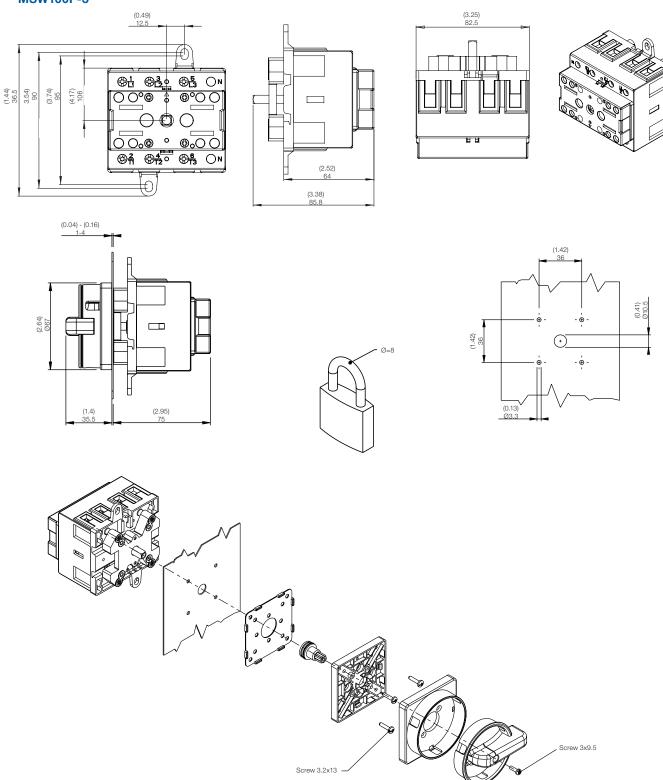


MSW63...80P-3





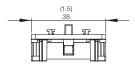
MSW100P-3



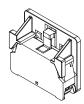


Auxiliary Contact

MSWAC-40...80P1NC / MSWAC-40...80P1NO

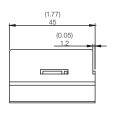


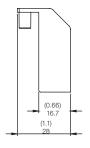


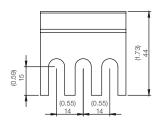


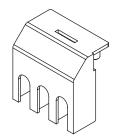
Terminal Cover

MSWTS-40P

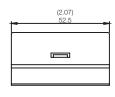


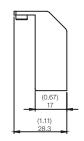


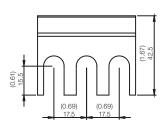


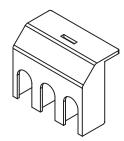


MSWTS-80B-P



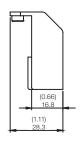


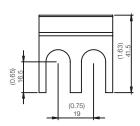


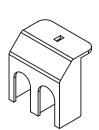


MSWTS-100P





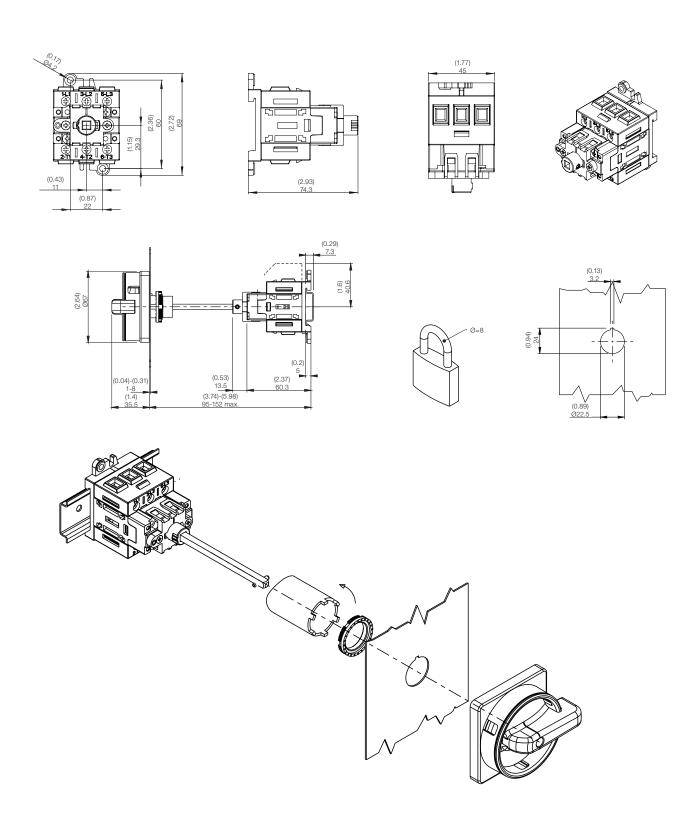






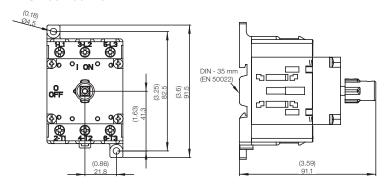
Disconnect Switches for Base Mounting

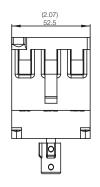
MSW25...40B-3

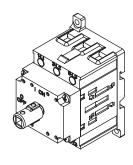


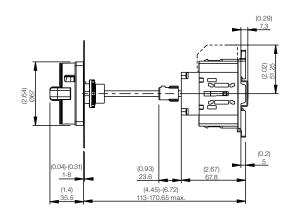


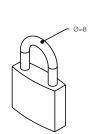
MSW63...80B-3

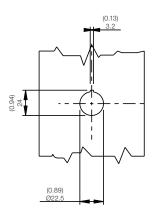


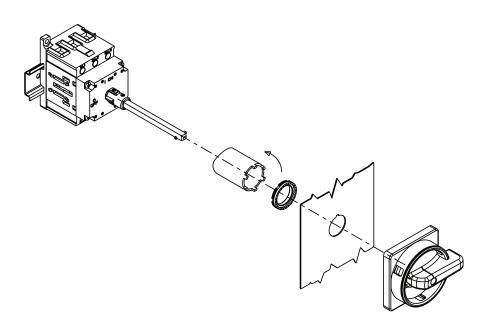






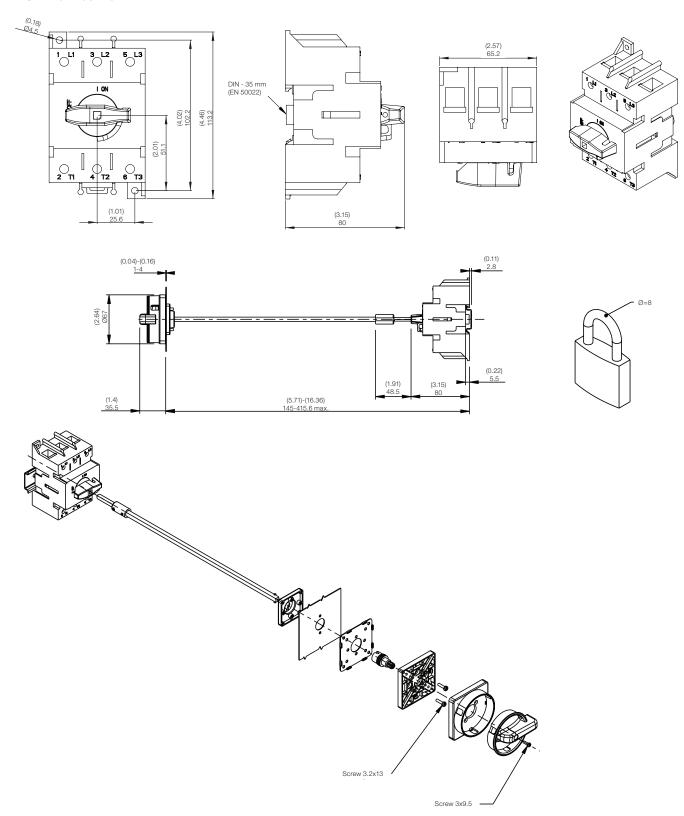








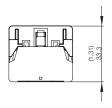
MSW125...160B-3





Auxiliary Contact

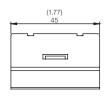
MSWAC-40...80B1NC / MSWAC-40...80B1NO

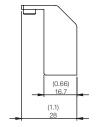


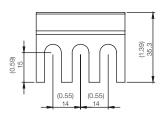


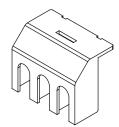
Terminal Cover

MSWTS-40B

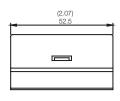


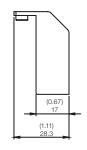


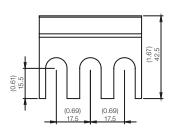


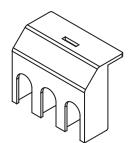


MSWTS-80B-P

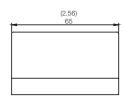


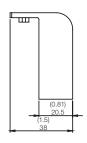


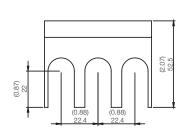


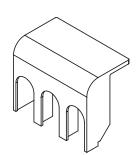


MSWTS-160B









The Global Solution with electric machines and automation for industry and energy systems.

WEG, one of the largest global manufacturers of Electric Motors with Quality and Efficiency recognized in different industrial areas worldwide, is also present in Energy, Transmission and Distribution, Coatings and Industrial Automation sectors, and produces and offers a wide range of electric components for Motor Control and Protection and Electric Circuit Protection.



Motor Protection and Starters

- Modular contactors up to 800 A (AC-3)
- Compact contactors up to 22 A (AC-3)
- Control relays
- Motor protective circuit breakers up to 100 A
- Enclosed starters (plastic or metallic enclosures)
- Customized starters for OEM applications
- Overload relays

Electrical Circuit Protection

- Miniature circuit breakers up to 125 A
- Molded case circuit breakers up to 1,600 A (3P and 4P)
- Air circuit breakers up to 6.300 A
- DgL-gG fuses up to 63 A
- NH gL-gG fuses up to 630 A
- NH aR fuses up to 1,000 A
- Disconnect Switches for door or base mounting up to 160 A
- Residual current circuit-breaker up to 100 A (30 or 300 mA)
- Surge supressors

Electrical Connections

- Terminal blocks with screw type connection
- Terminal block with spring type connection
- Terminal blocks for fuses
- Busbar and busbar connectors
- Identifiers for terminals and cables
- Printing system

Capacitors

- Power factor compensation
- Lighting
- Motor-run

Pushbuttons and Pilot Lights

- IP66 pushbuttons and pilot lights
- Flush, guarded, extended or mushroom illuminated or non illuminated pushbuttons
- Selector switches lever or knob illuminated or non illuminated or with key
- Emergency pushbuttons (according EN 418)
- Contact blocks with "positive break" system
- Double pushbutton
- Pilot lights with LED technology
- Customized descriptions
- Decentralized control stations PBW

Smart Relay

- Low voltage electric motor management system
- Compact and modular concept
- Full motor protection and monitoring through current and voltage measurements
- Multiple operating modes including PLC functions
- Easy network module change via exclusive drawer system (Modbus, DeviceNet, Profibus modules)
- USB communication
- Free WLP programming software

Electronic Relays

- Timing, monitoring and level relays
- 22.5 mm width frame
- LED for status indication
- Multifunction three-phase monitoring relays and timer relays

LET'S START SOMETHING



Notes:	www.weg.net	Ше

WEG's scope of solutions is not limited to the products and solutions presented in this brochure.

Contact WEG for information on additional products and solutions.

For WEG's worldwide operations visit our website

www.weg.net





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