ATyS range

ATyS r, ATyS d, ATyS t, ATyS g, ATyS p

from 125 to 3200 A

Characteristics according to IEC 60947-3 and IEC 60947-6-1

125 to 630 A

Thermal current I_{th} to 40°C		**125 A**	**160 A**	**200 A**	**250 A**	**315 A**	**400 A**	**500 A**	**630 A**
Frame size		**B3**	**B3**	**B3**	**B4**	**B4**	**B4**	**B5**	**B5**
Rated insulation voltage U_i (V) (power circuit)		800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV) (power circuit)		8	8	8	12	12	12	12	12
Rated insulation voltage U_i (V) (control circuit)		300	300	300	300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (control circuit)		4	4	4	4	4	4	4	4
Rated operational currents I_e (A) according to IEC 60947-3									
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-23 A / AC-23 B	125/125	160/160	200/200	200/200	315/315	400/400	500/500	500 /630
500 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	200/250	200/315	200/400	500/500	500/500
500 VAC	AC-23 A / AC-23 B	80/80	80/80	80/80	200/200	200/200	200/200	400/400	400/400
690 VAC(3)	AC-21 A / AC-21 B	125/125	160/160	200/200	200/200	200/200	200/200	500/500	500/500
690 VAC(3)	AC-22 A / AC-22 B	125/125	125/125	125/125	160/160	160/160	160/160	400/400	400/400
690 VAC(3)	AC-23 A / AC-23 B	63/80	63/80	63/80	125/125	125/125	125/125	400/400	400/400
220 VDC	DC-21 A / DC-21 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-22 A / DC-22 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC (2)	DC-21 A / DC-21 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC (2)	DC-22 A / DC-22 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC (2)	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
Rated operational currents I_e (A) according to IEC 60947-6-1									
Rated voltage	**Utilisation category**								
415 VAC	AC-31 B	125	160	200	250	315	400	500	630
415 VAC	AC-32 B				200	315	400	500	500
415 VAC	AC-33 B				200	200	200	400	400
Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3									
Prospective fuse protected short-circuit withstand at 415 VAC(6)		100	100	50	50	50	50	50	50
Prospective fuse protected short-circuit withstand at 690 VAC(kA rms)					50	50	50	50	50
Associated fuse rating (A)		125	160	200	250	315	400	500	630
Short-circuit withstand without protection as per IEC 60947-3									
Rated short-time withstand current 0.3s I_{cw} at 415 VAC (kA rms)		12	12	12	15 (4)	15 (4)	15 (4)	17 (4)	17 (4)
Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms)		7	7	7	8 (4)	8 (4)	8 (4)	11 (4)	10 (4)
Rated peak withstand current at 415 VAC (kA peak)		20	20	20	30	30	30	45	45
Short-circuit withstand without protection as per IEC 60947-6-1									
Rated short-time withstand current 30 ms I_{cw} at 415 VAC (kA rms)		10	10	10	10	10	10		
Rated short-time withstand current 60 ms I_{cw} at 415 VAC (kA rms)								10	12.6
Connection									
Minimum Cu cable cross-section as per IEC 60947-1 (mm^2)		35	35	50	95	120	185	2 x 95	2 x 120
Recommended Cu busbar cross-section (mm^2)								2 x 32 x 5	2 x 40 x 5
Maximum Cu cable cross-section (mm^2)		50	95	120	150	240	240	2 x 185	2 x 300
Maximum Cu busbar width (mm)		25	25	25	32	32	32	50	50
Min./max. tightening torque (Nm)		9/13	9/13	9/13	20/26	20/26	20/26	40/45	40/45
Switching time (rated voltage, after receiving command)									
Transfer time I-II or II-I (s)		0.85	0.85	0.85	0.9	0.9	0.9	0.95	0.95
I-0 or II-0 (s)		0.55	0.55	0.55	0.5	0.5	0.5	0.55	0.55
Contact transfer time ("black-out" I-II) minimum (s)		0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
Power supply									
Min./max. power (VAC)		166/332	166/332	166/332	166/332	166/332	166/332	166/332	166/332
Control supply power demand									
Demand/rated power (VA) - ATyS r, ATyS d		184/92	184/92	184/92	276/115	276/115	276/115	276/150	276/150
Demand/rated power (VA) - ATyS t, g , p		206/114	206/114	206/114	298/137	298/137	298/137	298/172	298/172
Mechanical specifications									
Durability (number of operating cycles)		10,000	10,000	10,000	8,000	8,000	8,000	5,000	5,000
Weight ATyS r 3 P / 4 P (kg)		5.7/ 6.9	5.7/ 6.9	5.7/ 6.9	6.6/ 7.4	6.7/ 7.8	6.7/ 7.8	11.4/ 13.3	11.9/ 14.0
Weight ATyS d 3 P / 4 P (kg)		6.3/ 7.5	6.3/ 7.5	6.3/ 7.5	7.2/ 8.0	7.3/ 8.4	7.3/ 8.4	12.0/ 13.9	12.5/ 14.6
Weight ATyS t, g, p 3 P / 4 P (kg)		6.8/ 8.0	6.8/ 8.0	6.8/ 8.0	7.7/ 8.5	7.8/ 8.9	7.8/ 8.9	12.5/ 14.4	13.0/ 15.1

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".
4-pole device with 2 poles in series by polarity.
(3) Interphase barriers must be installed on the products.
(4) Values given at 690 VAC.

800 to 3200 A

Thermal current I_{th} at 40°C		**800 A**	**1000 A**	**1250 A**	**1600 A**	**2000 A**	**2500 A**	**3200 A**
Frame size		**B6**	**B6**	**B6**	**B7**	**B8**	**B8**	**B8**
Rated insulation voltage U_i (V) (power circuit)		1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV) (power circuit)		12	12	12	12	12	12	12
Rated insulation voltage U_i (V) (control circuit)		300	300	300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (control circuit)		4	4	4	4	4	4	4
Rated operational currents I_e (A) according to IEC 60947-3								
Rated voltage	**Utilisation category**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**
415 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC	AC-22 A / AC-22 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC	AC-23 A / AC-23 B	800/800	1000/1000	1250/1250	1250/1250	-/1600	-/1600	-/1600
500 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2000	-/2000
500 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1600/1600			
500 VAC	AC-23 A / AC-23 B	630/630	630/630	800/800	1000/1000			
690 VAC[3]	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2000	-/2000
690 VAC[3]	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1000/1000			
690 VAC[3]	AC-23 A / AC-23 B	630/630	630/630	800/800	800/800			
220 VDC	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC [2]	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC [2]	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC [2]	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
Rated operational currents I_e (A) according to IEC 60947-6-1								
Rated voltage	**Utilisation category**							
415 VAC	AC-31 B	800	1000	1250	1600	2000	2500	3200
415 VAC	AC-32 B	800	1000	1250	1250	2000	2000	2000
415 VAC	AC-33 B	800	1000	1000	1000	1250	1250	1250
Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3								
Prospective fuse protected short-circuit withstand at 415 VAC(kA rms)		50	50	100	100			
Prospective fuse protected short-circuit withstand at 690 VAC(kA rms)		50	50	50				
Associated fuse rating (A)		800	1000	1250	2x800			
Short-circuit withstand without protection as per IEC 60947-3								
Rated short-time withstand current 0.3s I_{cw} at 415 VAC (kA rms)		64	64	64	78	78	78	78
Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms)		35	35	35	50	50	50	50
Rated peak withstand current at 415 VAC (kA peak)		55	55	80	110	120	120	120
Short-circuit withstand without protection as per IEC 60947-6-1								
Rated short-time withstand current 30 ms I_{cw} at 415 VAC (kA rms)								
Rated short-time withstand current 60 ms I_{cw} at 415 VAC (kA rms)		20	20	25	32	50	50	50
Connection								
Minimum Cu cable cross-section as per IEC 60947-1 (mm^2)		2 x 185						
Recommended Cu busbar cross-section (mm^2)		2 x 50 x 5	2 x 63 x 5	2 x 60 x7	2 x 100 x 5	3 x 100 x 5	2 x 100 x 10	3 x 100 x 10
Maximum Cu cable cross-section (mm^2)		4 x 185	4 x 185	4 x 185	6 x 185			
Maximum Cu busbar width (mm)		63	63	63	100	100	100	100
Min./max. tightening torque (Nm)		9/13	9/13	20/26	40/45	40/45	40/45	40/45
Switching time (rated voltage, after receiving command)								
Transfer time I-II or II-I (s)		2.8	2.8	2.8	2.9	2.8	2.8	2.8
I-0 or II-0 (s)		1.4	1.4	1.4	1.4	1.8	1.8	1.8
Contact transfer time ("black-out" I-II) minimum (s)		1.4	1.4	1.4	1.5	1	1	1
Power supply								
Min./max. power (VAC)		166/332	166/332	166/332	166/332	166/332	166/332	166/332
Control supply power demand								
Demand/rated power (VA) - ATyS r, ATyS d		460/184	460/184	460/184	460/230	812/322	812/322	812/322
Demand/rated power (VA) - ATyS t, g , p		482/206	482/206	482/206	482/252	834/344	834/344	834/344
Mechanical specifications								
Durability (number of operating cycles)		4,000	4,000	4,000	3,000	3,000	3,000	3,000
Weight ATyS r 3 P / 4 P (kg)		27.9/ 32.2	28.4/ 32.9	28.9/ 33.6	33.1/ 39.4	50.7/ 61.6	50.7/ 61.6	61.0/ 75.3
Weight ATyS d 3 P / 4 P (kg)		28.5/ 32.8	29.0/ 33.5	29.5/ 34.2	33.7/ 40.0	51.3/ 62.2	51.3/ 62.2	61.6/ 75.9
Weight ATyS t, g, p 3 P / 4 P (kg)		29.0/ 33.3	29.5/ 34.0	30.0/ 34.7	34.2/ 40.5	51.8/ 62.7	51.8/ 62.7	62.1/ 76.4

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".
4-pole device with 2 poles in series by polarity.
(3) Interphase barriers must be installed on the products.
(4) Values given at 690 VAC.