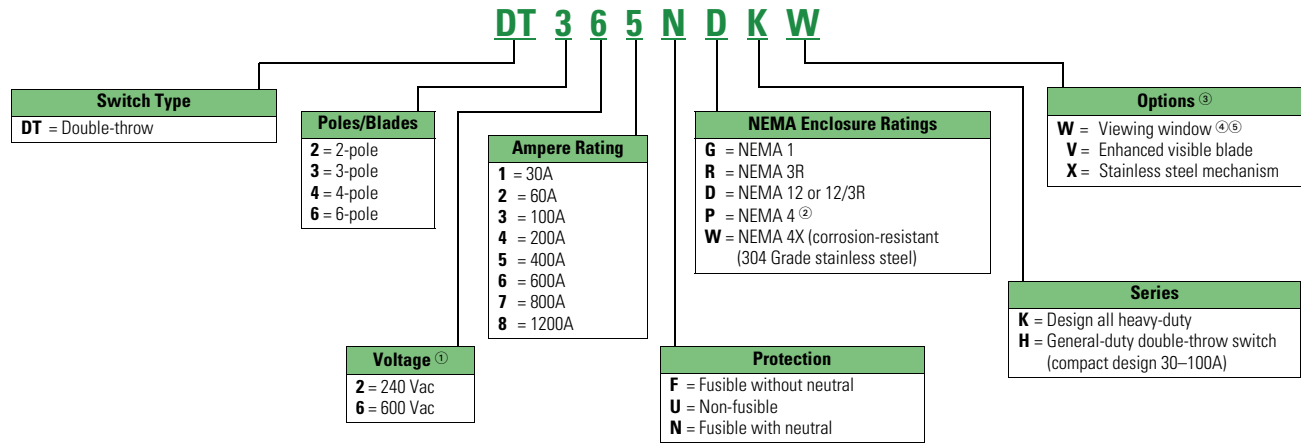


Double-Throw

**Notes**

- ① For DC ratings, check individual switch ratings.
 ② Only available for 400A and higher safety switches.
 ③ See Modifications-Flex Center for additional available options.
 ④ All window switches feature enhanced visible blade design as standard.
 ⑤ Only available in NEMA 12/3R and NEMA 4X enclosures.

These tables are intended for use in breaking down existing catalog numbers. They are not intended for building new catalog numbers.

A factory-installed ground lug is supplied in all heavy-duty safety switches.

Heavy-Duty Double-Throw



Double-Throw Switches

Product Description

Used to transfer service from a normal power source to an alternate source... or to switch from one load circuit to another.

- 30–1200A
- Horsepower rated
- 600 Vac, 250 Vdc maximum
- 600–1200A fusible utilize common set of fuses as Eaton's stacked double-throw design. The stacked design is suitable for two source 1 load applications only
- 600–800A fusible are available for one source 2 load applications; include an "R" at the end of the catalog number
- Fusible or non-fusible
- Fusible and non-fusible switches are 100% load break and 100% load make rated
- Suitable for service entrance applications unless otherwise noted
- The continuous load current of fusible switches is not to exceed 80% of the rating of fuses employed in other than motor circuits. Non-fusible switches are 100% fully rated
- Wiring configuration from factory allows a single load to be supplied by a normal or alternate source. 30–800A can be field modified to allow two loads to be alternately supplied by a single power source, except for stacked design double-throw switches

Contents

<i>Description</i>	<i>Page</i>
Product Overview	V2-T1-2
General Duty	V2-T1-25
Heavy-Duty	V2-T1-30
Heavy-Duty Double Door Safety Switch	V2-T1-39
Six-Pole Switches	V2-T1-43
Double-Throw Switches	
Features, Benefits and Functions	V2-T1-46
Standards and Certifications	V2-T1-47
Product Selection	V2-T1-47
Technical Data and Specifications	V2-T1-51
Dimensions	V2-T1-51
EnviroLine Stainless Steel Switch	V2-T1-53
Window Switches	V2-T1-57
Receptacle Switches	V2-T1-60
Non-Metallic KRYDON Switch	V2-T1-62
Shunt Trip Safety Switch	V2-T1-65
NEMA 7/9—Hazardous Location Disconnect Switch	V2-T1-68
Quick-Connect Switches	V2-T1-70
Solar Disconnect Switch	V2-T1-75
Mill-Duty Rated, Heavy-Duty Safety Switch	V2-T1-77
Heavy-Duty Fusible Safety Switches Accepting CUBEFuses	V2-T1-79
Elevator Control Switch	V2-T1-82
Auxiliary Power Heavy-Duty Safety Switch	V2-T1-85
Left-Handed Safety Switch	V2-T1-89
Heavy-Duty Surge Switch	V2-T1-90
OEM Line Isolation (OLI) Switch	V2-T1-92
Pringle Bolted Pressure Switch	V2-T1-95
Type DS, Fusible and Non-Fusible	V2-T1-98
Type Visi-Flex DE-ION	V2-T1-101
Flange Mounted—Variable Depth	V2-T1-105
Flange Mounted—Fixed Depth	V2-T1-109

Features, Benefits and Functions

- Ample wire bending space provides for easier installation
- Visible double-break quick-make, quick-break rotary blade mechanism. Two points of contact provide a positive open and close, easier operation, and also help prevent contact burning for longer contact life
- Triple padlocking capability. Personnel safety feature since the large hasp can accommodate up to three 3/8-inch (9.5 mm) shank locks. Clearly visible handle. The position (ON or OFF) can be clearly seen from a distance
- Deionizing arc chutes; arc chutes confine and suppress the arcs produced by opening contacts under load
- Additional locking capability; cabinet door can be further padlocked at the top and bottom
- Clear line shield (provided on fusible double-throw) protects against accidental contact with energized parts. Probe holes enable the user to test if the line side is energized without removing the shield
- Tangential knockouts on sides, top and bottom. Enables any size of conduit to be mounted close to the wall, providing for cable installation closer to the wall and a neat appearance

Standards and Certifications

- UL listed switching neutral capability is available on three-pole and four-pole non-fusible double-throw switches with the installation of the proper bonding kit shown on **Page V2-T1-13**
- Suitable for use as a manually operated switch per 2005 NEC Article 702

- UL listed File No. E5239
- UL 98
- NEMA Std KS-1

**Seismic Qualifications**

- Heavy-duty switches exceed the requirements of Uniform Building Code (UBC) and California Code Title 24 OSP-0011-10, OSP-0012-10

**Product Selection****DT223URH-N**
Compact Design**240 Vac General-Duty, Non-Fusible, Compact Design, Double-Throw**

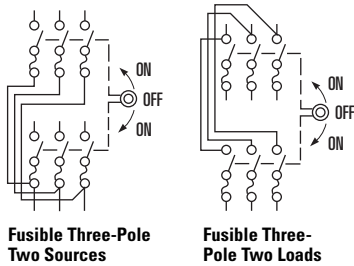
Ampere Rating Main and Standby	NEMA 3R Enclosure Rainproof Catalog Number	Ampere Rating Main and Standby	NEMA 3R Enclosure Rainproof Catalog Number
Two-Pole—240 Vac		Two-Pole, Three-Wire—240 Vac—Solid Neutral	
30	DT221URH	30	DT221URH-N
60	DT222URH	60	DT222URH-N
100	DT223URH	100	DT223URH-N

DT224URK-NPS**240 Vac General-Duty, Non-Fusible, Compact Design, Double-Throw**

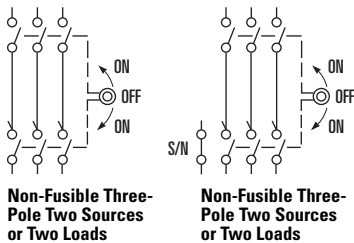
Ampere Rating Main and Standby	Maximum Horsepower Ratings						DC 250V	NEMA 3R Enclosure Rainproof Catalog Number
	Single-Phase AC			Three-Phase AC				
	240V	480V	600V	240V	480V	600V		
Two-Pole—240 Vac—250 Vdc								
30	3	—	—	—	—	—	5	DT221URKPS
60	1	—	—	—	—	—	10	DT222URKPS
100	20	—	—	—	—	—	20	DT223URKPS
200	15	—	—	—	—	—	40	DT224URKPS
400	—	—	—	—	—	—	50	DT225URKPS
Two-Pole, Three-Wire—240 Vac—250 Vdc, Solid Neutral								
30	3	—	—	—	—	—	5	DT221URK-NPS
60	10	—	—	—	—	—	10	DT222URK-NPS
100	20	—	—	—	—	—	20	DT223URK-NPS
200	15	—	—	—	—	—	40	DT224URK-NPS
400	—	—	—	—	—	—	50	DT225URK-NPS

Technical Data and Specifications

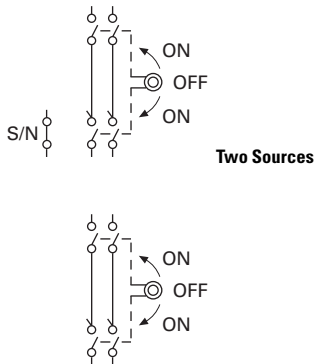
Typical Fusible, Double-Throw Schematic Diagram



Typical Non-Fusible, Double-Throw Schematic Diagram



Typical General-Duty, Double-Throw Schematic Diagrams (with and without factory-installed neutral)



Short-Circuit Ratings Using Class "R", "J", "L" or "T" Fusing Where Applicable

Ampere Rating	Voltage Ratings			
	Type 1	Type 3R	Type 12	Type 4 and 4X
30	100k at 600	100k at 600	100k at 600	100k at 600
60	100k at 600	100k at 600	100k at 600	100k at 600
100	100k at 600	100k at 600	100k at 600	100k at 600
200	100k at 600	100k at 600	100k at 600	100k at 600
400	100k at 600	100k at 600	100k at 600	100k at 600
600	100k at 600	100k at 600	100k at 600	100k at 600
800	100k at 600	100k at 600	—	—
1200	100k at 600	100k at 600	—	—

Dimensions

Approximate Dimensions in Inches (mm)

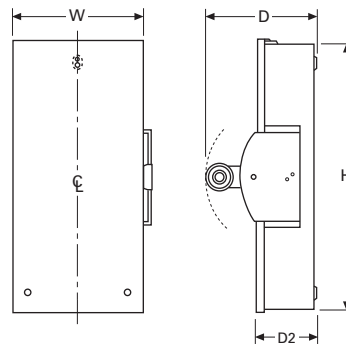
General-Duty, Non-Fusible, 240V, Two-Pole Solid Neutral, Double-Throw, Compact Design

Ampere Rating	Height (H)	Width (W)	Depth (D)	Depth (D2)	Weight Lbs (kg)
NEMA 3R					
30	14.69 (373.1)	9.63 (244.6)	10.81 (274.6)	5.23 (132.8)	12 (5.5)
60	14.69 (373.1)	9.63 (244.6)	10.81 (274.6)	5.23 (132.8)	12 (5.5)
100	14.69 (373.1)	9.63 (244.6)	10.81 (274.6)	5.23 (132.8)	12 (5.5)

General-Duty, Non-Fusible, 240V, Two-Pole Solid Neutral, Double-Throw, Quick-Make, Quick-Break Design

Ampere Rating	Height (H)	Width (W)	Depth (D)	Depth (D2)	Weight Lbs (kg)
NEMA 3R					
30	24.63 (625.6)	11.94 (303.3)	9.88 (251.0)	5.38 (136.7)	34 (15.4)
60	24.63 (625.6)	11.94 (303.3)	9.88 (251.0)	5.38 (136.7)	34 (15.4)
100	24.63 (625.6)	11.94 (303.3)	9.88 (251.0)	5.38 (136.7)	34 (15.4)
200	37.38 (949.5)	19.56 (496.8)	11.25 (285.8)	6.10 (154.9)	80 (36.3)
400	53.81 (1366.8)	23.13 (587.5)	12.50 (317.6)	8.88 (225.6)	140 (63.6)

NEMA 3R, 30–400A, General-Duty, Non-Fusible, Double-Throw



Notes

Class "H" fuse clips supplied as standard for 30–400A except Class "T" for 400A at 600V. Rated at 10,000 rms symmetrical when using Class "H" fuses.

Table is not applicable to the compact design shown on **Page V2-T1-47**. The compact design is suitable for use on a circuit capable of delivering not more than 10,000 rms symmetrical amperes.

Class "R" fuse adapter kits are shown on **Page V2-T1-13**. Individual adapter kits are applicable as shown on **Page V2-T1-13** and yield the short-circuit ratings per the tables above when Class "R" fuses are installed. When installed, Class "R" fuse adapter kits reject all fuses except Class "R."

Class "J" fuse provisions can be obtained on most 60–400A safety switches by moving the fuse base to a new position as instructed by the device publication label. Class "J" fuse adapter kits, where needed, are shown on **Page V2-T1-13** and yield the short-circuit ratings per the tables above when Class "J" fuses are installed. Class "J" fuse provisions must be factory installed on 30A heavy-duty switches. Catalog numbers are shown in table on **Page V2-T1-15**. Class "J" fusing is not applicable on 30–200A general-duty switches, 30–100A double-throw switches, and any switch higher than 600A.

Class "T" fuse adapter kits are shown on **Page V2-T1-13**. Individual adapter kits are applicable to 200–800A switches as shown on **Page V2-T1-13** and yield the short-circuit ratings per the tables to the left when Class "T" fuses are installed. On 1200A switches, Class "T" fuse provisions can be obtained by moving the fuse base to a new position as instructed by the device publication label.

Approximate Dimensions in Inches (mm)

Heavy-Duty, Non-Fusible, 240V and 600V, Three-Pole, Double-Throw

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
NEMA 1, 3R					
30	11.94 (303.3)	24.63 (625.6)	9.88 (251.0)	5.38 (136.7)	34 (15.436)
60	11.94 (303.3)	24.63 (625.6)	9.88 (251.0)	5.38 (136.7)	34 (15.436)
100	11.94 (303.3)	24.63 (625.6)	9.88 (251.0)	5.38 (136.7)	34 (15.436)
200	19.56 (496.8)	37.38 (949.5)	11.25 (285.8)	6.10 (154.9)	80 (36.32)
400	23.13 (587.5)	53.81 (1366.8)	12.50 (317.5)	7.25 (184.2)	140 (63.56)
600	27.44 (697.0)	63.31 (1608.1)	14.13 (358.9)	8.88 (225.6)	175 (79.45)
800	27.44 (697.0)	63.31 (1608.1)	14.13 (358.9)	8.88 (225.6)	175 (79.45)
1200	42.62 (1082.5)	78.11 (1984.0)	29.62 (752.3)	20.47 (519.9)	473 (214.6)

NEMA 12, 4X Stainless Steel

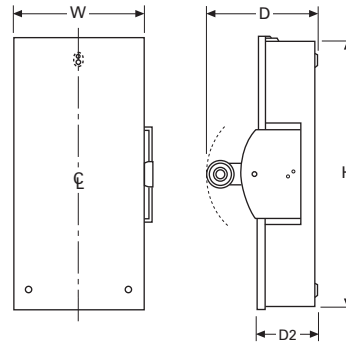
30	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27.24)
60	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27.24)
100	12.00 (304.8)	25.88 (657.4)	10.25 (260.4)	5.50 (139.7)	60 (27.24)
200	19.50 (495.3)	41.00 (1041.4)	11.63 (295.4)	6.48 (164.6)	105 (47.67)
400	23.00 (584.2)	57.50 (1460.5)	12.50 (317.5)	7.25 (184.2)	185 (83.99)

Heavy-Duty, Fusible, 240V and 600V, Three-Pole, Double-Throw

Ampere Rating	Width (W)	Height (H)	Depth (D)	Depth (D2)	Weight Lbs (kg)
NEMA 1, 3R					
30	11.94 (303.3)	36.63 (930.4)	9.88 (251.0)	5.38 (136.7)	44 (19.976)
60	11.94 (303.3)	36.63 (930.4)	9.88 (251.0)	5.38 (136.7)	44 (19.976)
100	11.94 (303.3)	36.63 (930.4)	9.88 (251.0)	5.38 (136.7)	44 (19.976)
200	19.56 (496.8)	50.88 (1292.4)	11.25 (285.8)	6.10 (154.9)	95 (43.13)
400	25.38 (644.7)	74.75 (1898.7)	14.13 (358.9)	8.88 (225.6)	230 (104.42)
600	28.12 (714.3)	58.86 (1495.0)	25.62 (650.7)	20.47 (520.0)	282 (127.9)
800	28.12 (714.2)	58.86 (1495.0)	25.62 (650.7)	20.47 (519.9)	282 (127.9)
1200	42.62 (1082.5)	78.11 (1984.0)	29.62 (752.3)	20.47 (519.9)	509 (230.9)

NEMA 12, 4X Stainless Steel

30	12.00 (304.8)	39.81 (1011.2)	10.25 (260.4)	5.50 (139.7)	45 (20.43)
60	12.00 (304.8)	39.81 (1011.2)	10.25 (260.4)	5.50 (139.7)	45 (20.43)
100	12.00 (304.8)	39.81 (1011.2)	10.25 (260.4)	5.50 (139.7)	45 (20.43)
200	19.56 (496.8)	55.63 (1413.0)	11.63 (295.4)	6.46 (164.1)	100 (45.4)
400	25.38 (644.7)	74.75 (1898.7)	14.13 (358.9)	8.92 (226.6)	260 (118.04)

NEMA 1, 3R Double-Throw 30-1200A**NEMA 12, 4X Double-Throw 30-400A**