



C10/20 - List of overcurrent protections

A. List of protections without auxiliary supply, only to be used with a compatible circuit-breaker

The technical specifications which should be met by these protections, and the procedure to add other protection devices to this list, are described in [this document](#).

Important note: The relays mentioned in this list A can only be used in combination with a compatible circuit breaker. To prove this, the circuit breaker should successfully pass the compatibility test as described in the procedure C2/113 for the homologation of HV-switchgear. For this compatibility test, only the approved relays in this list A can be used.

Manufacturer	Type	Threshold I_{ph}	Threshold I_0	R_i	H2 rest	User def	Remarks
ABB	PR512	2	2	No	No	No	
	REJ603 1.5	2	2	Yes	Yes	No	
	REJ603 3.0	2	2	Yes	Yes	No	
Mevoco	RP600	2	2	Yes	No	No	
	RP800	2	2	Yes	Yes	No	TRIP output = active output for STRIKER
Ormazabal	ekor.rpa-000 series (ekor.rpa-031)	2	2	No	Yes	No	1A inputs only. Special consideration has to be paid to the associated CTs and characteristics.

Manufacturer	Type	Threshold I _{ph}	Threshold I ₀	R _I	H2 rest	User def	Remarks
Schneider Electric	Micom P124D	3	3	Yes	No	No	RXIDG + reclosure
	VIP300	2	2	Yes	No	No	
	VIP400	3	2	Yes	Yes	No	
	VIP410	3	2	Yes	Yes	No	
	Micom P116A	3	3	Yes	Yes	No	
Siemens	7SR45	2	2	No	Yes	No	
Woodward - SEG	WIC 1	2	2	Yes	No	No	
	WIP1-1-I1-E1	2	2	Yes	No	No	
	WIP1-2-I1-E1	2	2	Yes	No	No	

B. List of protections with auxiliary supply which may be used by end users

The technical specifications which should be met by these protections, and the procedure to add other protection devices to this list, are described in [this document](#).

Important note: As prescribed by the Synergrid document C2/112, the explicit agreement of the DSO is required before connecting and using an active protection equipped with an auxiliary supply, such as those mentioned in the list below.

Manufacturer	Type	Threshold I_{ph}	Threshold I_0	R_I	Inrush H2	User curve	Remarks
ABB	REF541	3	3	Yes	Double I>		Directional
	REF543	3	3	Yes	Double I>		Directional
	REF601	3	2	Yes	Yes	No	- No disturbance recorder available. - No communication port present in standard model, but available in option.
	REF610	3	2	Yes			
	REF615	3	3	Yes	Double I>	Equation	Directional
	REF630	3	3	Yes	Yes		Directional
	REX521	3	3	Yes			Soft. Version 1.46
	REX610	5	5	Yes	Yes	Yes	
	REX615	3	3	Yes	Double I>	Equation	Directional
REX640	5	5	Yes	Yes	Yes		
GE	MIF	2	2			Equation	
ICE	NPF910	4	4	Yes	Yes	No	RI and RXIGD curves available Connection drawing
Mevoco	RP800	2	2	Yes	Yes	No	TRIP output = active output for STRIKER
Ormazabal	ekor.rpa-100 series (ekor.rpa-120)	2	2	No	Yes	No	1A inputs only. Special consideration has to be paid to the associated CTs and characteristics. No disturbance recorder.

Manufacturer	Type	Threshold I_{ph}	Threshold I_0	R_I	Inrush H2	User curve	Remarks
Schneider Electric	Micom P122	3	2	Yes	Yes	No	
	Micom P123	3	2	Yes	Yes	No	
	Micom P127	3	3	Yes	Yes	No	Soft. Version 3.j, directional relay
	Sepam 1000+ S20	4	4	Yes	Earth only	No	
	Sepam S40	4	4	Yes	Earth only	No	S42 directional
	Sepam S60-S62	4	4	Yes	Earth only	No	S62 directional
	P3U10	4	4	Yes	Yes	No	
	P3U20	4	4	Yes	Yes	No	
	P3U30	4	4	Yes	Yes	No	
	P5U20	3	5	Yes	Yes	Yes	
	P5F30	6	6	Yes	Yes	Yes	

Manufacturer	Type	Threshold I_{ph}	Threshold I_0	R_i	Inrush H2	User curve	Remarks
Siemens	7SJ61	2	2	No	Yes	Yes	Sensitive earth fault, user defined curve
	7SJ62	2	2	No	Yes	Yes	Directional, user defined curve
	7SJ64	2 + 10 (*)	2 + 10 (*)	No	Yes	Yes	(*) : 20 flexible functions that can be used for I or I_0 for instance Directional, user defined curve
	7SJ80	3 + 10 (*)	2 + 10 (*)	No	Yes	Yes	(*) : 20 flexible functions that can be used for I or I_0 for instance Directional, user defined curve
	7SJ82	8	6	No	Yes	Yes	Number of functions can be extended by buying additional "points" Directional, user defined curve
	7SJ85	8	6	No	Yes	Yes	Number of functions can be extended by buying additional "points" Directional, user defined curve
	7SJ86	8	6	No	Yes	Yes	Number of functions can be extended by buying additional "points" Directional, user defined curve
	7SR11	4	4	No	No	No	No disturbance recorder
	7SR12	8	8	No	No	No	Directional relay No disturbance recorder
	7SR45	2	2	No	Yes	No	Automatic switching to self powered functionality requires proper selection of CTs and use of low power coil
	7SX800	8	6	No	Yes	Yes	
	Argus 1	3	3	No	No	No	
	Argus 4	3	3	No	No	No	
Woodward - SEG	MRI 3	2	2	Yes	No	No	
	MRIK 3	2	2	Yes	No	No	
	MRI 4	6	6	Yes	Yes		RXIDG present (check torus ratio)
	MRA 4	6	6	Yes	Yes		RXIDG present (check torus ratio)