

ARCTEQ®

RELIABLE POWER



Arcteq AQ 200 series selection table

Selection Table

Protection functions	IEC	ANSI	Feeder protection					Machine protection					Transformer protection					Busbar protection	Line protection	Control, monitoring and measuring						
			AQ F201	AQ F210	AQ F205	AQ F215	AQ F255	AQ M210	AQ M215	AQ M255	AQ M257	AQ G215	AQ G257	AQ T216	AQ T215	AQ T256	AQ T257	AQ T259	AQ V211	AQ L255	AQ S214	AQ S254	AQ S215	AQ S255	AQ P215	AQ E215
Three phase overcurrent protection stages INST, DT or IDMT	I>...I>>>>	50/51	✓ 3 stages	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓						Indication	
(Sensitive) Earth-fault protection stages INST, DT or IDMT	I0>...I0>>>>	50/51N(S)	✓ 3 stages	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓						Indication	
Harmonic overcurrent protection / inrush blocking stages INST, DT or IDMT	IXh>...IXh>>>>	50/51h/68	✓ 1 stage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Cold-load pick-up block	CLPU	68	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Current unbalance / broken conductor protection stages INST, DT or IDMT	I2 (I2/I1)	46R/46L/4646	✓ 1 stage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Thermal overload protection (line)	T >	49L	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Restricted earth fault protection (low-imp)	I0d>	87N	✓ (high-imp)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Cable-end differential protection		87N	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Directional three-phase overcurrent protection stages DT or IDMT	IDir>...IDir>>>>	67			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓						Indication	
Directional (sensitive) residual overcurrent protection stages DT or IDMT	I0Dir>...I0Dir>>>>	67N			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓						Indication	
5-zone distance protection		21																	✓							
Fault locator		21FL			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Overvoltage protection stages INST, DT or IDMT	U>...U>>>>	59			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Undervoltage protection stages INST, DT or IDMT	U<...U<<<<	27			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						Indication	
Positive sequence under/overvoltage protection stages INST, DT or IDMT	U1</> (4)	59P/27P/47			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Residual voltage protection stages INST, DT or IDMT	U0>...U0>>>>	59N			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						Indication	
Frequency protection stages	f >/ f < (8)	81O/U			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
INST, DT or IDMT																										
Rate of change of frequency	df/dt (8)	81R			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Vector Jump / surge		78			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Reverse/under/over power protection stages INST, DT or IDMT	P</> (4)	32			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓							
Transformer differential protection, 2-winding	Idx>, Idx>>	87T										✓		✓	✓	✓	✓									
Transformer differential protection, 3-winding	Idx>, Idx>>	87T										✓		✓	✓	✓	✓									
Transformer thermal overload protection	T>	49T										✓		✓	✓	✓	✓									
Machine thermal overload protection	T>	49M					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓									
Motor start-up supervision element	ISt>	14					✓	✓	✓	✓	✓															
Restart inhibit / frequent starts	N>	66					✓	✓	✓	✓	✓															
Undercurrent monitor	I<	37					✓	✓	✓	✓	✓															
Load jam monitor	Im>	51m					✓	✓	✓	✓	✓															
Synchrocheck	DV/Da/Df	25			✓	✓	✓	✓	✓	✓	✓						✓	✓					✓	✓		
Underimpedance protection	Z<	21									✓	✓	✓	✓	✓	✓	✓									
Voltage controlled/dependent overcurrent protection	Iv>	51V									✓	✓	✓	✓	✓	✓	✓									
Loss of field	X<	40									✓	✓	✓	✓	✓	✓	✓									
Overexcitation protection	V/Hz	24											✓													
100% stator earth-fault protection	U0f3<	64F3									✓	✓	✓	✓	✓	✓	✓									
Out-of Step		78									✓	✓	✓	✓	✓	✓	✓									
Auto-reclose	0 -> 1	79		✓	✓	✓	✓	✓	✓	✓	✓												✓	✓		
Fuse failure	VTS	60			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓		
CT supervision	CTS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓		
Switch onto fault logic	SOTF		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓		
Breaker failure protection	CBFP	50BF	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓		
Arc protection	IL>	50ARC																✓								
Programmable stage		99		option		option	option	option	option	option	option	option	option	option	option	option	option		option							
Measuring and monitoring																										
Phase, sequence and residual currents (I _{Lx} , I _{0x} , I _{2x} , I _{1x})			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓	
Phase, sequence and residual voltage (U _x , U ₁₂ , U ₂₃ , U ₃₁ , U ₀) and frequency				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓	
Power (P, Q, S, pf) and Energy (E+, E-, Eq+, Eq-) class 0.5					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓	
Power (P, Q, S, pf) and Energy (E+, E-, Eq+, Eq-) class 0.25					option	option	option	option	option	option	option	option	option	option	option	option	option	option					option	option	✓	
Circuit breaker wear			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓		
Trip circuit supervision (TCS)			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓		
Control																										
Controllable objects			1	5	1	5	10	5	5	10	10	5	10	5	5	10	10	10	5	5	5	10	5	10	5	
Hardware																										
Current inputs			5	5	5	5	5	5	5	10	5	10	10	5	10	10	15		5			5	5	5	5	
Voltage inputs					4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			4	4	4	
Digital inputs standard			3	3	11	3	3	3	3	3	3	3	3	3	3	3	3	3	4			3	3	3	3	
Output relays standard			6	6	11	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		6	6	6	6	
Digital inputs optional				8...32		8...24	8...88	8...24	8...24	8...88	8...72	8...24	8...24	8...16	8...24	8...80	8...72	8...56	8...40	8...88	8...48	8...112	8...24	8...88	8...24	8...24
Output relays optional				5...15		5...15	5...30	5...15	5...15	5...30	5...30	5...15	5...15	5...10	5...15	5...30	5...30	5...30	5...15	5...30	5...15	5...30	5...15	5...30	5...15	
External RTD inputs (optional)			12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
Internal RTD inputs (optional)				16		16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Event recording																										
Disturbance recorder			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓					✓	✓	✓	
Max no. permanent event records			15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	15 000	
Communication interface																										
RJ 45 Ethernet 100Mb (front), RJ 45 Ethernet 100Mb and RS 485 (rear)			✓	✓																						

