

**COORDINATION**

**AND**

**SELECTIVITY**

**TABLES**

**NOARK**

DEFINITION OF RELIABILITY

# Coordination table

Coordination table for cascade protection (220/230/240 VAC)

Up-stream	Ex9M1					Ex9M2					Ex9M3					Ex9M4					Ex9M5									
	S	N	Q	H	P	S	N	Q	H	P	S	N	Q	H	P	S	N	Q	H	P	S	N	Q	H	P					
Breaking capacity (kA rms)	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150
Down-stream	Breaking capacity (kA rms)																													
Ex9BN	25	30	40	60	60	25	30	40	60	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ex9BH	30	40	50	65	65	30	40	50	65	65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ex9M1S		50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100
Ex9M1N			70	90	120			70	90	120			70	90	120			70	90	120			70	90	120			70	90	120
Ex9M1Q				90	140				90	140				90	140				90	140				90	140				90	140
Ex9M1H					150					150					150					150					150					150
Ex9M2S							50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100
Ex9M2N								70	90	120			70	90	120			70	90	120			70	90	120			70	90	120
Ex9M2Q									90	140				90	140				90	140				90	140				90	140
Ex9M2H										150					150					150					150					150
Ex9M3S												50	60	80	100		50	60	80	100		50	60	80	100		50	60	80	100
Ex9M3N													70	90	120			70	90	120			70	90	120			70	90	120
Ex9M3Q														90	140				90	140				90	140				90	140
Ex9M3H															150					150					150					150
Ex9M4S																	50	60	80	100		50	60	80	100		50	60	80	100
Ex9M4N																		70	90	120			70	90	120			70	90	120
Ex9M4Q																			90	140				90	140				90	140
Ex9M4H																				150					150					150
Ex9M5S																						50	60	80	100		50	60	80	100
Ex9M5N																							70	90	120			70	90	120
Ex9M5Q																								90	140				90	140
Ex9M5H																														150

# Coordination table

Coordination table for cascade protection (380/400/415 VAC)																									
Up-stream	Ex9M1					Ex9M2					Ex9M3					Ex9M4					Ex9M5				
Breaking capacity (kA rms)	S	N	Q	H	P	S	N	Q	H	P	S	N	Q	H	P	S	N	Q	H	P	S	N	Q	H	P
	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150	36	50	70	100	150
Down-stream	Breaking capacity (kA rms)																								
Ex9BN	25	25	25	25	25	25	25	25	25	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ex9BH	30	30	30	30	30	30	30	30	30	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ex9M1S		50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100
Ex9M1N			70	90	120			70	90	120			70	90	120			70	90	120			70	90	120
Ex9M1Q				90	140				90	140				90	140				90	140				90	140
Ex9M1H					150					150					150						150				150
Ex9M2S							50	50	80	100		50	50	80	100		50	50	80	100		50	50	80	100
Ex9M2N								70	90	120			70	90	120			70	90	120			70	90	120
Ex9M2Q									90	140				90	140				90	140				90	140
Ex9M2H										150					150						150				150
Ex9M3S												50	50	80	100		50	50	80	100		50	50	80	100
Ex9M3N													70	90	120			70	90	120			70	90	120
Ex9M3Q														90	140				90	140				90	140
Ex9M3H															150						150				150
Ex9M4S																	50	50	80	100		50	50	80	100
Ex9M4N																		70	90	120			70	90	120
Ex9M4Q																			90	140				90	140
Ex9M4H																				150					150
Ex9M5S																						50	50	80	100
Ex9M5N																							70	90	120
Ex9M5Q																								90	140
Ex9M5H																									150

# Selectivity protection

Selectivity protection table. Number: Maximum fault current to achieve selectivity

Upstream		Ex9M1 TM											Ex9M2 TM					Ex9M2 SU20S					
Downstream	$I_n$ (A)	16	20	25	32	40	50	63	80	100	125	160	125	160	180	200	225	250	32	63	100	160	250
Ex9B B and C Characteristics	≤10	190	190	300	400	500	500	500	630	800	1000	1250	T	T	T	T	T	T	400	500	1000	T	T
	16			300	400	500	500	500	630	800	1000	1250	T	T	T	T	T	T	400	500	1000	T	T
	20					500	500	500	630	800	1000	1250	T	T	T	T	T	T		500	1000	T	T
	25						500	500	630	800	1000	1250	T	T	T	T	T	T		500	1000	T	T
	32							500	630	800	1000	1250	2000	5000	T	T	T	T		500	1000	T	T
	40								630	800	1000	1250	2000	5000	T	T	T	T			1000	T	T
	50									800	1000	1250	2000	5000	T	T	T	T			1000	T	T
	63										1000	1250	2000	5000	T	T	T	T			1000	T	T
Ex9M1 TM	16					400	500	500	630	800	1000	1250	1000	2500	2500	2500	2500	2800		500	1000	2500	2800
	20						500	500	630	800	1000	1250	1000	2500	2500	2500	2500	2800		500	1000	2500	2800
	25							500	630	800	1000	1250	1000	2500	2500	2500	2500	2800		500	1000	2500	2800
	32								630	800	1000	1250	1000	2500	2500	2500	2500	2800			1000	2500	2800
	40									800	1000	1250	1000	2000	2000	2500	2500	2800			1000	2500	2800
	50										1000	1250	1000	2000	2000	2500	2500	2800			1000	2500	2800
	63											1250	1000	2000	2000	2500	2500	2800				2500	2800
	80													2000	2000	2500	2500	2800				2500	2800
	100															2500	2500	2800					2800
	125																2500	2800					2800
	160																2500	2800					2800
Ex9M2 TM	125																						
	160																						
	180																						
	200																						
	225																						
Ex9M2 SU20S/L	250																						
	32																				1000	2000	2800
	63																					2000	2800
	100																						2800
	160																						
Ex9M3	250																						
	315																						
	350																						
	400																						
	500																						
Ex9M3 SU20S/L	250																						
	400																						
	630																						



# NOARK

DEFINITION OF RELIABILITY



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