Disconnect switches

SwitchLine Non-fusible

SwitchLine
Non-fusible disconnect switches
16A – 3150A, 600V

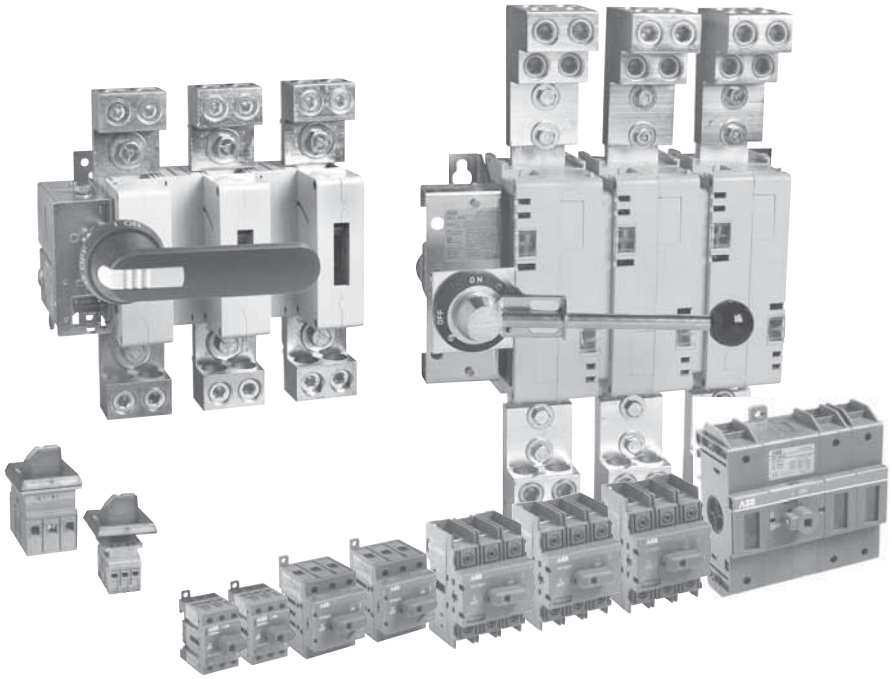
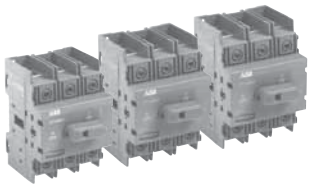


ABB SwitchLine includes 16 different amperage sizes from 16A to 3150A. The basic construction provides flexibility, safety, and high performance in an extremely compact size. ABB SwitchLine is a perfect choice for all switching applications from industrial motor control to construction safety switches.

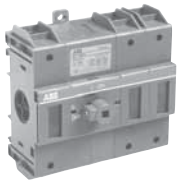
General information
Selection guide
OT16E3 – OT160E3

OT16E3 OT25E3 OT32E3

OT45E3 OT63E3



OT30E3 OT60E3 OT100E3



OT160E3

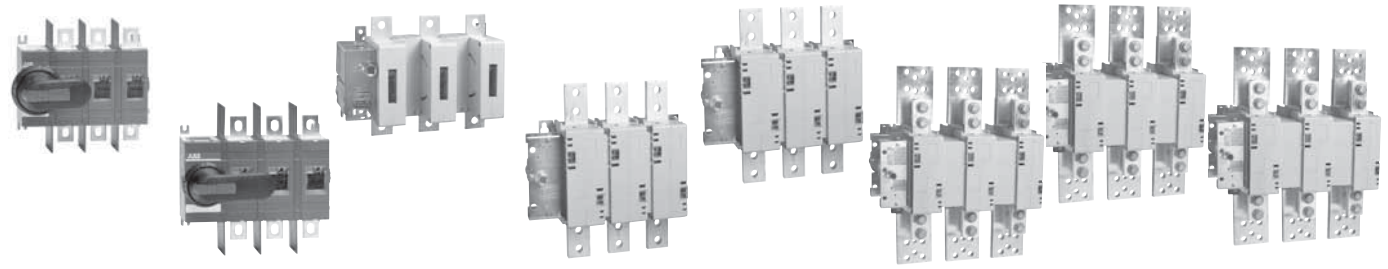
Catalog number	3 pole	OT16E3	OT25E3	OT32E3	OT45E3	OT63E3	OT30E3	OT60E3	OT100E3	OT160E3
General purpose amp rating	**A**	**16**	**25**	**40**	**60**	**80**	**30**	**60**	**100**	**125**
Catalog reference	Page #	18.10	18.10	18.10	18.10	18.10	18.10	18.10	18.10	18.20
Approvals ①										
	2 pole	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	UL98
	3 pole	UL508	UL508	UL508	UL508	UL508	UL98	UL98	UL98	UL98
	4 pole	UL508	UL508	UL508	UL508	UL508	UL98	UL98	UL98	UL98
Technical ratings – UL,CSA ②										
Max operating voltage	V	600	600	600	600	600	600	600	600	600
Max horsepower rating										
Three phase										
200 – 208V	HP	3	7.5	10	15	20	10	20	25	30
240V	HP	5	7.5	10	15	20	10	20	30	40
480V	HP	10	15	20	30	40	20	40	50	75
600V	HP	10	20	25	30	40	30	40	50	100
Single phase										
120V	HP	1	1.5	2	2	2	2	3	5	7.5
240V	HP	2	3	5	5	5	5	7.5	15	20
Technical ratings – IEC②										
Rated insulation and operational voltage. AC20 and DC20	V	750	750	750	750	750	750	750	750	750
Rated thermal current, I_{th}										
AC 20/DC 20 open	A	25	32	40	63	80	40	63	115	200
AC 20/DC 20 enclosed	A	25	32	40	63	80	40	63	115	160
AC 21A ≤500V	A	16	25	32	63	80	40	63	100	160
≤690V	A	16	25	32	63	80	40	63	100	160
Rated operational power AC23										
400/415V	kW	7.5	9	11	22	37	15	18.5	37	75
690V	kW	7.5	9	11	15	18.5	15	15	37	75
Physical characteristics										
Weight ③ 3 pole	lb	0.24	0.24	0.24	0.59	0.59	0.79	0.79	0.79	2.42
Dimension 3 pole H	in	2.68	2.68	2.68	3.60	3.60	3.94	3.94	3.94	5.00
W	in	1.38	1.38	1.38	2.07	2.07	2.76	2.76	2.76	4.96
D	in	2.20	2.20	2.20	2.85	2.85	2.95	2.95	2.95	2.93
Accessories										
Terminal lug kit		Integral	Integral	Integral	Integral	Integral	Integral	Integral	Integral	Integral
Terminal shroud		•	•	•	•	•	•	•	•	—
Auxiliary contact		•	•	•	•	•	•	•	•	•
Handle UL/NEMA type										
Type 1, 3R, 12		•	•	•	•	•	•	•	•	•
Type 1, 3R, 4, 4X, 12		•	•	•	•	•	•	•	•	•
Handle type										
Selector		•	•	•	•	•	•	•	•	—
Pistol		•	•	•	•	•	•	•	•	•
Conversion kits										
6 pole		•	•	•	•	•	•	•	•	•
Transfer		•	•	•	•	•	•	•	•	•
Bypass		•	•	•	•	•	•	•	•	•
Mechanical interlock		•	•	•	•	•	•	•	•	•
Electrical interlock		—	—	—	—	—	—	—	—	—

• = Available
— = Not available

UL listed, CSA approved, IEC rated, CE marked

① UL listed switches are also CSA approved.
② For complete technical information please see page 18.43 – 18.74.
③ Switch only.

General information
Selection guide
OT200 – OT400 & OETL-NF600A – OETL-NF3150



OT200U03 | OT400U03 | OETL-NF600ASW | OETL-NF800ASW | OETLNF1200SW | OETL-NF1600SW | OETL-NF2000SW | OETL-NF3150SW

Catalog number	3 pole	OT200U03	OT400UO3	OETL-NF600A	OETL-NF800A	OETL-NF1200	OETL-NF1600	OETL-NF2000	OETL-NF3150
General purpose amp rating	**A**	**200**	**400**	**600**	**800**	**1200**	**1600**	**2000**	**3150**
Catalog reference	Page #	18.23	18.26	18.26	18.26	18.30	18.30	18.30	18.30
Approvals①									
	2 pole	N/A	N/A	UL98 & IEC	UL98 & IEC	UL98 & IEC	UL98 & IEC	UL98 & IEC	IEC
	3 pole	UL98 & IEC	UL98 & IEC	UL98 & IEC	UL98 & IEC	UL98 & IEC	UL98 & IEC	UL98 & IEC	IEC
	4 pole	IEC	UL98 & IEC	UL98 & IEC	IEC	IEC	IEC	IEC	IEC
Technical ratings – UL,CSA ②									
Max operating voltage	V	600	600	600	600	600	600	600	600
Max horsepower rating									
Three phase									
200 – 208V	HP	60	100	150	200	—	—	—	—
240V	HP	75	125	200	250	—	—	—	—
480V	HP	150	250	400	500	—	—	—	—
600V	HP	200	350	500	600	—	—	—	—
Single phase									
120V	HP	—	—	—	—	—	—	—	—
240V	HP	—	—	—	—	—	—	—	—
Technical ratings – IEC ②									
Rated insulation and operational voltage. AC20 and DC20	V	1000	1000	1000	1000	1000	1000	1000	1000
Rated thermal current, I_{th}									
AC 20/DC 20 open	A	250	400	800	1250	1600	2500	2500	3150
AC 20/DC 20 enclosed	A	250	400	720	1250	1600	2300	2300	2600
AC 21A ≤500V	A	250	400	800	1250	1600	2500④	2500④	3150④
≤690V	A	250	400	800	1250	1600	2500④	2500④	3150④
Rated operational power AC23									
400/415V	kW	132	220	355	400	400	400	400	400
690V	kW	240	355	355	—	—	—	—	—
Physical characteristics									
Weight ③ 3 pole	lb	2.9	5.7	13.66	35.9	38.55	127.7	127.7	127.7
Dimension 3 pole H	in	6.69	8.66	11.77	19.09	19.09	25.04	25.04	25.04
W	in	6.67	8.7	11.93	14.29	14.29	18.43	18.43	18.43
D	in	3.30	3.35	5.12	4.92	4.92	10.67	10.67	10.67
Accessories									
Terminal lug kit		OZXA-200	OZXA-400	OZXA-27	OZXA-30	OZXA-28	OZXA-28	OZXA-28/2	OZXA-28/2
Terminal shroud		•	•	•	•	•	—	—	—
Auxiliary contact		•	•	•	•	•	•	•	•
Handle UL/NEMA type									
Type 1, 3R, 12		•	•	•	•	•	•	•	•
Type 1, 3R, 4, 4X, 12		•	•	•	•	•	•	•	•
Handle type									
Selector		—	—	—	—	—	—	—	—
Pistol		•	•	•	•	•	•	•	•
Conversion kits									
6 pole		•	•	•	•	•	—	—	—
Transfer		•	•	•	•	•	—	—	—
Bypass		•	•	•	•	•	—	—	—
Mechanical interlock		•	•	•	•	•	•	•	•
Electrical interlock		•	•	•	•	•	•	•	•

S = Standard feature
• = Available
— = Not available

UL listed, CSA approved, IEC rated, CE marked

① UL listed switches are also CSA approved.
② For complete technical information please see page 18.43 – 18.74.
③ Switch only
④ IEC 947-3 Utilization Category B, Infrequent operation

General information

Versatility

ABB SwitchLine non-fusible disconnect switches are designed to offer maximum versatility in many ways.

Broad range

SwitchLine is seventeen amperage sizes from 16A – 3150A. All sizes are compact, heavy duty, 600V disconnect switches. Many sizes are available in 2, 3, 4, 6, and 8 pole configurations.

Compact size

The SwitchLine's compact dimensions allow panel size reduction in new applications or easily retrofit into space-sensitive existing installations.

International acceptance

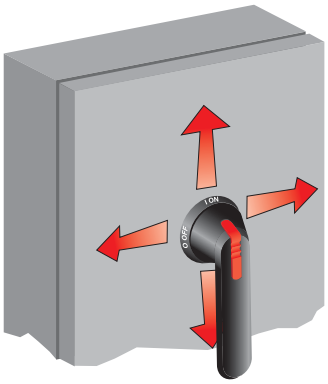
UL listed, CSA approved, IEC rated, CE marked, and most other international standards.

UL98 (CSA 22.2 No.4) — UL File # E101914, CSA File #LR58077
For OT30, OT60, OT100, OT160, OT200, OT400, OETL-NF600 – OETL-NF2000 switches, OH_ pistol grip handles
Suitable for use as motor disconnects or industrial control panel disconnects on service entrance equipment, panelboards, switchboards, industrial control equipment, motor control centers, etc. and are horsepower rated and ampere rated.

UL508 (CSA 22.2 No. 14) — UL File # E63822, CSA File #LR58247
For OT16 – OT63 switches, OH_ selector handles
Suitable for use in equipment or machinery as motor controllers & motor disconnects and are horsepower and ampere rated.

IEC
Tested in accordance to IEC 947-1 and 3, IEC 664, IEC 269, and IEC 204

CE
Compliance with the European Machine Directive IEC 204 (EN 60204)



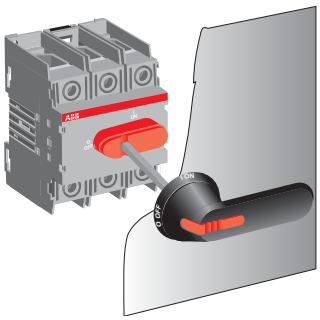
Installation options

Rotary through the door: available in all sizes, 16A – 3150A

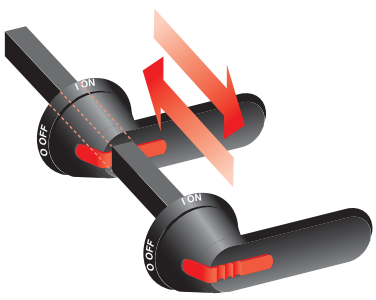
Flange: versions available in 30A, 60A, 100A, & 200A sizes

A rotary disconnect switch may be installed nearly anywhere in a control panel — mounting is not limited to the upper right hand corner of the panel.

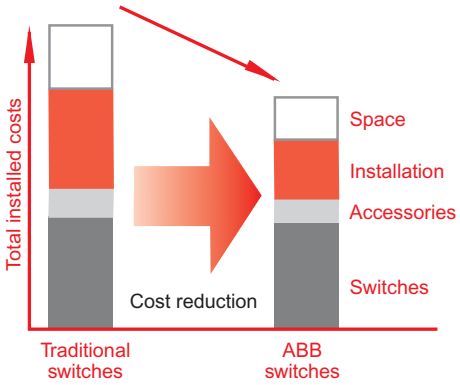
Mount the switch where it conveniently fits in your panel and simply install the handle on the door, in line with the switch. The switch and handle are mechanically linked through an easily adjusted shaft. This allows fast and easy installation into panels of different depths and layouts.



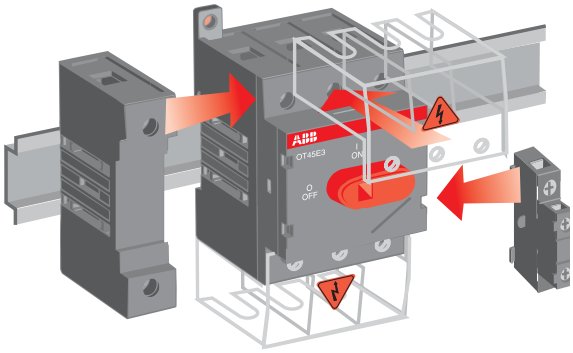
Rotary through the door installation



Easily adjusted shaft

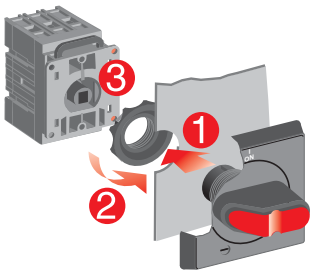


Lower installed costs



Broad range of accessories

- Handles — UL/NEMA type 1, 3R, 4, 4X, 12; IP54, 65, 66
- Auxiliary contacts available for every switch size
- Additional power poles
- Additional terminal poles (neutrals & grounds)
- Terminal shrouds
- 6 & 8 pole mechanisms
- Transfer mechanisms
- Bypass mechanisms
- Mechanical interlock mechanisms
- Electro-mechanical interlock mechanisms
- Motor operators

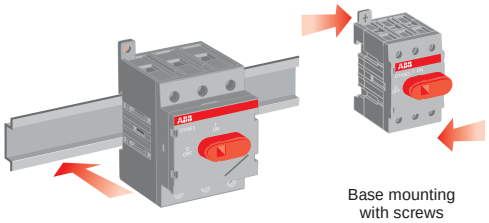


Door mounting

Mounting

SwitchLine disconnect switches offer several mounting possibilities:

- Door mounting on an enclosure door or sidewall, 16A – 125A
- DIN rail mounting, 16A – 125A
- Base mounting with screws, 16A – 3150A

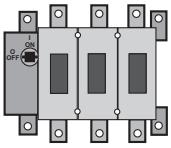


Base mounting with screws

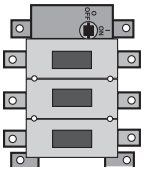
DIN rail mounting

Mounting positions

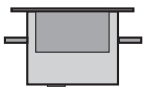
SwitchLine disconnect switches may be mounted in any position:



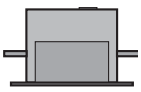
Vertical



Horizontal



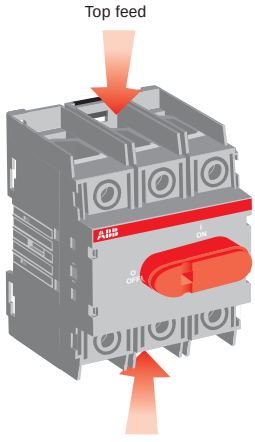
Ceiling

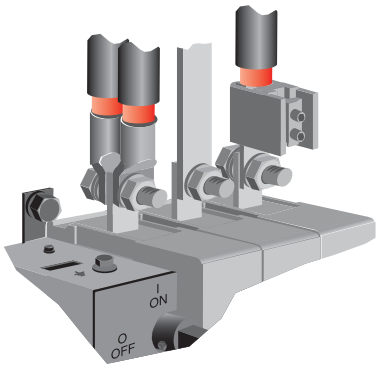


Floor

Incoming power feeds

SwitchLine disconnect switches can be used equally well with either top or bottom incoming power feeds.





Terminal connections

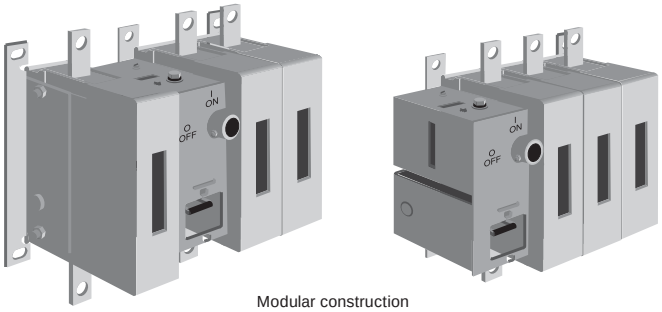
Versatile connecting possibilities, 200A – 3150A:

- Ring tongue crimp on lugs
- Direct bus
- Terminal lugs

General information

Modular construction ①

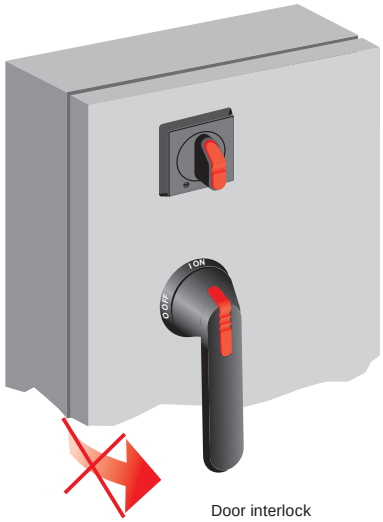
Modular switch construction allows the operating mechanism to be placed at either end of the switch or anywhere in-between, 125A – 3150A.



Modular construction

Finger proof

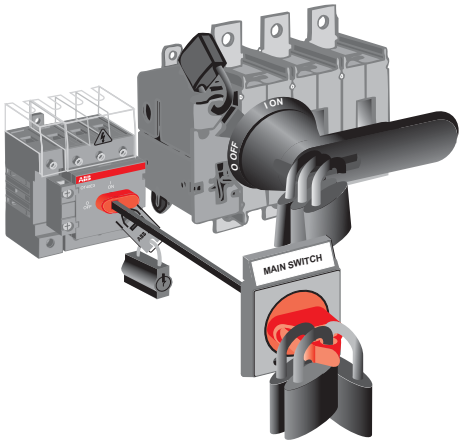
Dead-front construction plus terminal shrouds reduce the risk of touching live parts, improving the safety and reliability of the installation.



Door interlock

Door interlock

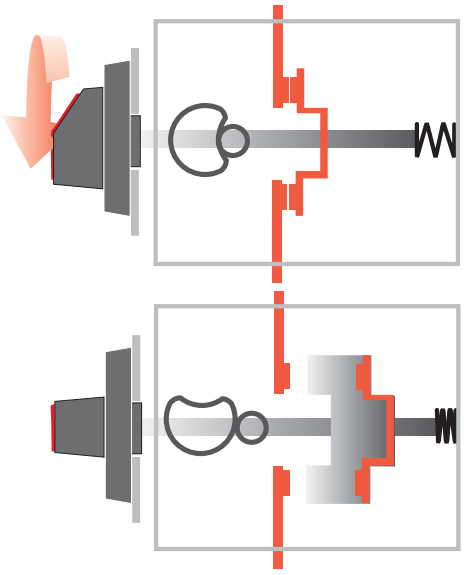
The handle and shaft provide a door interlock; the door can not be opened when the switch is in the “ON” position. NOTE: Some handles provide a method for qualified personnel to circumvent the door interlock. This is commonly referred to as a “defeater” mechanism.



Handle and mechanism padlocked OFF

Padlockable

Handles can be padlocked in the “OFF” position with up to three padlocks: Additionally, the switch mechanism can be directly padlocked in the “OFF” position when the door is open. NOTE: Some handles can be ordered with the ability to padlock in both the “ON” & “OFF” positions, please consult your ABB sales office.

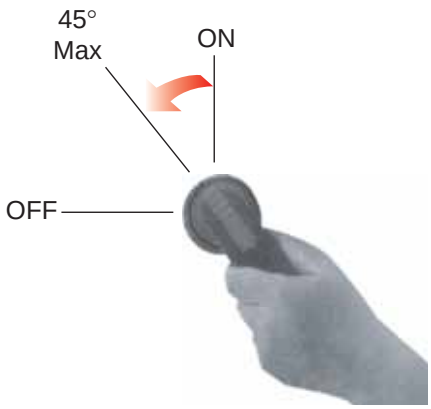


Positive opening operation

Positive opening operation

All switches operate according to the “positive opening operation” principle. This means the contacts are opened and closed by a driven mechanism, a solid moving bridge, not merely springs. This provides reliable position indication to the user; if the switch is in the “OFF” position, the contacts are open.

① Please consult ABB sales office for additional information.



Welded contact protection

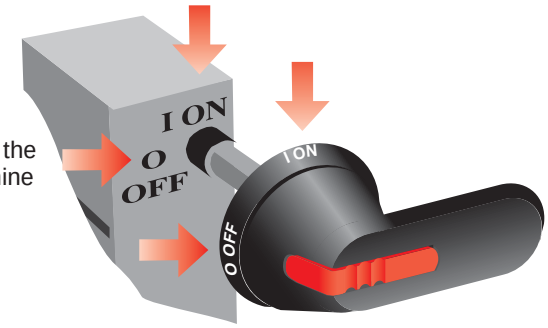
Positive opening operation safeguards users in case of welded contacts due to an overload or short circuit.

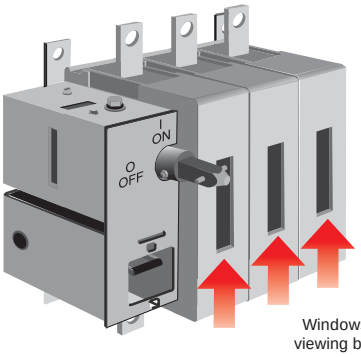
The switch can not reach the “OFF” position unless the contacts are truly open. If any or all of the contacts are welded shut, the switch mechanism will only allow the handle to operate a maximum of 45°. This safeguards personnel by:

- alerting them a problem has occurred
- maintaining the door interlock and
- not allowing a padlock to be inserted.

Clear position indication

All switches and handles have clear “ON” and “OFF” designations. Whether the door is open or closed, it is possible to simply look at the switch and determine if the switch is “ON” or “OFF”.





Windows for viewing blades

Visible blades

Visible blades offer additional safety from 125A — 1200A.

Track resistant material

Excellent track resistant material, CTI > 600V, IEC 112, reduces the risk of flashover between phases in even the most severe circumstances.

Constant control

The OT16E3 to OT100E3 provide the user with constant control over the power circuit. Whether the enclosure door is open or closed, qualified personnel have the ability to manually operate the switch. This is most meaningful when qualified personnel are working with the enclosure door open: In case of an emergency down-stream, the main three phase power can be disconnected immediately using the red, direct mounted handle.