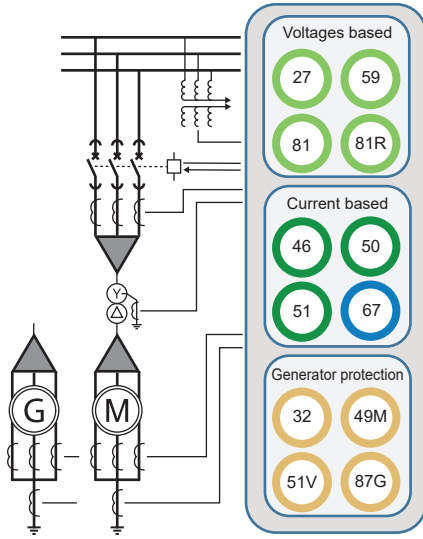


MVR-200 series Machine/Motor and Generator protection

Machine/Motor (MVR-M2xx) and Generator (MVR-G2xx) protection



MVR-21x series



MVR-25x series

Feature	Machine/Motor				Generator	
	M210	M215	M255	M257	G215	G257
5 x AC current measurement	•	•	•		•	
10 x AC current measurement (differential current included)				•		•
4 x AC voltage measurement		•	•	•	•	•
3 x DI, 5 x relay output, 1 x System fault (Watchdog) output	•	•	•	•	•	•
HW Option B: 8 x Isolated (2 groups) digital inputs, 10 to 200 V DC	•	•	•	•	•	•
HW Option C: 5 x NO digital outputs, 220 V AC / 3 A or 220 V DC / 0.3 A	•	•	•	•	•	•
HW Option I: 5 x analogue outputs 0(4) to 24 mA out, 1 x mA in*	•	•	•	•	•	•
HW Option J: Double Fiber Ethernet interface**	•	•	•	•	•	•
HW Option L: RS 232 interface + Serial fiber Plastic - Plastic (PP)**	•	•	•	•	•	•
HW Option M: RS 232 interface + Serial fiber Plastic - Glass (PG)**	•	•	•	•	•	•
HW Option N: RS 232 interface + Serial fiber Glass - Plastic (GP)**	•	•	•	•	•	•
HW Option O: RS 232 interface + Serial fiber Glass - Glass (GG)**	•	•	•	•	•	•
SW Option: Measuring class 0.25 (0.55 standard)		•	•	•	•	•
SW Option: Selection between types: synchronous/asynchronous/synchronous with excitation				•		
SW Option: Active synchronizer with relay outputs for speed/voltage control						•
Number of option slots	4	3	11	9	3	9

* Max. 2 modules per relay.

** Only one communication option per relay.

Machine/Motor and Generator protection

Protection	Codes		Machine/Motor				Generator	
	IEC	ANSI	M210	M215	M255	M257	G215	G257
Motor start-up supervision element	IST>	14	•	•	•	•		
Under-impedance protection	Z<	21					•	•
Over-excitation protection	V/Hz	24					•	•
Synchrocheck	DV/DA/DF	25					•	•
Synchroniser		25						•
Under-voltage protection stages INST, DT or IDMT	U< to U<<<<	27		•	•	•	•	•
Inadvertent energising	I>U<I.A.E.	50/27						•
Reverse-/under-/over-power protection stages INDT, DT or IDMT	P</> (4)	32		•	•	•	•	•
Under-current monitor	I<	37	•	•	•	•		
Loss of field	X<	40					•	•
Current unbalance/broken conductor protection stages INST, DT or IDMT	I2 (I2/I1)	46 L/R	•	•	•	•	•	•
Positive/negative sequence under-/over-voltage protection stages INST, DT or IDMT	U1</> (4)	27P/47/59P		•	•	•	•	•
Motor start-up supervision element	IST>	48	•	•	•	•		
Machine thermal overload protection	T>	49M	•	•	•	•	•	•
Harmonic over-current protection/inrush blocking stages INST, DT or IDMT	IXH> to IXH>>>>	50H/51H/68	•	•	•	•	•	•
(Sensitive) Earth fault protection stages INST, DT or IDMT	I0> to I0>>>>	50N/51N(S)	•	•	•	•	•	•
Breaker failure protection	CBFP	50BF	•	•	•	•	•	•
Three-phase over-current protection stages INST, DT or IDMT	I> to I>>>>	50	•	•	•	•	•	•
Load jam monitor	IM>	51M	•	•	•	•		
Voltage controlled/dependent over-current protection	IV>	51V					•	•
Three-phase over-current protection stages INST, DT or IDMT	I> to I>>>>	51	•	•	•	•	•	•
Power factor		55		•	•	•	•	•
Over-voltage protection stages INST, DT or IDMT	U> to U>>>>	59		•	•	•	•	•
Residual voltage protection stages INST, DT or IDMT	U0> to U0>>>>	59N		•	•	•	•	•
Fuse failure	VTS	60		•	•	•	•	•
100 % stator Earth fault protection	U0F3<	64F3					•	•
Restart inhibit/frequent starts	N>	66	•	•	•	•		
Directional three-phase over-current protection stages DT or IDMT	IDIR> to IDIR>>>>	67		•	•	•	•	•
Directional (sensitive) residual over-current protection stages DT or IDMT	I0DIR> to I0DIR>>>>	67N		•	•	•	•	•
Vector jump/surge		78					•	•
Auto-reclose	0->1	79			•	•	•	•
Frequency protection stages	F>/ F< (8)	81O/U		•	•	•	•	•
Rate of change of frequency	df/dt (8)	81R		•	•	•	•	•
Restart inhibit/frequent starts	N>	86	•	•	•	•		
Restricted earth fault protection (low-imp)	I0D>	87N	•	•	•	•	•	•
Cable-end differential protection		87	•	•	•	•	•	•
Motor or generator differential protection, 2-winding	IDX>, IDX>>	87M/G				•		•
Programmable stage		99	•	•	•	•	•	•
Current transformer supervision	CTS		•	•	•	•	•	•
Voltage memory				•	•	•	•	•
Disturbance recorder, 60 MB (for example, 100 disturbance records of 10 s, 15,000 events)	DR		•	•	•	•	•	•

For more information, please contact:

DEIF A/S · Frisenborgvej 33 · DK-7800 Skive · Denmark

Tel.: +45 9614 9614 · Fax: +45 9614 9615 · info@deif.com · www.deif.com