

보호계전기 정정치 TAP값

TR용량(kVA)	정격전류 In(A)	CT비(A)		OCR		OCGR	
		1차	2차	한시TAP 정정치	순시TAP 정정치	한시TAP 정정치	순시TAP 정정치
				최대전류* (1/CT비)*1.5 0.6sec이하	최소치예정정 20 In 0.05sec 이하	부하전류* (1/CT비)*0.3 0.2sec이하	최소치예정정 10 In 0.05sec이하
150	3.8	5	5	5.7		1.1	
200	5.1	10	5	3.9		0.7	
250	6.4	10	5	4.8		0.9	
300	7.6	10	5	5.7		1.1	
350	8.9	10	5	6.7		1.3	
400	10.1	15	5	5.1		1	
450	11.4	15	5	5.7		1.1	
500	12.7	15	5	6.4		1.2	
550	13.9	20	5	5.3		1	
600	15.2	20	5	5.7		1.1	
750	19	30	5	4.8		0.9	
800	20.2	30	5	5.1		1	
850	21.5	30	5	5.4		1	
900	22.7	30	5	5.7		1.1	
950	24	30	5	6		1.2	
1000	25.3	30	5	6.4		1.2	
1250	31.6	40	5	6		1.1	
1500	37.9	50	5	5.7		1.1	
2000	50.5	75	5	5.1		1	
2500	63.1	75	5	6.4		1.2	
2750	69.4	100	5	5.3		1	
3000	75.7	100	5	5.7		1.1	
3500	88.3	100	5	6.7		1.3	
4000	100.9	150	5	5.1		1	
4500	113.5	150	5	5.7		1.1	
5000	126.1	150	5	6.4		1.2	
5500	138.7	200	5	5.3		1	
6000	151.3	200	5	5.7		1.1	
6500	163.9	200	5	6.2		1.2	
7000	176.5	200	5	6.7		1.3	
7500	189.1	250	5	5.7		1.1	
8000	201.7	250	5	6.1		1.2	
8500	214.4	250	5	6.5		1.2	
9000	227	300	5	5.7		1.1	
9500	239.6	300	5	6		1.1	
10000	252.2	300	5	6.4		1.2	

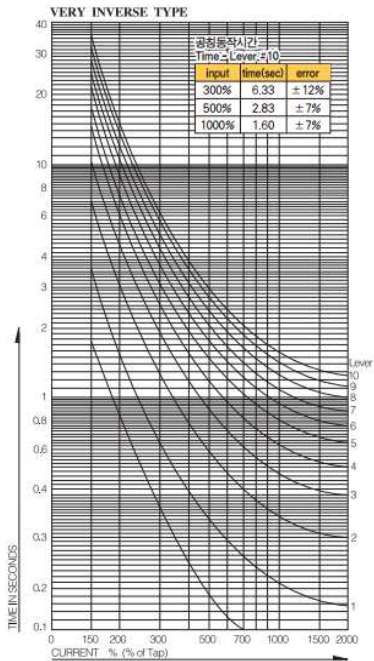
UVR 정격전압의 80%, 2초

OVR 정격전압의 130%, 2초

OVGR GVT 2차전압의 30~35V(30%)_트립용, 최대영상전압 3V₀=110V인 경우

경보_유도형

Time & Current Characteristics



- TYPE : GCO - C I 4, C I D 4 GCO - C H I 4, C H I D 4
- C I 3, C I D 3 - C H I 3, C H I D 3
- C I 2, C I D 2 - C H I 2, C H I D 2
- GCO - C I I 4, C I I D 4 GCO - C H I I 4, C H I I D 4
- C I I 3, C I I D 3 - C H I I 3, C H I I D 3
- C I I 2, C I I D 2 - C H I I 2, C H I I D 2

시한조정 Lever에 따른 오차 계산식

n ≤ 10일 경우

$$\epsilon = \frac{T_n - \frac{n}{10} T_{10}}{T_{10}} \times 100(\%)$$

T₁₀ : 기준 동작시간 정정에서의 공칭 동작시간
 T_n : 동작시간정정 n에서의 실측 동작시간
 단, n = $\frac{\text{동작시간정정}}{\text{기준동작시간정정}} \times 10$

성능

시험 항목	반환시 성능
적용 형식	GCO - C I □ □ GCO - C I I □ □ GCO - C H I □ □ GCO - C H I I □ □
최대 동작전류	한시요소 : 한시 Lever "1"에서 Tap 지의 ±5% 이내 순시요소 : 전류 정정치의 ±10% 이내
Floating 특성	최소 전류 정정치의 ±5% 이내
동작시간 특성	한시) Lever10, 동작전류 정정치 2000% 입력 : 1.2초 ± 0.2초 T ₂ / T ₅ : 10~15배 이내 T ₅ / T ₁ : 1.8~2.6배 이내 순시) 동작전류 정정치의 200% 입력 : 50ms 이내

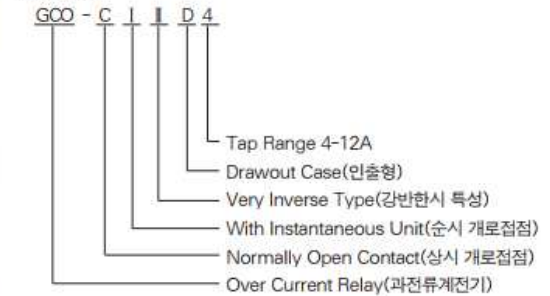
Type & Form Identification

- GCO Over Current unit
- ICS Indicating Contact Switch unit
- IIT Indicating Instantaneous Trip unit

- TYPE
- G Manufacturer's mark
- C Current
- O Over

- FORM
- C Normally open contact
- I With instantaneous unit
- H With holding coil
- II Very inverse
- III Inverse
- L Long time
- D Drawout case
- 5 0.5-2.0A
- 4 4-12A
- 39 3-9A
- 3 3-8A
- 2 2-6A
- 1 0.1-0.5A

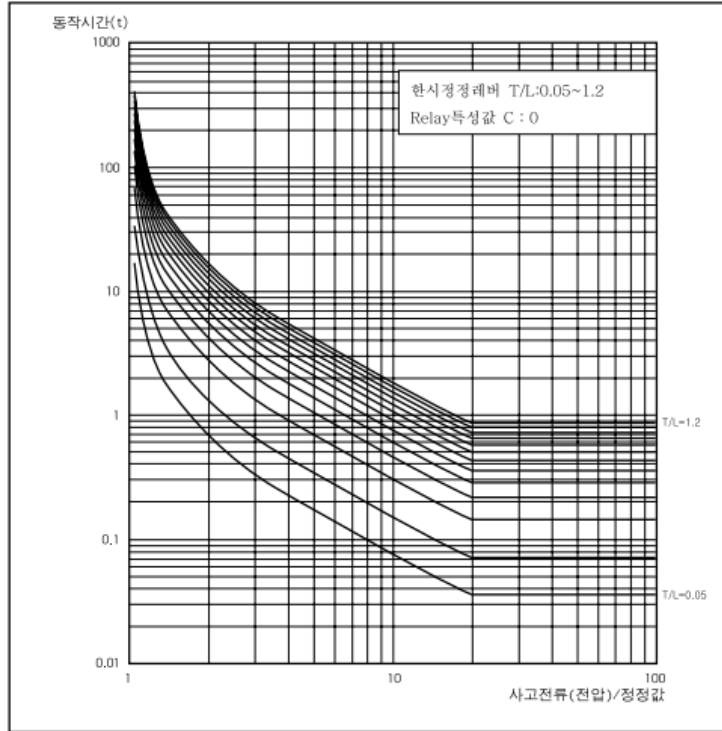
Example



Note : D표시가 없는 것은 비인출형임



강반한시 (Very Inverse Time) - VI



강반한시 (VI) Time Table

T/L I/Is (%)	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.85	0.9	0.95	1	1.1	1.2
110	6.75	13.5	20.25	27	33.75	40.5	47.25	54	60.75	67.5	74.25	81	87.75	94.5	101.3	108	114.8	121.5	128.3	135	148.5	162
150	1.35	2.7	4.05	5.4	6.75	8.1	9.45	10.8	12.15	13.5	14.85	16.2	17.55	18.9	20.25	21.6	22.95	24.3	25.65	27	29.7	32.4
200	0.675	1.35	2.025	2.7	3.375	4.05	4.725	5.4	6.075	6.75	7.425	8.1	8.775	9.45	10.13	10.8	11.48	12.15	12.83	13.5	14.85	16.2
300	0.338	0.675	1.013	1.35	1.688	2.025	2.363	2.7	3.038	3.375	3.713	4.05	4.388	4.725	5.063	5.4	5.738	6.075	6.413	6.75	7.425	8.1
400	0.225	0.45	0.675	0.9	1.125	1.35	1.575	1.8	2.025	2.25	2.475	2.7	2.925	3.15	3.375	3.6	3.825	4.05	4.275	4.5	4.95	5.4
500	0.169	0.338	0.506	0.675	0.844	1.013	1.181	1.35	1.519	1.688	1.856	2.025	2.194	2.363	2.531	2.7	2.869	3.038	3.206	3.375	3.713	4.05
600	0.135	0.27	0.405	0.54	0.675	0.81	0.945	1.08	1.215	1.35	1.485	1.62	1.755	1.89	2.025	2.16	2.295	2.43	2.565	2.7	2.97	3.24
700	0.113	0.225	0.338	0.45	0.563	0.675	0.788	0.9	1.013	1.125	1.238	1.35	1.463	1.575	1.688	1.8	1.913	2.025	2.138	2.25	2.475	2.7
800	0.096	0.193	0.289	0.386	0.482	0.579	0.675	0.771	0.868	0.964	1.061	1.157	1.254	1.35	1.446	1.543	1.639	1.736	1.832	1.929	2.121	2.314
900	0.084	0.169	0.253	0.338	0.422	0.506	0.591	0.675	0.759	0.844	0.928	1.013	1.097	1.181	1.266	1.35	1.434	1.519	1.603	1.688	1.856	2.025
1000	0.075	0.15	0.225	0.3	0.375	0.45	0.525	0.6	0.675	0.75	0.825	0.9	0.975	1.05	1.125	1.2	1.275	1.35	1.425	1.5	1.65	1.8
1100	0.068	0.135	0.203	0.27	0.338	0.405	0.473	0.54	0.608	0.675	0.743	0.81	0.878	0.945	1.013	1.08	1.148	1.215	1.283	1.35	1.485	1.62
1200	0.061	0.123	0.184	0.245	0.307	0.368	0.43	0.491	0.552	0.614	0.675	0.736	0.798	0.859	0.92	0.982	1.043	1.105	1.166	1.227	1.35	1.473
1300	0.056	0.113	0.169	0.225	0.281	0.338	0.394	0.45	0.506	0.563	0.619	0.675	0.731	0.788	0.844	0.9	0.956	1.013	1.069	1.125	1.238	1.35
1400	0.052	0.104	0.156	0.208	0.26	0.312	0.363	0.415	0.467	0.519	0.571	0.623	0.675	0.727	0.779	0.831	0.883	0.935	0.987	1.038	1.142	1.246
1500	0.048	0.096	0.145	0.193	0.241	0.289	0.338	0.386	0.434	0.482	0.53	0.579	0.627	0.675	0.723	0.771	0.82	0.868	0.916	0.964	1.061	1.157
1600	0.045	0.09	0.135	0.18	0.225	0.27	0.315	0.36	0.405	0.45	0.495	0.54	0.585	0.63	0.675	0.72	0.765	0.81	0.855	0.9	0.99	1.08
1700	0.042	0.084	0.127	0.169	0.211	0.253	0.295	0.338	0.38	0.422	0.464	0.506	0.548	0.591	0.633	0.675	0.717	0.759	0.802	0.844	0.928	1.013
1800	0.04	0.079	0.119	0.159	0.199	0.238	0.278	0.318	0.357	0.397	0.437	0.476	0.516	0.556	0.596	0.635	0.675	0.715	0.754	0.794	0.874	0.953
1900	0.038	0.075	0.113	0.15	0.188	0.225	0.263	0.3	0.338	0.375	0.413	0.45	0.488	0.525	0.563	0.6	0.638	0.675	0.713	0.75	0.825	0.9
2000	0.036	0.071	0.107	0.142	0.178	0.213	0.249	0.284	0.32	0.355	0.391	0.426	0.462	0.497	0.533	0.568	0.604	0.639	0.675	0.711	0.782	0.853
2100	0.036	0.071	0.107	0.142	0.178	0.213	0.249	0.284	0.32	0.355	0.391	0.426	0.462	0.497	0.533	0.568	0.604	0.639	0.675	0.711	0.782	0.853
2200	0.036	0.071	0.107	0.142	0.178	0.213	0.249	0.284	0.32	0.355	0.391	0.426	0.462	0.497	0.533	0.568	0.604	0.639	0.675	0.711	0.782	0.853
2300	0.036	0.071	0.107	0.142	0.178	0.213	0.249	0.284	0.32	0.355	0.391	0.426	0.462	0.497	0.533	0.568	0.604	0.639	0.675	0.711	0.782	0.853
2400	0.036	0.071	0.107	0.142	0.178	0.213	0.249	0.284	0.32	0.355	0.391	0.426	0.462	0.497	0.533	0.568	0.604	0.639	0.675	0.711	0.782	0.853
2500	0.036	0.071	0.107	0.142	0.178	0.213	0.249	0.284	0.32	0.355	0.391	0.426	0.462	0.497	0.533	0.568	0.604	0.639	0.675	0.711	0.782	0.853

$$t = \frac{13.5}{(I/Is) - 1} \times T/L + C$$

적용 : 과전류(50/51, T/L : 0.05 ~ 1.2), 지락과전류(50/51N, T/L : 0.05 ~ 1.2)
 지락과전압(64, T/L : 0.05 ~ 1.0), 역상과전류(46, T/L : 0.05 ~ 1.0)

[표 4-1] 계기용변류기 선정표

계 약 전 력 (k변압기설비 공동이용고객)							CT 용량 (1차측) A
단상 2선	삼상 3선				삼상 4선		
6,600V	6,600V	22,000V	66,000V	154,000V	22,900V	345,000V	
30	51	171	514	1,200	178	2,689	5
59	103	343	1,029	2,401	357	5,378	10
89	154	514	1,543	3,601	535	8,067	15
119	206	686	2,058	4,801	714	10,756	20
178	309	1,029	3,087	7,202	1,071	16,134	30
238	412	1,372	4,115	9,602	1,428	21,512	40
297	514	1,715	5,144	12,003	1,785	26,890	50
446	772	2,572	7,716	18,005	2,677	40,335	75
594	1,029	3,429	10,288	24,006	3,570	53,780	100
891	1,543	5,144	15,433	36,009	5,355	80,670	150
1,188	2,058	6,859	20,577	48,012	7,140	107,560	200
1,485	2,572	8,574	25,721	60,016	8,924	134,450	250
1,782	3,087	10,288	30,865	72,019	10,709	161,341	300
2,376	4,115	13,718	41,154	96,025	14,279	215,121	400
2,970	5,144	17,147	51,442	120,031	17,849	268,901	500
3,564	6,173	20,577	61,730	144,037	21,419	322,681	600
4,455	7,716	25,721	77,163	180,047	26,773	403,351	750
4,752	8,231	27,436	82,307	192,050	28,558	430,241	800
5,940	10,288	34,295	102,884	240,062	35,698	537,802	1,000
7,128	12,346	41,154	123,461	288,075	42,837	645,362	1,200
8,910	15,433	51,442	154,326	360,093	53,546	806,703	1,500
11,880	20,577	68,589	205,768	480,124	71,395	1,075,604	2,000
17,820	30,865	102,884	308,651	720,187	107,093	1,613,405	3,000
23,760	41,154	137,178	411,535	960,249	142,790	2,151,207	4,000

주1) 3,300V는 6,600V의 1/2배, 5,700V는 22,900V의 1/4배 계약전력을 적용함

주2) 154kV 3상 4선식 공급시에는 3상 3선식 공급시와 동일치를 적용함

주3) 본 용량표는 역률 90%를 기준으로 산정한 것임