DMX³ 1600

technical characteristics

Technical characteristics

DMX³ 1600

DMX³ according to IEC 60947-2		DMX³ 1600	
		42 kA	50 kA
Frame current (A)		1600	
Number of poles		3P-4P	
Rating In (A)		630/800/1000/1250/1600	
Rated insulation voltage Ui (V)		1000	
Rated impulse withstand voltage Uimp (kV)		12	
Rated operational voltage (50/60Hz) Ue (V)		690	
Category of use		B	
Ultimate breaking capacity Icu (kA)	220 / 240 V~	42	50
	380 / 415 V~	42	50
	440 / 460 V~	42	50
	480 / 500 V~	42	50
	600 V~	42	42
	690 V~	42	42
Service breaking capacity Ics (% Icu)		100 %	100 %
Short-circuit making capacity Icm (kA)	220 / 240 V~	88	105
	380 / 415 V~	88	105
	440 / 460 V~	88	105
	480 / 500 V~	88	105
	600 V~	88	88
	690 V~	88	88
Short time withstand current Icw (kA) for t = 1s	220 / 240 V~	42	50
	380 / 415 V~	42	50
	440 / 460 V~	42	50
	480 / 500 V~	42	50
	600 V~	42	42
	690 V~	42	42
Magnetic threshold	Istantaneous releases Ii (x In)	(2 ÷ 15) & Icw	
Isolation behavior		Yes	
Endurance (cycle)	mechanical without maintenance	5000	
	mechanical with maintenance	10000	
	electrical	1500 at 690 V / 3000 at 415 V	

Derating at different altitudes

Air circuit breaker	DMX³ 1600			
Altitude H (m)	< 2000	3000	4000	5000
Rated current (at 40°C) In (A)	In	0.93 x In	0.88 x In	0.82 x In
Rated voltage Ue (V)	690	600	500	440
Rated insulation voltage Ui (V)	1000	900	750	600

Selectivity in three-phase network 415 V~

DMX³/DPX³

Downstream \ Upstream		DMX³ 1600				
		630 A	800 A	1000 A	1250 A	1600 A
DPX³ 160(1)		T	T	T	T	T
DPX³ 250(1) TM and elec.		T	T	T	T	T
DPX³ 630(1) TM and elec.			T	T	T	T
DPX³ 1600(1) thermal magnetic	630 A		T	T	T	T
	800 A			T	T	T
	1000 A				T	T
	1250 A					T
DPX³ 1600(1) electronic	630 A				T	T
	800 A				T	T
	1000 A					T
	1250 A					T
	1600 A					

1: All breaking capacities
T: total selectivity, up to downstream circuit breaking capacity according to IEC 60947-2

DMX³/DMX³

Downstream \ Upstream		DMX³ 1600				
		630 A	800 A	1000 A	1250 A	1600 A
DMX³	630 A		T	T	T	T
	800 A			T	T	T
	1000 A				T	T
	1250 A					T
	1600 A					

T: total selectivity, up to downstream circuit breaking capacity according to IEC 60947-2
Icu of downstream circuit breaker ≤ Icu of upstream circuit breaker
Selectivity values are intended with protection unit properly adjusted

DMX³/DX³

	DMX³ 1600				
	630 A	800 A	1000 A	1250 A	1600 A
DX³ 6000 - 10 kA	T	T	T	T	T
DX³ 10000 - 16 kA	T	T	T	T	T
DX³ 25 kA	T	T	T	T	T
DX³ 36 kA	T	T	T	T	T
DX³ 50 kA	T	T	T	T	T

T: total selectivity, up to downstream circuit breaking capacity according to IEC 60947-2
Icu of downstream circuit breaker ≤ Icu of upstream circuit breaker
Selectivity values are intended with protection unit properly adjusted

Temperature derating

Fixed and draw-out version

Temperature	40°C		50°C		60°C		65°C		70°C	
	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In	Imax (A)	Ir / In
DMX³ 1600	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	950	0.95
	1250	1	1250	1	1250	1	1187	0.95	1125	0.9
	1600	1	1600	1	1330	0.83	1280	0.8	1216	0.76

Minimum recommended dimension of copper busbars per pole

In (A)	Fixed version		Draw-out version	
	Horizontal bars (mm)	Vertical bars (mm)	Horizontal bars (mm)	Vertical bars (mm)
630	2 x 40 x 5	2 x 40 x 5	2 x 40 x 5	2 x 40 x 5
800	2 x 30 x 10	2 x 50 x 5	2 x 30 x 10	2 x 50 x 5
1000	2 x 30 x 10	1 x 60 x 10 / 2 x 60 x 5	2 x 30 x 10	2 x 60 x 5
1250	2 x 40 x 10	1 x 80 x 10 / 2 x 40 x 10	2 x 40 x 10	2 x 80 x 5
1600	2 x 50 x 10	2 x 50 x 10	2 x 50 x 10	2 x 50 x 10

Note: The tables presenting the minimum recommended dimensions of connection plates and bars per pole should be used solely as a general guideline for selecting products. Due to extensive variety of switchgear constructions shapes and conditions that can affect the behavior of the apparatus, the solution used must always be verified

For minimum recommended section of aluminium busbars
Please, consult us