

Chapter No. 33.26
AUTOMATIC VOLTAGE STABLIZER, TIMER:

Sr. No.	Code No.	Description	Unit	Quantity	Plain			For Sub-Mountainous Region		
					Rate (In Rs.)	Cost (In Rs.)	Total (In Rs.)	Rate (In Rs.)	Cost (In Rs.)	Total (In Rs.)
1	2	3	4	5	6	7	8	9	10	11

AUTOMATIC VOLTAGE STABLIZER:

33.26 A		Supply and erection of single phase copper wound automatic voltage stablizer of suitable capacity electronically controlled circuit with input voltage 100-280 volts single phase AC supply and output voltage 220 ± 5% volts single phase AC supply having main silicon core copper wound step up transformer with suitable nos. of turns on primary side and secondary side the transformer should be fully insulated inside the MS sheet box 450 mm x 350mm x 330mm. There should be power control relay and single pole MCB (C-curve, 10kA) of suitable capacity complete with internal copper wiring along with amp. meter and volt meter, high voltage cut off 280 volt input (243 volt output) and 90 volt maximum boost and overloading protection to be provided.										
(i)		Automatic voltage stablizer copper wound 4 KVA, input voltage 100-280volts & output voltage 220± 5%volts with power control relay rating 25 amp. (single phase) and Single pole MCB 16 amp. (C-curve, 10kA)										
		Unit :-	1	Each								
I		Materials										
(i)		Automatic voltage stablizer copper wound 4 KVA, input voltage 100-280volts & output voltage 220± 5%volts with power control relay rating 25 amp. (single phase) and Single pole MCB 16 amp. (C-curve, 10kA)										
				Each	1.00	6142.50	6142.50					
		Total - I					6142.50					
		Sundries such as carriage of material and other hidden charges etc.@1% on Rs.6142.5					61.43					
		Add contractor's profit @ 10% i.e. on Rs. 6203.93					620.39					
		Add labour cess @ 1% i.e. on Rs. 6824.32					68.24					
							6892.56		6892.56			6892.56
II		Labour										
		Taking output	1	Each								
(i)		Wireman (1st Class)		Day	1/6	164.69	27.50					
		Total - II					27.50					
		Sundries such as uses of tools and other hidden charges etc.@1% on Rs.27.5					0.28					

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1	2	3			4	5	6	7	8	9	10	11
		Add contractor's profit @ 21.5% i.e. on Rs. 27.78						5.97				
		Add labour cess @ 1% i.e. on Rs. 33.75						0.34				
		Labour for	1	Each				34.09				
		Labour for	1	Each				34.09	34.09		34.09	
		Cost for	1	Each					6926.65			
		Add 10% for sub mountainous region										3.41
		Labour for	1	Each								37.50
		Cost for	1	Each								6930.06

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1	2	3	4	5	6	7	8	9	10	11
(iv)		Automatic voltage stablizer copper wound 8 KVA, input voltage 100-280volts & output voltage 220± 5%volts with power control relay rating 63 amp. (single phase) and Single pole MCB 63 amp. (C-curve, 10kA)								
		Unit :-	1	Each						
I		Materials								
(i)		Automatic voltage stablizer copper wound 8 KVA, input voltage 100-280volts & output voltage 220± 5%volts with power control relay rating 63 amp. (single phase) and Single pole MCB 63 amp. (C-curve, 10kA)								
			Each	1.00	9327.50	9327.50				
		Total - I				9327.50				
		Sundries such as carriage of material and other hidden charges etc.@1% on Rs.9327.5				93.28				
		Add contractor's profit @ 10% i.e. on Rs. 9420.78				942.08				
		Add labour cess @ 1% i.e. on Rs. 10362.86				103.63				
						10466.49	10466.49			10466.49
II		Labour								
		Taking output	1	Each						
(i)		Wireman (1st Class)	Day	1/6	164.69	27.50				
		Total - II				27.50				
		Sundries such as uses of tools and other hidden charges etc.@1% on Rs.27.5				0.28				
		Add contractor's profit @ 21.5% i.e. on Rs. 27.78				5.97				
		Add labour cess @ 1% i.e. on Rs. 33.75				0.34				
		Labour for	1	Each		34.09				
		Labour for	1	Each		34.09	34.09	34.09		
		Cost for	1	Each			10500.58			
		Add 10% for sub mountainous region								3.41
		Labour for	1	Each						37.50
		Cost for	1	Each						10503.99

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1	2	3	4	5	6	7	8	9	10	11

TIMER:

TIMER (FOR THREE PHASE CIRCUIT)

33.26 B (i)	S/E of Microprocessor Based St. Light Controller with digital time switch daily programmed with stand by lithium battery with back up of 6 years with min. time between 2 switching operations is 1 minute, 3 nos. three pole power contactors 40A. with coil voltage 220-230V AC with 1 no. aux. contact NO, 1 no. aux. contactor 6 amp.(2NO+2NC) with coil voltage 220V AC, 3 nos. MCB 2 pole 40amp. (C-curve,10kA)& power wiring with single core PVC insulated FRLS cable 10 sq. mm and control wiring with PVC insulated FRLS cable 1 sq. mm, 1 no. two position selector switch to bypass timer and other accessories & petty material (din rail, 2 nos. 4 pole bakelite terminal strip 63A/ 440V AC, required nut bolts) should be fixed on bakelite sheet 6mm thick to be mounted in a IP54 surface/ flush mounting powder coated sheet metal (1.60mm thick) cabinet having size 450mmx600mmx150mm to switch 'ON' all the 3 phases & switch 'OFF' 3 phases pre-fixed timings complete in all respect as per satisfaction of Engineer-in-charge.											
	Unit :-	1	Each									
I	Materials											
(i)	Digital time switch daily programmed with stand by battery six years one channel			Each	1.00	4558.99	4558.99					
(ii)	Power contactor three pole 40amp. With coil voltage 220-230 volts AC and 1no. NO contact			Each	3.00	1922.38	5767.14					
(iii)	Auxiliary contactor 6amp. with coil voltage 220-230 volts AC and 2 NO + 2 NC contact			Each	1.00	451.02	451.02					
(iv)	Miniature circuit breaker double pole 40amp. (Breaking capacity 10kA, Curve-C) suitable for 240/ 415 volts 50cycles AC supply			Each	3.00	609.70	1829.10					
(v)	Bakelite terminal strip with 4 nos. brass nut bolts 63 amp./ 440 volt AC			Each	2.00	79.12	158.24					
(vi)	Powder coated sheet metal cabinet IP54 front door open duly hinged and locking arrangement			Kg.	8.700	110.00	957.00					
(vii)	Bakelite sheet 6mm thick (Colour Brown)			Sq. inch	216.00	0.96	207.36					
(viii)	Din rail to mount contactors and timers			Metre	0.50	142.18	71.09					
(ix)	PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1 sq.mm, 1100volts grade			Metre	4.00	6.51	26.04					

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1	2	3	4	5	6	7	8	9	10	11
(x)		PVC insulated copper conductor single core FRLS cable (ISI marked) overall 10 sq.mm, 1100volts grade	Metre	8.00	58.55	468.40				
(xi)		Two position selector switch	Each	1.00	80.00	80.00				
		Total - I				14574.38				
		Sundries such as carriage of material and other hidden charges etc.@1% on Rs.14574.38				145.74				
		Add contractor's profit @ 10% i.e. on Rs. 14720.12				1472.01				
		Add labour cess @ 1% i.e. on Rs. 16192.13				161.92				
						16354.05	16354.05			16354.05
II		Labour								
		Taking output	1	Each						
(i)		Electrician	Day	1/2	164.69	82.35				
(ii)		Mazdoor (Skilled)	Day	1/2	164.69	82.35				
		Total - II				164.70				
		Sundries such as uses of tools and other hidden charges etc.@1% on Rs.164.7				1.65				
		Add contractor's profit @ 21.5% i.e. on Rs. 166.35				35.77				
		Add labour cess @ 1% i.e. on Rs. 202.12				2.02				
		Labour for	1	Each		204.14				
		Labour for	1	Each		204.14	204.14	204.14		
		Cost for	1	Each			16558.19			
		Add 10% for sub mountainous region								20.41
		Labour for	1	Each						224.55
		Cost for	1	Each						16578.60

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1	2	3	4	5	6	7	8	9	10	11

TIMER (FOR SINGLE PHASE CIRCUIT)

(ii)		S/E of Microprocessor Based Street Light Controller with digital time switch daily programmed with stand by lithium battery with back up of six years with minimum time between 2 switching operations is 1 minute, 1 nos. 3 pole power contactors 40amp. with coil voltage 220-230V AC with 1 no. auxiliary contact NO, 1 no. MCB double pole 40amp. (C-curve, 10kA characteristic) and power wiring with single core PVC insulated FRLS cable 10 sq. mm & control wiring with PVC insulated FRLS cable 1 sq. mm, 1 no. two position selector switch to bypass timer & other accessories & petty material (din rail, 1 no. 4 pole bakelite terminal strip 63A/ 440 volts AC, required nut bolts) should be fixed on bakelite sheet 6mm thick to be mounted in a IP54 surface/ flush mounting powder coated sheet metal (1.60mm thick) cabinet having size 450mmx600mmx150mm to switch 'ON' all the 3 phases & switch 'OFF' 3 phases predetermined/ pre-fixed timings complete in all respect as per satisfaction of Engineer-in-charge.										
		Unit :-	1	Each								
I		Materials										
(i)		Digital time switch daily programmed with stand by battery six years one channel			Each	1.00	4558.99	4558.99				
(ii)		Power contactor three pole 40amp. With coil voltage 220-230 volts AC and 1no. NO contact			Each	1.00	1922.38	1922.38				
(iii)		Miniature circuit breaker double pole 40amp. (Breaking capacity 10kA, Curve-C) suitable for 240/ 415 volts 50cycles AC supply			Each	1.00	609.70	609.70				
(iv)		Bakelite terminal strip with 4 nos. brass nut bolts 63 amp./ 440 volt AC			Each	1.00	79.12	79.12				
(v)		Powder coated sheet metal cabinet IP54 front door open duly hinged and locking arrangement			Kg.	8.700	110.00	957.00				
(vi)		Bakelite sheet 6mm thick (Colour Brown)			Sq. inch	216.00	0.96	207.36				
(vii)		Din rail to mount contactors and timers			Metre	0.25	142.18	35.55				
(viii)		PVC insulated copper conductor single core FRLS cable (ISI marked) overall 1 sq.mm, 1100volts grade			Metre	2.00	6.51	13.02				
(ix)		PVC insulated copper conductor single core FRLS cable (ISI marked) overall 10 sq.mm, 1100volts grade			Metre	3.00	58.55	175.65				
(x)		Two position selector switch			Each	1.00	80.00	80.00				

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1	2	3	4	5	6	7	8	9	10	11
		Total - I				8638.77				
		Sundries such as carriage of material and other hidden charges etc.@1% on Rs.8638.77				86.39				
		Add contractor's profit @ 10% i.e. on Rs. 8725.16				872.52				
		Add labour cess @ 1% i.e. on Rs. 9597.68				95.98				
						9693.66	9693.66			9693.66
II		Labour								
		Taking output	1	Each						
(i)		Electrician	Day	1/2	164.69	82.35				
(ii)		Mazdoor (Skilled)	Day	1/2	164.69	82.35				
		Total - II				164.70				
		Sundries such as uses of tools and other hidden charges etc.@1% on Rs.164.7				1.65				
		Add contractor's profit @ 21.5% i.e. on Rs. 166.35				35.77				
		Add labour cess @ 1% i.e. on Rs. 202.12				2.02				
		Labour for	1	Each		204.14				
		Labour for	1	Each		204.14	204.14	204.14		
		Cost for	1	Each			9897.80			
		Add 10% for sub mountainous region								20.41
		Labour for	1	Each						224.55
		Cost for	1	Each						9918.21

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1	2	3	4	5	6	7	8	9	10	11