

Etal For Electrical & Mechanical Industries S.A.E.



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is an Egyptian company has been established in 2007 to produce several items of <u>Low Voltage</u> Switchgear.

The factory is located in - <u>Fayoum Industrial Zone</u> - 50 KM South West Cairo - on a land of 4000 m2

The factory is equipped with the most advanced, and computerized machines suitable for Producing, Adjusting & Testing all kinds of LV Panel Measurment Instruments

As (Current Transformers, Fuse & Base link, and Fuse Switch Disconnector) - That all are complying with their specified International Standards.

CT's have been tested, and approved by Ilac MRA Laboratories as per IEC 61869-1 2007-10), and IEC 61869-2 (2012-09) standards

<u>Fuse & Base link</u> have been tested as well, and approved by <u>Ilac MRA</u> Laboratories as per IEC (60269-1) 2014 standards



PROUCTS







Current Transformers

Fuse Switch Disconnections H.R.C Fuse Link and Base



CURRENT TRANSFORMERS

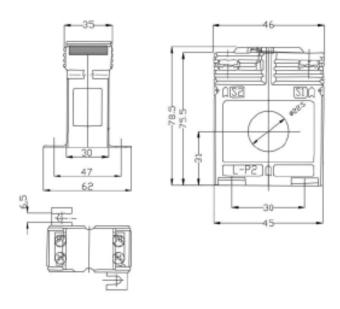


CT's have been tested, and approved by <u>llac MRA</u> Laboratories as per IEC 61869-1 2007-10), and IEC 61869-2 (2012-09) standards









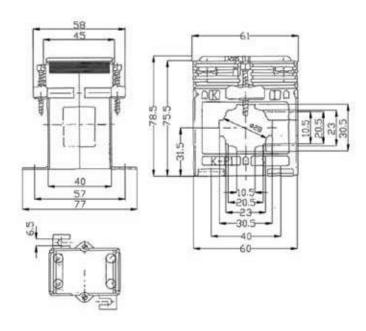


Accuracy class		1			0.5	
Drimory	Burden	Secondar	y current	Burden	secondar	y current
Primary	VA	5	1	buruen	5	1
current		Art.,	No		Art.	, No
30	2.5	230510	230110			
40	2.5	240510	240110			
50	2.5	250510	250110	1	250505	250105
60	2.5	260510	260110	1	260505	260105
75	2.5	275510	275110	1.5	275505	275105
80	2.5	280510	280110	1.5	280505	280105
100	2.5	2100510	2100110	1.5	2100505	2100105
125	2.5	2125510	2125110	1.5	2125505	2125105
150	1.5	2150510	2150110	2.5	2150505	2150105
200	1.5	2200510	2200110	2.5	2200505	2200105









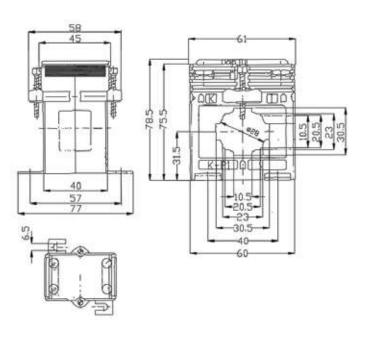


Accuracy class		1			0.5 / 0.5 S		0.2			
Drimary	Burden	Secondar	ry current	Burden	secondar	y current	Burden	secondary current		
Primary	VA	5	1	buruen	5	1	buruen	5	1	
current		Art.	, No		Art.	, No		Art.	, No	
50	1.5	350510	350110							
60	1.5	360510	360110							
75	2.5	375510	375110							
80	2.5	380510	380110							
100	3.75	3100510	3100110	2.5	3100505	3100105	1.5	3100502	3100102	
125	3.75	3125510	3125110	2.5	3125505	3125105	1.5	3125502	3125102	
150	10	3150510	3150110	7.5	3150505	3150105	5	3150502	3150102	
200	15	3200510	3200110	10	3200505	3200105	5	3200502	3200102	
250	15	3250510	3250110	10	3250505	3250105	5	3250502	3250102	
300	15	3300510	3300110	10	3300505	3300105	5	3300502	3300102	
400	15	3400510	3400110	10	3400505	3400105	5	3400502	3400102	
500	15	3500510	3500110	10	3500505	3500105	5	3500502	3500102	
600	15	3600510	3600110	15	3600505	3600105	10	3600502	3600102	
750	15	3750510	3750110	15	3750505	3750105	10	3750502	3750102	

ECT-30







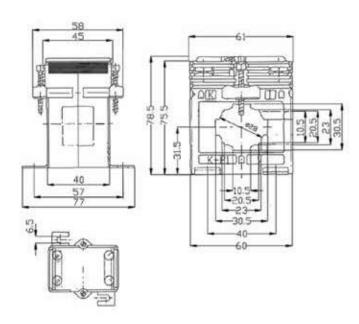


Accuracy class		1			0.5 / 0.5 S			0.2			
	Burden	Secondary current		Durdon	secondary current		Burden	secondary current			
Primary current	VA	5	1 Burden		5	1	Burden	5	1		
current		Art., No			Art., No			Art., No			
5	10	3140510	3140110	5	3140505	3140105	2.5	3140502	3140102		
10	10	3110510	3110110	5	3110505	3110105	2.5	3110502	3110102		
15	10	3115510	3115110	5	3115505	3115105	2.5	3115502	3115102		
20	10	3120510	3120110	5	3120505	3120105	2.5	3120502	3120102		
25	10	3125510	3125110	5	3125505	3125105	2.5	3125502	3125102		



ECT-30/B





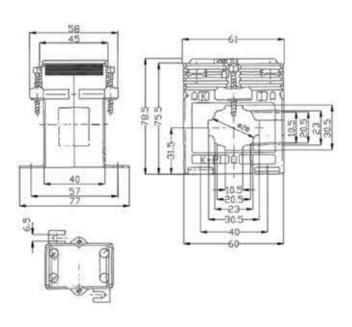


Accuracy class		1			0.5 / 0.5 S			0.2	
<u> </u>	Burden	Secondary current		Durden	secondar	y current	Dundan	secondary current	
Primary	VA	5	1	Burden	5	1	Burden	5	1
current		Art.	, No		Art.	, No		Art.	, No
10	10	3010510	3010110	5	3010505	3010105	2.5	3010502	3010102
15	10	3015510	3015110	5	3015505	3015105	2.5	3015502	3015102
20	10	3020510	3020110	5	3020505	3020105	2.5	3020502	3020102
25	10	3025510	3025110	5	3025505	3025105	2.5	3025502	3025102
30	10	3030510	3030110	5	3030505	3030105	2.5	3030502	3030102
40	10	3040510	3040110	5	3040505	3040105	2.5	3040502	3040102
50	10	3050510	3050110	5	3050505	3050105	2.5	3050502	3050102
60	10	3060510	3060110	5	3060505	3060105	2.5	3060502	3060102
75	10	3075510	3075110	5	3075505	3075105	2.5	3075502	3075102
80	10	3080510	3080110	5	3080505	3080105	2.5	3080502	3080102
100	10	30100510	30100110	5	30100505	30100105	2.5	30100502	30100102
125	10	30125510	30125110	5	30125505	30125105	2.5	30125502	30125102
150	10	30150510	30150110	5	30150505	30150105	2.5	30150502	30150102

ECT-40









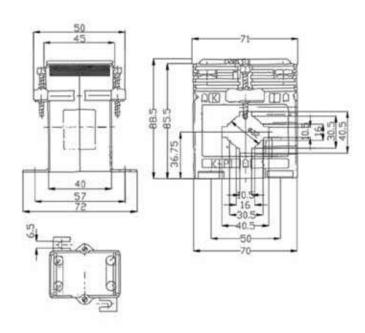
Accuracy class		1			0.5 / 0.5 S		0.2			
E STATE OF THE STA	Burden	Burden Secondary current		Burden secondary current			Burden	secondar	y current	
Primary	VA	5 1		VA	5	1	VA	5	1	
current		Art., No			Art., No			Art.	, No	
5	10	4160510	4160110	5	4160505	4160105	2.5	4160502	4160102	
10	10	4110510	4110110	5	4110505	4110105	2.5	4110502	4110102	
15	10	4115510	4115110	5	4115505	4115105	2.5	4115502	4115102	
20	10	4120510	4120110	5	4120505	4120105	2.5	4120502	4120102	
25	10	4125510	4125110	5	4125505	4125105	2.5	4125502	4125102	
30	10	4130510	4130110	5	4130505	4130105	2.5	4130502	4130102	
40	10	4140510	4140110	5	4140505	4140105	2.5	4140502	4140102	





ECT-40/B





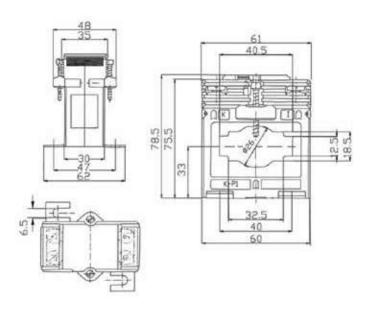


Accuracy class		1			0.5 / 0.5 S		0.2			
AND -	Burden	Secondar	y current	Burden	secondar	y current	Burden	secondary current		
Primary	VA	5	1	VA	5	1	VA	5	1	
current		Art.	, No		Art., No			Art.	, No	
10	10	4010510	4010110	5	4010505	4010105	2.5	4010502	4010102	
15	10	4015510	4015110	5	4015505	4015105	2.5	4015502	4015102	
20	10	4020510	4020110	5	4020505	4020105	2.5	4020502	4020102	
25	10	4025510	4025110	5	4025505	4025105	2.5	4025502	4025102	
30	10	4030510	4030110	5	4030505	4030105	2.5	4030502	4030102	
40	10	4040510	4040110	5	4040505	4040105	2.5	4040502	4040102	
50	10	4050510	4050110	5	4050505	4050105	2.5	4050502	4050102	
60	10	4060510	4060110	5	4060505	4060105	2.5	4060502	4060102	
75	10	4075510	4075110	5	4075505	4075105	2.5	4075502	4075102	
80	10	4080510	4080110	5	4080505	4080105	2.5	4080502	4080102	
100	10	40100510	40100110	5	40100505	40100105	2.5	40100502	40100102	
125	10	40125510	40125110	5	40125505	40125105	2.5	40125502	40125102	
150	10	40150510	40150110	5	40150505	40150105	2.5	40150502	40150102	

ECT-4.6







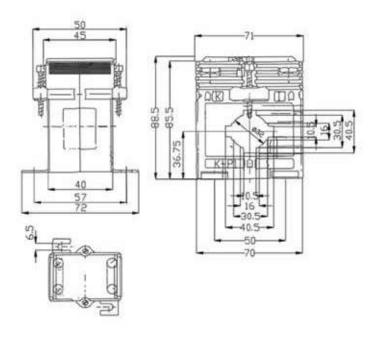


Accuracy class		1			0.5		0.2			
Drimoni	Burden	Secondar	y current	Burden VA	secondar	y current	Burden VA	secondary current		
Primary	VA	5	1	Burden vA	5	1	buruen vA	5	1	
current	l l	Art.	, No		Art., No					
100	1.5	41005106	41001106							
125	1.5	41005106	41001106							
150	2.5	41505106	41501106	1	41505056	41501056				
200	2.5	42005106	42001106	1	42005056	42001056				
250	5	42505106	42501106	2.5	42505056	42501056	1	42505026	42501026	
300	5	43005106	43001106	2.5	43005056	43001056	1	43005026	43001026	
400	5	44005106	44001106	2.5	44005056	44001056	1	44005026	44001026	
500	10	45005106	45001106	5	45005056	45001056	2.5	45005026	45001026	
600	10	46005106	46001106	5	46005056	46001056	2.5	46005026	46001026	
750	15	47505106	47501106	5	47505056	47501056	2.5	47505026	47501026	
800	15	48005106	48001106	5	48005056	48001056	2.5	48005026	48001026	

ECT-4.7







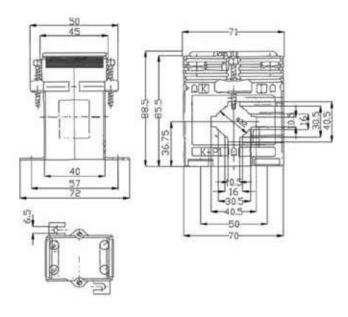


Accuracy class		1			0.5 / 0.5 S			0.2	
Drimanı	Burden	Secondar	y current	Burden	secondar	y current	Burden	secondar	y current
Primary	VA	5	1	VA	5	1	VA	5	1
current		Art.	, No		Art.	, No		Art.	, No
50	1.5	450510	450110						
60	1.5	460510	460110		į į			1	
75	2.5	475510	475110						
80	2.5	480510	480110				1		
100	5	4100510	4100110	2.5	4100505	4100105	1.5	4100502	4100102
125	5	4125510	4125110	2.5	4125505	4125105	1.5	4125502	4125102
150	10	4150510	4150110	5	4150505	4150105	2.5	4150502	4150102
200	15	4200510	4200110	10	4200505	4200105	5	4200502	4200102
250	15	4250510	4250110	10	4250505	4250105	5	4250502	4250102
300	15	4300510	4300110	10	4300505	4300105	5	4300502	4300102
400	15	44000510	4400110	10	4400505	4400105	5	4400502	4400102
500	15	4500510	4500110	15	4500505	4500105	10	4500502	4500102
600	15	4600510	4600110	15	4600505	4600105	10	4600502	4600102
750	15	4750510	4750110	15	4750505	4750105	10	4750502	4750102
800	30	4800510	4800110	15	4800505	4800105	10	4800502	4800102
1000	30	41000510	41000110	15	41000505	41000105	10	41000502	41000102

ECT-6.9







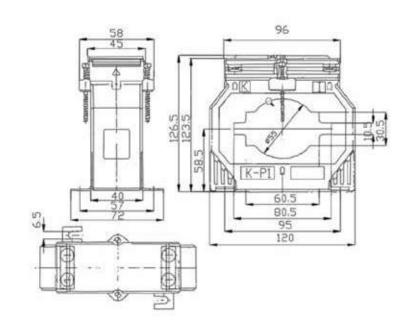


Accuracy class		1			0.5 / 0.5 S			0.2	
Drimary	Burden	Secondar	y current	Burden	secondar	y current	Burden	secondary current	
Primary	VA	5	1	VA	5	1	VA	5	1
current		Art., No			Art.	, No		Art.	, No
200	2.5	6200510 6200110		2.5	6200505	6200105	1.5	6200502	6200102
250	2.5	6250510	6250110	2.5	6250505	6250105	1.5	6250502	6250102
300	15	6300510	6300110	10	6300505	6300105	5	6300502	6300102
400	15	64000510	6400110	10	6400505	6400105	5	6400502	6400102
500	15	6500510	6500110	15	6500505	6500105	10	6500502	6500102
600	15	6600510	6600110	15	6600505	6600105	10	6600502	6600102
750	15	6750510	6750110	15	6750505	6750105	10	6750502	6750102
800	15	6800510	6800110	15	6800505	6800105	10	6800502	6800102
1000	30	61000510	61000110	30	61000505	61000105	15	61000502	61000102
1200	30	61200510	61200110	30	61200505	61200105	15	61200502	61200102
1250	30	61250510	61250110	30	61250505	61250105	15	61250502	61250102
1500	30	61500510	61500110	30	61500505	61500105	15	61500502	61500102
1600	30	61600510	61600110	30	61600505	61600105	15	61600502	61600102



ECT-8.12





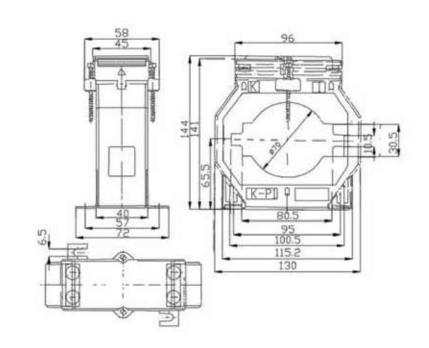


Accuracy class		1			0.5 / 0.5 S			0.2	
Deimon	Burden	Secondary	current	Burden VA	secondary	current	Burden VA	secondary current	
Primary	VA	5	1	buruen va	5	1	buruen va	5	1
current		Art.,	Art., No		Art., No			Art.,	No
400	5	84000510	8400110	5	8400505	8400105	2.5	8400502	8400102
500	10	8500510	8500110	10	8500505	8500105	5	8500502	8500102
600	10	8600510	8600110	10	8600505	8600105	5	8600502	8600102
750	15	8750510	8750110	15	8750505	8750105	10	8750502	8750102
800	15	8800510	8800110	15	8800505	8800105	10	8800502	8800102
1000	30	81000510	81000110	15	81000505	81000105	10	81000502	81000102
1200	30	81200510	81200110	15	81200505	81200105	10	81200502	81200102
1250	30	81250510	81250110	15	81250505	81250105	10	81250502	81250102
1500	30	81500510	81500110	15	81500505	81500105	10	81500502	81500102
1600	30	81600510	81600110	15	81600505	81600105	10	81600502	81600102
2000	30	82000510	82000110	15	82000505	82000105	10	82000502	82000102
2500	30	82500510	82500110	15	82500505	82500105	10	82500502	82500102
3000	30	83000510	83000110	15	83000505	83000105	10	83000502	83000102



ECT-10.13





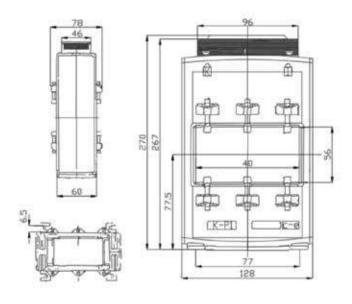


Accuracy class		1)	0.5 / 0.5 S			0.2	
Drimary	Burden	Seconda	ry current	Burden VA	seconda	ry current	Burden VA	seconda	ry current
Primary	VA	5	1	Burden va	5	1	Buruen va	5	1
current		Art	., No		Art., No			Art	., No
500	10	10500510	10500110	5	10500505	10500105	2.5	10500502	10500102
600	10	10600510	10600110	5	10600505	10600105	2.5	10600502	10600102
750	10	10750510	10750110	5	10750505	10750105	2.5	10750502	10750102
800	20	10800510	10800110	10	10800505	10800105	5	10800502	10800102
1000	20	1.01E+08	101000110	10	1.01E+08	101000105	5	101000502	101000102
1200	30	1.01E+08	101200110	15	1.01E+08	101200105	10	101200502	101200102
1250	30	1.01E+08	101250110	15	1.01E+08	101250105	10	101250502	101250102
1500	30	1.02E+08	101500110	15	1.02E+08	101500105	10	101500502	101500102
1600	30	1.02E+08	101600110	15	1.02E+08	101600105	10	101600502	101600102
2000	30	1.02E+08	102000110	15	1.02E+08	102000105	10	102000502	102000102
2500	30	1.03E+08	102500110	15	1.03E+08	102500105	10	102500502	102500102
3000	30	1.03E+08	103000110	15	1.03E+08	103000105	10	103000502	103000102









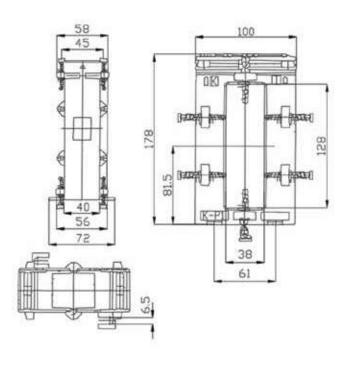


Accuracy class		1 Secondary surrent			0.5 / 0.5 S		0.2			
Primary	Burden	Secondar	y current	Burden	Burden secondary current			secondar	y current	
The second second	VA	5	1	VA	5	1	VA	5	1	
current		Art., No			Art.	, No		Art.	, No	
750	20	12750510	12750110	10	12750505	12750105	5	12750502	12750102	
800	20	12800510 12800110		10	12800505	12800105	5	12800502	12800102	
1000	20	121000510	121000110	10	121000505	121000105	5	121000502	121000102	
1200	30	121200510	121200110	15	121200505	121200105	10	121200502	121200102	
1250	30	121250510	121250110	15	121250505	121250105	10	121250502	121250102	
1500	30	121500510	121500110	15	121500505	121500105	10	121500502	121500102	
1600	30	121600510	121600110	15	121600505	121600105	10	121600502	121600102	
2000	45	122000510	122000110	15	122000505	122000105	10	122000502	122000102	
2500	45	122500510	122500110	15	122500505	122500105	10	122500502	122500102	
3000	45	123000510	123000110	15	123000505	123000105	10	123000502	123000102	

ECT-13.10







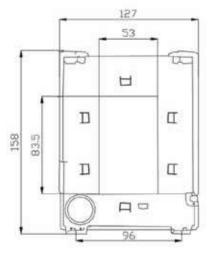


Accuracy class	1			0.5 / 0.5 S			0.2		
Primary	Burden VA	Secondary current		Durdon VA	secondary current		Burdon VA	secondary current	
		5	1	Burden VA	5	1	Burden VA	5	1
current	Art., No		Art., No		Art., No		, No		
600	15	13600510	13600110	10	13600505	13600105	5	13600502	13600102
750	20	13750510	13750110	10	13750505	13750105	5	13750502	13750102
800	20	13800510	13800110	10	13800505	13800105	5	13800502	13800102
1000	20	131000510	131000110	10	131000505	131000105	5	131000502	131000102
1200	30	131200510	131200110	15	131200505	131200105	10	131200502	131200102
1250	30	131250510	131250110	15	131250505	131250105	10	131250502	131250102
1500	30	131500510	131500110	15	131500505	131500105	10	131500502	131500102
1600	30	131600510	131600110	15	131600505	131600105	10	131600502	131600102
2000	30	132000510	132000110	15	132000505	132000105	10	132000502	132000102
2500	30	132500510	132500110	15	132500505	132500105	10	132500502	132500102
3000	30	133000510	133000110	15	133000505	133000105	10	133000502	133000102
4000	45	134000510	134000110	15	134000505	134000105	10	134000502	134000102











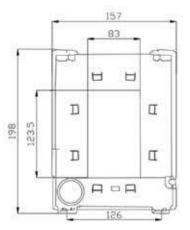


Detic	Burden (VA) accuracy			
Ratio	0.5	1.0		
250/5A		2.5VA		
300/5A	2.5VA	5VA		
400/5A	5VA	5VA		
500/5A	5VA	5VA		
600/5A	5VA	10VA		
800/5A	10VA	10VA		
1000/5A	10VA	10VA		
1200/5A	10VA	10VA		











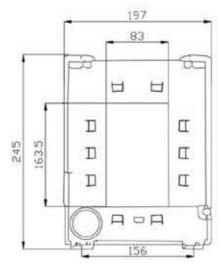


Datio	Burden (VA) accuracy			
Ratio	0.5	1.0		
500/5A	2.5VA	5VA		
600/5A	2.5VA	5VA		
800/5A	5VA	5VA		
1000/5A	10VA	10VA		
1200/5A	10VA	10VA		
1500/5A	10VA	10VA		
1600/5A	10VA	10VA		
2000/5A	15VA	15VA		
2500/5A	15VA	15VA		













Ratio	Burden (VA) accuracy			
Ratio	0.5	1.0		
1000/5A	10VA	15VA		
1200/5A	10VA	15VA		
1500/5A	10VA	15VA		
1600/5A	10VA	15VA		
2000/5A	15VA	20VA		
2500/5A	15VA	25VA		
3000/5A	15VA	30VA		
4000/5A	15VA	30VA		
5000/5A	15VA	30VA		
6000/5A	15VA	30VA		
7000/5A	15VA	30VA		



H.R.C FUSE LINK AND BASE

Fuse & Base link have been tested, and approved by Ilac MRA Laboratories as per IEC (60269-1) 2014 standards



NT SERIES H.R.C FUSE LINK





	Size of the fuse link	Rating	Rated watt loss (W)	Watt loss limits as per IS 13703	Type NT	
		10 A	1.1		100,125,160	
		16 A	2.4		100,125,160	
		20 A	2.4		100,125,160	
		25 A	3.2		100,125,160	
		32 A	5.0		100,125,160	
1	01 00	40 A	5.0	400 0	100,125,160	
1800	Size 00	50 A	5.0	100 Amp, Fuse-6.5 W	100,125,160	
The state of the s		63 A	5.3	Fuse-6.5 W	100,125,160	
A		80 A	6.2		100,125,160	
-		100 A	7.0		100,125,160	
		125 A	8.5	j	100,125,160	
		160 A	12.0	Ţ.	100,125,160	
		63 A	5.7		100,125,160	
N. Com		80 A	8.3		200	
V OLE		100 A	9.1		200,250,315	
	Size 1	125 A	10.3	250 Amp,	200,250,315	
0		160 A	12.3	Fuse-34 W	250,315	
		200 A	14.3		250,315	
		250 A	17.3		250,315	
1		200 A	14.1		400	
	0: 0	250 A	16.9	400 Amp,	400	
J. D.	Size 2	315 A	20.2	Fuse-34 W	400	
		400 A	24.9		400	
		315 A	20.5		630,800	
1		400 A	26.7	630 Amp, Fuse-48 W	630,800	
-	Size 3	500 A	36.1		630,800	
10		630 A	42.2	ruse-48 VV	630,800	
		800 A	48		800	

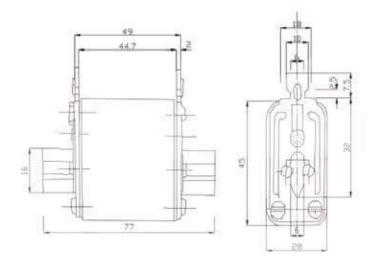
^{*}suitable fuse base & fuse pulling handle are detailed in the following pages Guide lines for selection

While selecting fuse-links, the following points should be considered:

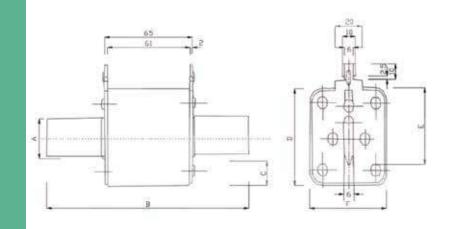
- -Fuse-links type NT are suitable for system voltage up to 415 v+
- -Select the suitable size and rating off use-link for switch-disconnect or fuse unit as per the fuse selection chart
- -Ensure that the breaking capacity of the fuse link is higher than the prospective fault current
- -Fuses should be selected such the discrimination is achieved with other protective devices in the system



SIZE 00



SIZE 1/2/3



Туре	Α	В	С	D	E	F	KG
Size 1	20	135	12	48	38	48	0.390
Size 2	25	147.5	14	58	45	58	0.570
Size 3	32	147.5	17	66	50	66	0.760



NT SERIES H.R.C FUSE BASE



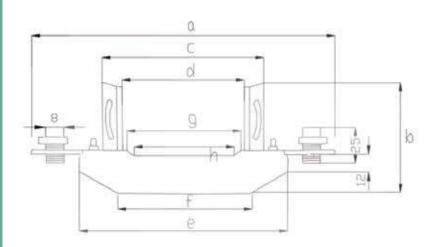


			D	imensio	ons in mi	m			Weight
Туре	а	b	С	d	е	f	g	h	In KG
NT00	129	60	68	53	89	55	52	45	0.228
NT1	200	78	118	78	153	125			0.600
NT2	200	84	136	85	153	125			0.790
NT3	225	93	149	80	153	125			0.825

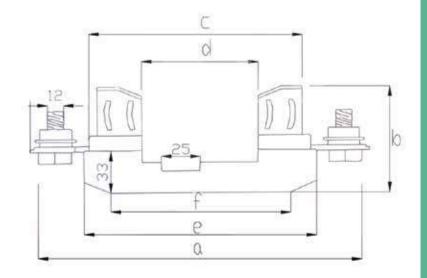


JLETAL

NToo



NT 1/2/3







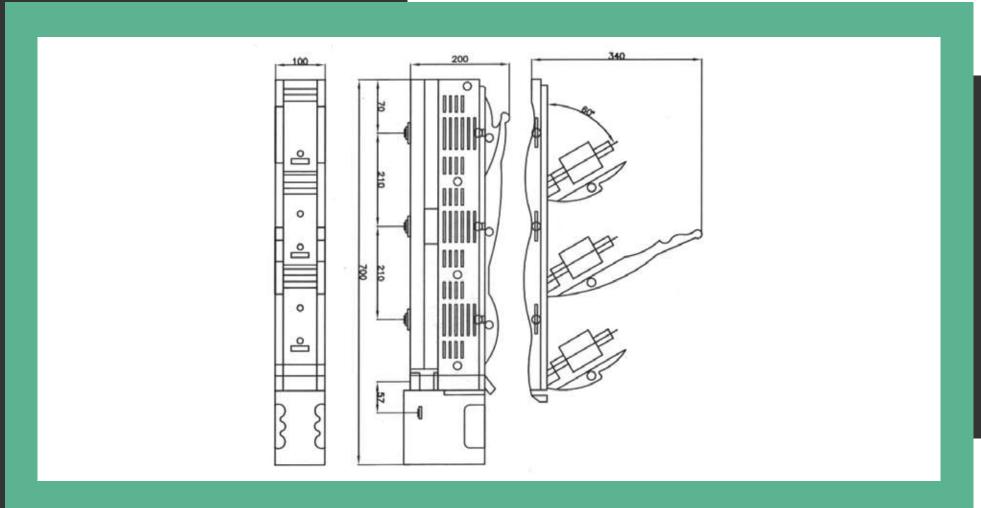
FUSE SWITCH DISCONNECTOR



	Туре			1	PS-V3/25	0	1	FS-V3/40	O	1	EFS-V3/63	0
	Rated operation voltage	Ue	Vac	400	500	690	400	500	690	400	500	690
	Rated operation current	lo	A	250	250	200	400	400	315	630	630	500
	Thermal current w/fuse link	Ith	A	250	250	200	400	400	315	630	630	500
	Utilization category			AC-238	AC-22B	AC-218	AC-238	AC-228	AC-218	AC-238	AC-228	AC-21
	Short circuit capacity current @400V		KA.		All to the same	-	10	≥50		1		
Switch	Rated isolation voltage	Ui	Vac					1000				
	Rated impulse withstand voltage	Uimp	KV				-	12				
	Standard			1			IECE09	47-1 / IEC	60947-3	3.5		-
	Size				NT1		111111111111111111111111111111111111111	NT2			NT3	
	Working current	In	A		250			400			630	
	Power loss at Im without fuse link	P	W		18			28			40	
	Rated operation voltage	Ue	v					400				
	Rated operation current	te	A		250			400			630	
Fuse tieks	Thermal current w/fuse link	ith	Α		250		-	400			630	
FUSE LINKS	Protected short circuit making	tcw	KA					120				
	Rated isolation voltage	UI	V	1000								
	Rated impulse withstand voltage	Uimp	KV	12								
Same and	Frequency		Hz	50/60								
Parameters	Poles							- 3				
Protection	Backer	ON						IP20				
Protection	Positive	OFF		II.				IP30				

	Ambient temperature	°C	-5 - +55		
	Working model		Continuous work		
	Operation		Handle		
Working condition	Installation		Vertical		
	Altitude	m	≤ 2000		
	Pollution degree		3		
	Over voltage level		IV		







ETAL WAREHOUSE







MOROCCO "CASABLANCA" TRADE MISSION FROM 1-5 JULY 2024





ETAL For Electrical & Mechanical Industries S.A.E

Add: Industrial Zone (B), Kum Ushim Fayoum Egypt.

Tel./Fax.: +2084-221 65 65/66

E-mail: export@etal-eg.com

Cellular & WhatsApp: +201001175276 And/Or +201017377713

Website: http://etal-eg.com/



