



<https://www.gevernova.com/grid-solutions/protection-relays.htm>

GE VERNOVA

# GRID SOLUTIONS



**PROLINE**  
ENGINEERS

## Selection Guide & Case Dimensions of Electromechanical Relays



Authorized Channel  
Partner

## DISC RELAYS

S.No	ANSI	Application Description	Model
1	51 or 51N	Single pole Non-directional IDMT selfpowered O/C or E/F relay	CDG11
2		Single pole Non Directional with AC series tripping	CDG11 S/T
3	51 or 51 & 51 N	Triple pole Non-directional IDMT selfpowered O/C or E/F relay	CDG31
4		Tripole Non Directional with AC series tripping	CDG31 S/T
5		Single pole Non Directional with Highset	CDG21
6		Single pole Non Directional with AC series tripping with Highset	CDG21 S/T
7	51 & 50 or 51,50, 51N,	Tripole Non Directional with Highset	CDG61
8		Tripole Non Directional with AC series tripping with Highset	CDG61S/T
9		Tripole Non directional extremely Inverse time O/C or E/F relay	CDG34

**DISC RELAYS**

S.No	ANSI	Application Description	Model
10		Triple pole Non directional extremely Inverse time with Highset with AC series Tripping	CDG34S/T
11	59	Single pole Self powered Inverse time overvoltage	VDG11
12	27	Single pole Inverse time under voltage	VDG13
13	59N	Single pole inverse time neutral voltage displacement	VDG14



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HINGED ARMATURE RELAY			
S.No	ANSI	Application Description	Model
1	95	Selfpowered Battery E/F relay	CAEM21
2		Second Rotor E/F	CAEM33
3	50	AC instantaneous O/C or E/F	CAG12
4	87 N, 64 R	Single pole instantaneous with high stability	CAG14
5		Single pole instantaneous with 1000ohm Stablizing resistor	CAG14 Stab
6	87	Tri pole instantaneous with high stability	CAG34
7		Tri pole instantaneous with 1000ohm Stablizing resistor	CAG34 Stab
8	30	Voltage operated auxiliary relay with single coil SR (Single Window)	VAA11
9	30	Voltage operated auxiliary relay with two coil SR (Two Window)	VAA21
10	30	Special model for annunciation scheme	VAA21
11	30	Special model for annunciation scheme	VAA21
12	30	Voltage operated auxiliary relay with three coil SR (Three Window)	VAA31
13	30	Voltage operated auxiliary relay with single coil SR & HR (Single Window)	VAA12
14	30	Voltage operated auxiliary relay with two coil SR & HR	VAA22
15	30	Voltage operated auxiliary relay with three coil SR & HR	VAA32
16	30	Voltage operated auxiliary relay with single coil HR (Single Window)	VAA13
17	30	Voltage operated auxiliary relay with two coil HR (Two Window)	VAA23
18	30	Voltage operated auxiliary relay with three coil HR (Three Window)	VAA33



19		Rotor E/F	VAEM21
20		Single pole No-Voltage	VAG11 (NV)
21	27	Single pole Under Voltage	VAG11 (UV)
22	59	Single pole Over Voltage	VAG11 (OV)
23		Single pole instantaneous No-voltage	VAG21 (NV)
24	27	Single pole instantaneous Under voltage	VAG21 (UV)
25	59	Single pole instantaneous Overvoltage	VAG21 (OV)
26	27	Single pole instantaneous U/V with adjustable setting	VAGM22 (UV)
27	59	Single pole instantaneous O/V with adjustable setting	VAGM22 (OV)
28		Single element high speed trip relay SR	VAJS13
29		Two element high speed trip relay SR	VAJS23
30	86	Single element high speed trip relay HR	VAJH13
31	86	Two element high speed trip relay HR	VAJH23
32		Single element high speed trip relay HR with supervision	VAJHM13
33		Two element high speed trip relay HR with supervision	VAJHM23
34		Fuse failure relay with Resistor	VAPM31
35	95	Trip Supply supervision	VAX21
36	95	Trip Coil supervision	VAX31
37		Test Plug	MPB
38		Test Block	MPG

STATIC RELAYS			
S.No	ANSI	Application Description	Model
39		Single pole definite time static sensitive E/F	CTUM15
40	25	Check synchronizing	SKD11
41		Check sync for 110V AC	SKD, AC Aux
42	25	Check sync for generator	SKE11
43		Check sync for 110V AC	SKE, AC Aux
44	2	Time Delay relay (delay on pickup)	VTT11
45	2	Time Delay relay (delay on dropoff)	VTT12
46	2	Definite time delay relay pickup	VTT14
47	2	Definite time delay relay dropoff	VTT15
48		CT Buswire pilot supervision	VTX31

RELAY IN MIDOS CASING			
S.No	ANSI	Application Description	Model
1	30	Single element relay with 2 make 2 change over o/p contacts	MVAAM11
2	30	Two element relay with 4 change over o/p contacts	MVAAM21
3	30	Three element relay with 4 change over o/p contacts	MVAAM31
4	30	Single element relay with 2 make 2 change over o/p contacts	MVAAM13
5	30	Two element relay with 4 make 4 change over o/p contacts	MVAAM23
6		Instantaneous under voltage relay	MVAGM21
7		Single pole high stability circulating current relay with S/R contacts & H/R flag	MCAG14
8		Trip supply supervision relay having S/R contacts & reverse flag	MVAXM21
9		Trip circuit supervision relay with pre-closing & post-closing supervision, having S/R contacts & reverse flag	MVAXM31
10	86	Single element voltage operated tripping relay with S/R contacts	MVAJM11 - 10 contacts
11	86	Single element voltage operated tripping relay with H/R contacts	MVAJM13 - 10 contacts
12	86	Single element voltage operated tripping relay (high burden) with E/R & H/R contacts	MVAJM15 - 10 Contacts
13	86	Single element voltage operated control relay with E/R contacts	MVAJM14 - 10contacts



RELAY IN MIDOS CASING			
S.No	ANSI	Application Description	Model
14		Two element voltage operated tripping relay (high burden) with E/R & H/R contacts	MVAJM25 -20 Contacts
15		Self reset high or low burden tripping relay with instantaneous or delayed cut off contact with 5 std o/p contacts	MVAJ051-L
16		Hand reset high or low burden tripping relay with instantaneous or delayed cut off contact with 5 std o/p contacts	MVAJ053-L
17		Electrically reset high or low burden tripping relay with instantaneous or delayed cut off contact with 5 std o/p contacts	MVAJ054-L
18		Hand & Electrically reset high or low burden tripping relay with instantaneous or delayed cut off contact with 5 std o/p contacts	MVAJ055-L
19		Self reset high or low burden tripping relay with instantaneous or delayed cut off contact with 10 std o/p contacts	MVAJ101-L
20		Hand reset high or low burden tripping relay with instantaneous or delayed cut off contact with 10 std o/p contacts	MVAJ103-L
21		Electrically reset high or low burden tripping relay with instantaneous or delayed cut off contact with 10 std o/p contacts	MVAJ104-L
22		Hand & Electrically reset high or low burden tripping relay with instantaneous or delayed cut off contact with 10 std o/p contacts	MVAJ105-L
23		Hand reset high or low burden tripping relay with instantaneous or delayed cut off contact with 20 std o/p contacts	MVAJ203-L

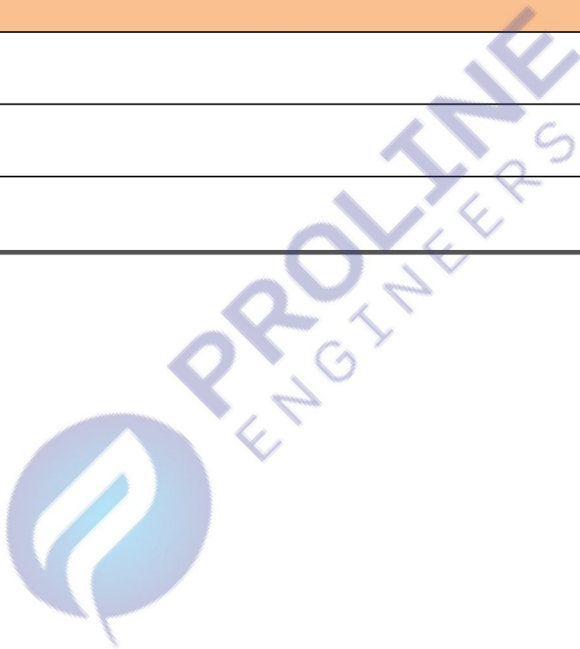
RELAY IN MIDOS CASING			
S.No	ANSI	Application Description	Model
24		Electrically reset high or low burden tripping relay with instantaneous or delayed cut off contact with 20 std o/p contacts	MVAJ204-L
25		Hand & Electrically reset high or low burden tripping relay with instantaneous or delayed cut off contact with 20 std o/p contacts	MVAJ205-L
26		Voltage selection relay with S/R contacts & H/R flag	MVAPM32
27		Static digital time delay relay, delayed on pick up	MVTTM14



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INDUSTRIAL RELAY			
S.No	ANSI	Application Description	Model
1		Single Pole Metrosil - 1A	MET1088
2		Single Pole Metrosil - 5A	MET1196
3		Static industrial Timer	TImEE(RQT)





ODS SWITCH MODELS			
S.No	ANSI	Application Description	Model
1		ODS 2WAY 120DEG LOCK FREE SPRING RETURN	S02LF120SRPM101
2		ODS 2WAY 120DEG NON-LOCK SPRING RETURN	S02N120SRPM101
3		ODS 2WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE	S02N120SRSPM102
4		ODS 4WAY 120DEG LOCK FREE SPRING RETURN	S04LF120SRPM101
5		ODS 4WAY 120DEG LOCK FREE SPRING RETURN	S04LF120SRPM117
6		ODS 4WAY 120DEG LOCK FREE SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S04LF120SRSL2PM122
7		ODS 4WAY 120DEG LOCK FREE SPRING RETURN WITH SEQUENCE	S04LF120SRSPM104
8		ODS 4WAY 90DEG LOCK FREE STAYPUT	S04LF90SPPM102
9		ODS 4WAY 120DEG NON-LOCK SPRING RETURN	S04N120SRPM101
10		ODS 4WAY 90DEG NON-LOCK STAYPUT	S04N90SPPM101
11		ODS 4WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE	S04N120SRSPM106
12		ODS 4WAY 90DEG NON-LOCK STAYPUT	S04N90SPPM103
13		ODS 6WAY 120DEG LOCK FREE SPRING RETURN WITH SEQUENCE	S06LF120SRSPM105
14		ODS 6WAY 90DEG LOCK FREE STAYPUT	S06LF90SPPM107
15		ODS 6WAY 120DEG LOCK FREE SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S06LF120SRSL2PM106
16		ODS 6WAY 120DEG NON-LOCK SPRING RETURN + 2BELL ALARM	S06N120SRL2PM111
17		ODS 6WAY 120DEG NON-LOCK SPRING RETURN	S06N120SRPM104
18		ODS 6WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S06N120SRSL2PM124

ODS SWITCH MODELS			
S.No	ANSI	Application Description	Model
19		ODS 6WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE	S06N120SRSPM116
20		ODS 6WAY 90DEG NON-LOCK STAYPUT	S06N90SPPM102
21		ODS 8WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE	S08LF120SRSPM118
22		ODS 8WAY 90DEG LOCK FREE STAYPUT	S08LF90SPPM102
23		ODS 8WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S08N120SRSL2PM115
24		ODS 8WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S08N120SRSL2PM123
25		ODS 8WAY 135DEG NON-LOCK STAYPUT	S08N135SPPM103
26		ODS 8WAY 90DEG NON-LOCK STAYPUT	S08N90SPPM102
27		ODS 10WAY 180DEG LOCK FREE STAYPUT	S10LT180SPPM107
28		ODS 10WAY 90DEG LOCK TRAPPED STAYPUT	S10LT90SPPM104
29		ODS 10WAY 90DEG NON-LOCK STAYPUT	S10N90SPPM126
30		ODS 10WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S10N120SRL2PM104
31		ODS 12WAY 180DEG LOCK FREE STAYPUT	S12LF180SPPM108

ODS SWITCH MODELS			
S.No	ANSI	Application Description	Model
32		ODS 14WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE + 4BELL ALARM	S14N120SRSL4PM102
33		ODS 16WAY 90DEG LOCK FREE STAYPUT	S16LF90SPPM103
34		ODS 16WAY 120DEG NON-LOCK SPRING RETURN + 2BELL ALARM	S16N120SRL2PM101
35		ODS 16WAY 120DEG NON-LOCK SPRING RETURN WITH SEQUENCE + 2BELL ALARM	S16N120SRL2PM102
36		ODS 16WAY 180DEG NON-LOCK STAYPUT	S16N180SPPM103
37		ODS 20WAY 90DEG NON-LOCK STAYPUT	S20N90SPPM106
38		ODS 22WAY 120DEG NON-LOCK SPRING RETURN + 2BELL ALARM	S22N120SRL2PM108
39		ODS 24WAY 135DEG NON-LOCK STAYPUT	S24LF135SPPM101
40		ODS 30WAY 90DEG LOCK TRAPPED STAYPUT	S30LT90SPPM105A

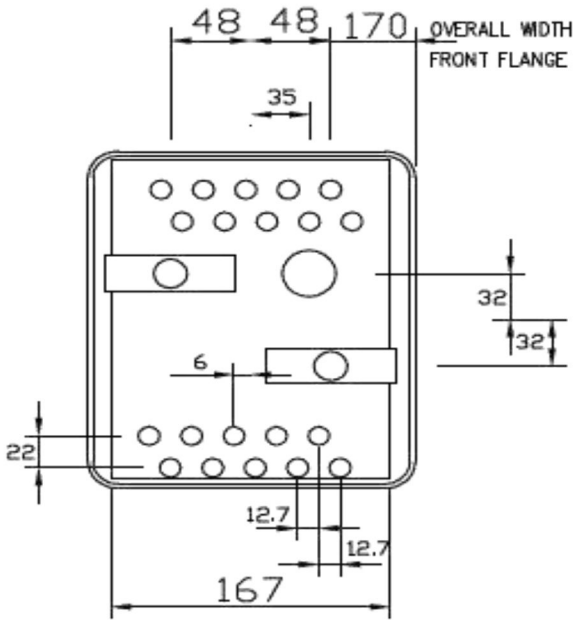
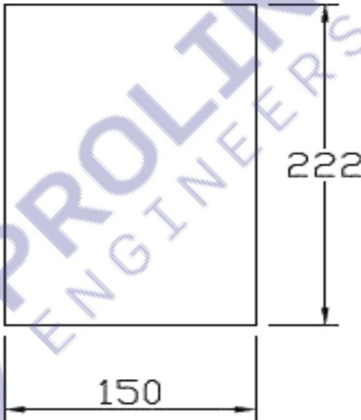
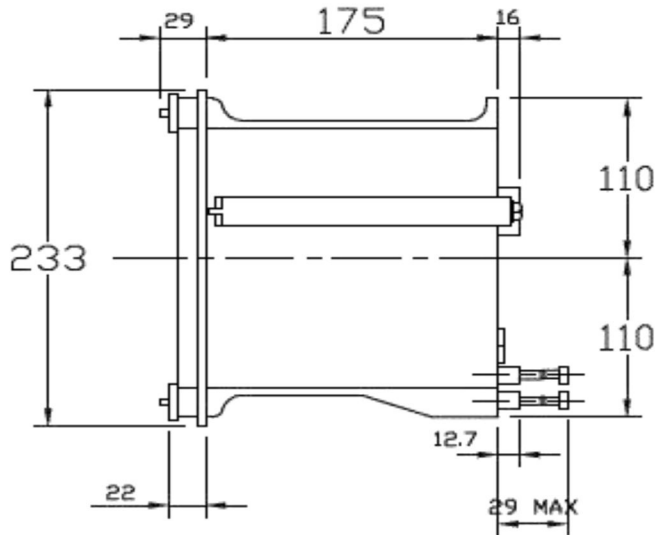
NOTE : - THE BLUE COLOUR SELECTED NON STANDARD



S.No.	Relay Type	Case	Case size	Maximum overall dimensions		
				Height	Width	Depth*
1	CDG11	AF	1D Vert 10T	233 mm	170 mm	203 mm
2	CDG31	EG	3D Horz	233 mm	454 mm	203 mm
3	CDG61	EG	3D Horz	233 mm	454 mm	203 mm
4	CAG12	AF	1D Vert 10T	233 mm	170 mm	203 mm
		ZF	1/2 NV 12T	153 mm	124 mm	130 mm
5	CTUM15	AF	1D Vert 10T	233 mm	170 mm	203 mm
		ZG	1/2 H 12T	153 mm	124 mm	130 mm
6	CAEM33	AF	1D Vert 10T	233 mm	170 mm	203 mm
7	CAG14	AF	1D Vert 10T	233 mm	170 mm	203 mm
8	CAG34	AF	1D Vert 10T	233 mm	170 mm	203 mm
9	VDG11	AF	1D Vert 10T	233 mm	170 mm	203 mm
10	VDG13	AF	1D Vert 10T	233 mm	170 mm	203 mm
11	VDG14	AF	1D Vert 10T	233 mm	170 mm	203 mm
12	VAG11	YF	1/4N V 10T	118 mm	105 mm	115 mm
13	VAG21	ZG	1/2 NV 12T	153 mm	124 mm	130 mm
14	VAJH13	YF	1/4N V 10T	118 mm	105 mm	115 mm
15	VAJH23	ZG	1/2N H 20T	124 mm	153 mm	130 mm

16	VAJHM13	YF	1/4N Horz 15T	118 mm	105 mm	120 mm
17	VAJHM23	ZG	1/2N H 20T	124 mm	153 mm	130 mm
18	VAA11	YF	1/4N V 10T	118 mm	105 mm	115 mm
19	VAA12	YF	1/4N V 10T	118 mm	105 mm	115 mm
20	VAA13	YF	1/4N V 10T	118 mm	105 mm	115 mm
21	VAA21	YF	1/4N V 10T	118 mm	105 mm	115 mm
		ZG	1/2N H 20T	124 mm	153 mm	130 mm
22	VAA22	YF	1/4N V 10T	118 mm	105 mm	115 mm
		ZG	1/2N H 20T	124 mm	153 mm	130 mm
23	VAA23	YF	1/4N V 10T	118 mm	105 mm	115 mm
		ZG	1/2N H 20T	124 mm	153 mm	130 mm
24	VAA31	ZG	1/2N H 20T	124 mm	153 mm	130 mm
25	VAA32	ZG	1/2N H 20T	124 mm	153 mm	130 mm
26	VAA33	ZG	1/2N H 20T	124 mm	153 mm	130 mm
27	VAX31	ZG	1/2N H 20T	124 mm	153 mm	130 mm
28	Case Size 2,3,4,6 Hinged Armature MIDOS)					

Case and Panel cut-out dimensions for case  
1D Vert 10T (all dimensions in mm)



Case size		Maximum overall dimensions	
	Height mm	Width mm	Depth* mm

1D Vert.

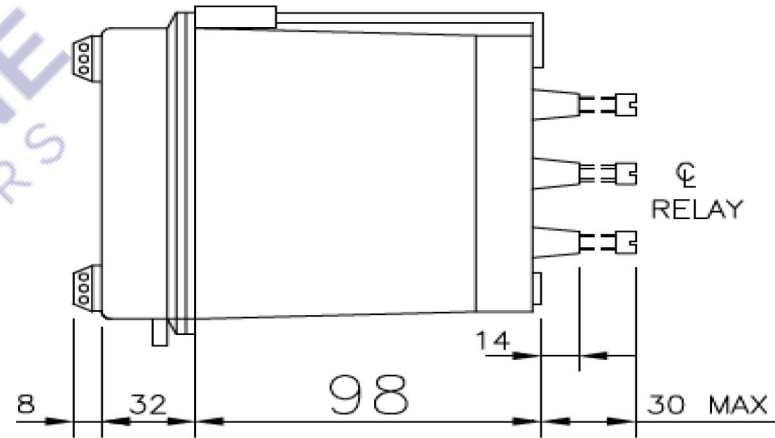
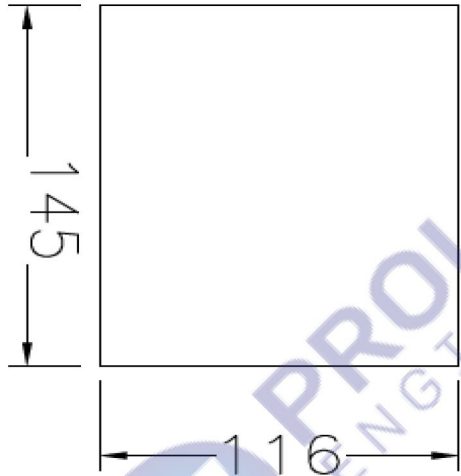
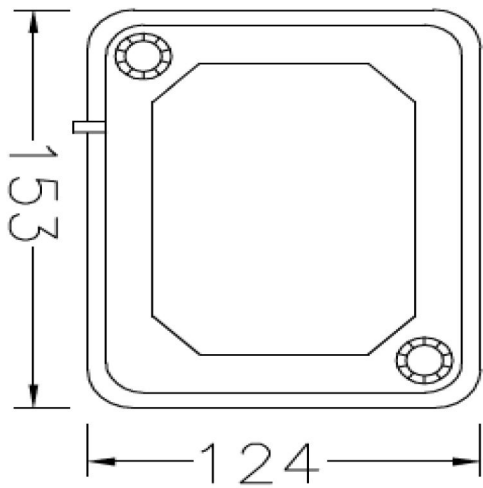
233

170

203

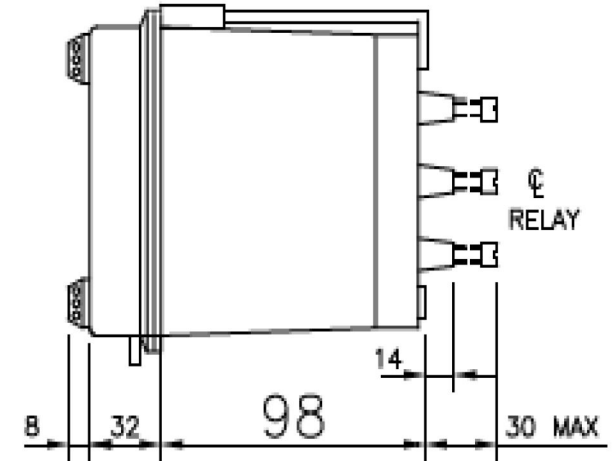
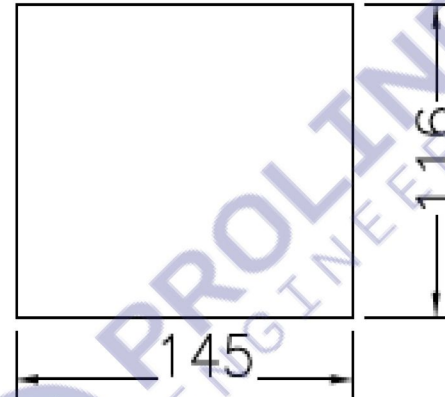
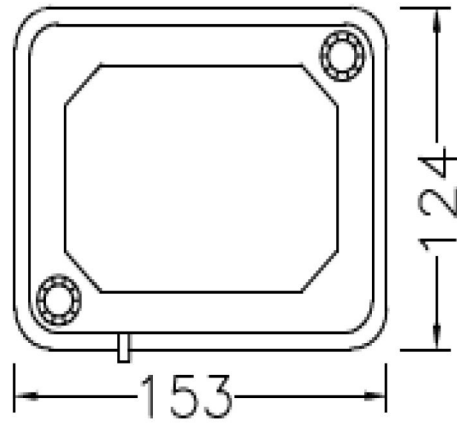


Case and panel cut -out dimensions for case  
1/2 N VERT. 12T ( All dimensions in mm)



Case size		Maximum overall dimensions		
	Height mm	Width mm	Depth* mm	
1/2N Vert.	153	124	130	

Case and panel cut -out dimensions for case  
1/2N H 20T ( All dimensions in mm)



Case Size

Maximum overall dimensions

Height mm

Width mm

Depth\* mm

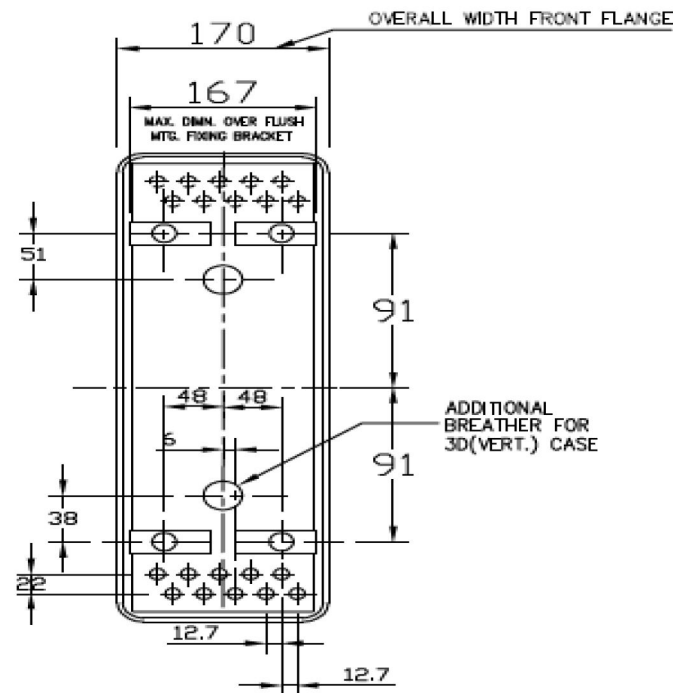
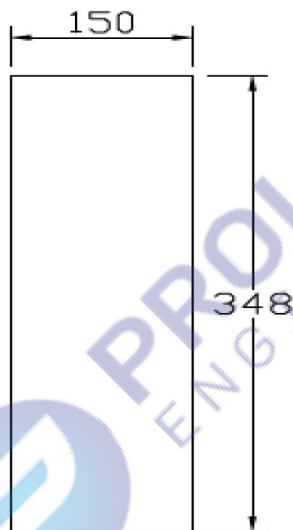
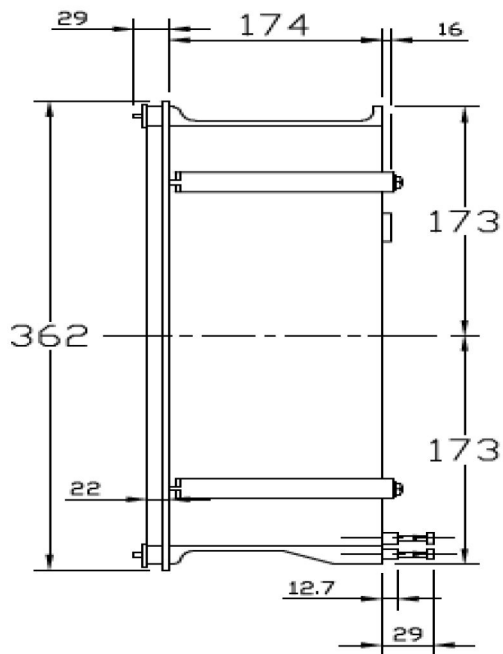
1/2 N Hor.

124

153

130

## Case and panel cut-out dimensions for case 1 1/2 D ( All dimensions in mm)

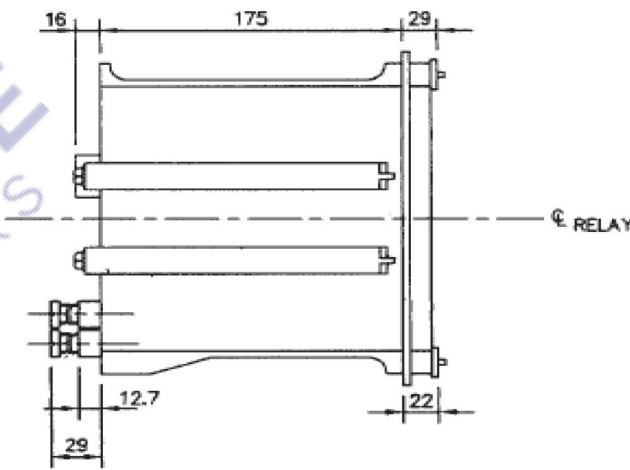
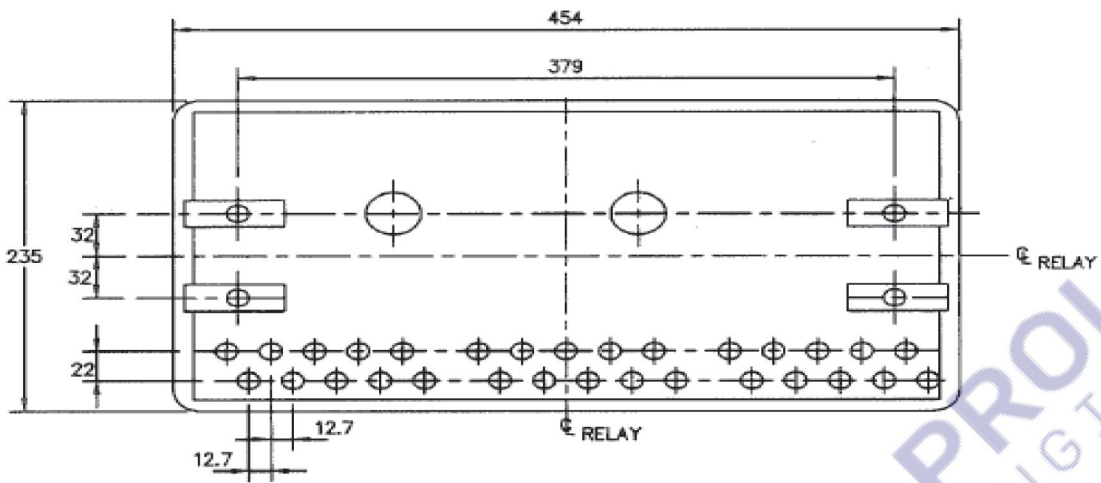


Case	Height	Width	Depth*
1 1/2 D	362 mm	170 mm	203 mm

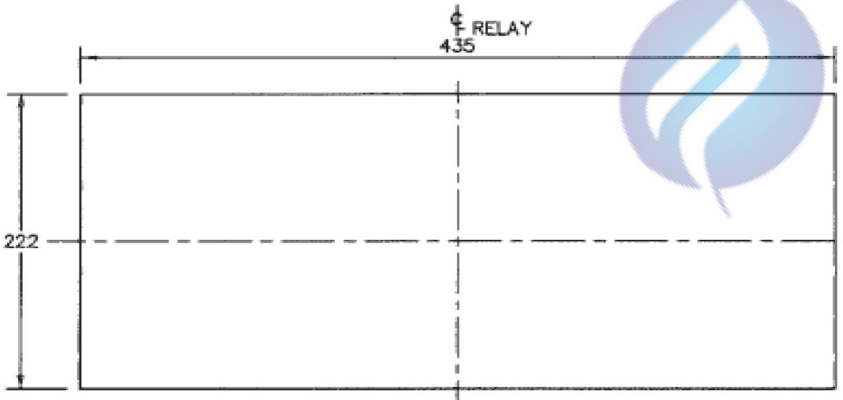
\*Add 76 mm for maximum length of terminal studs, alternatively, 29 mm for terminal screws.



Case and panel cut-out dimensions for case  
3D hor draw out (all dimensions in mm)

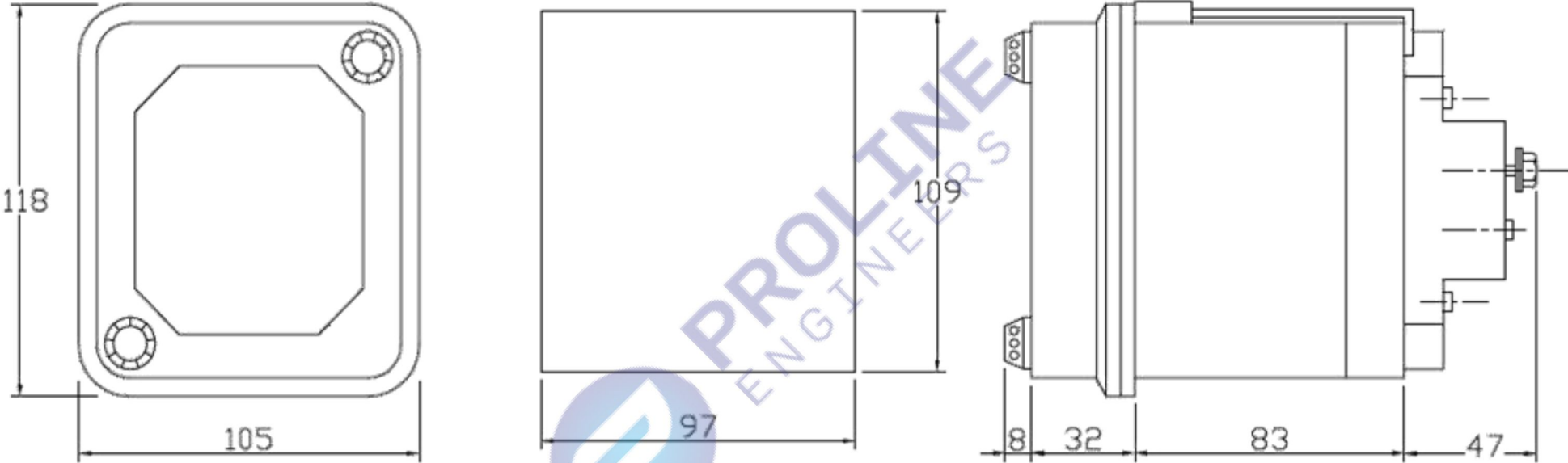


SIZE 3D (HORIZONTAL) SINGLE ENDED CASE

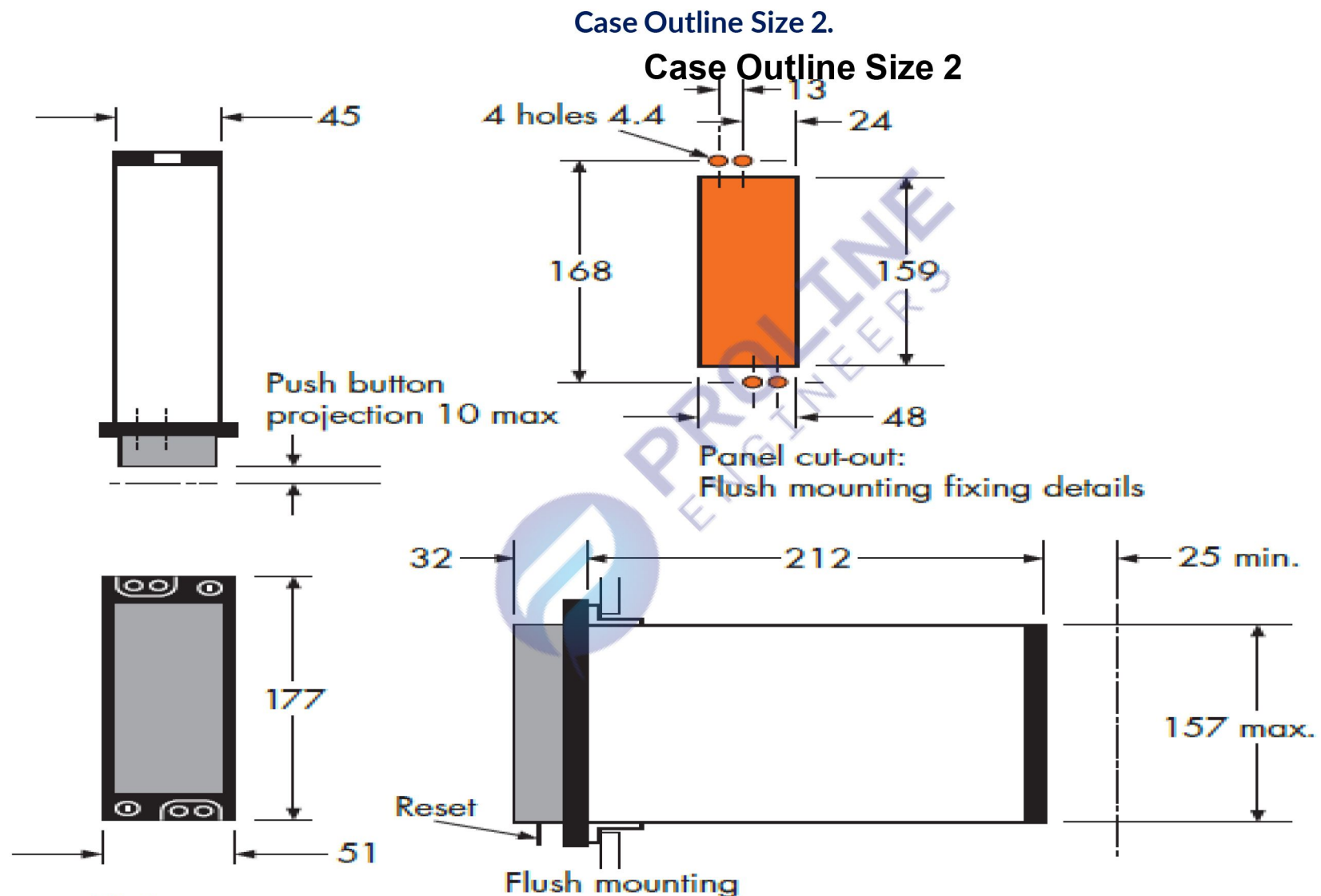


Case size	Maximum overall dimensions		
	Height mm	Width mm	Depth * mm
3D Hor.	233	454	203
3D Vert.	524	170	203

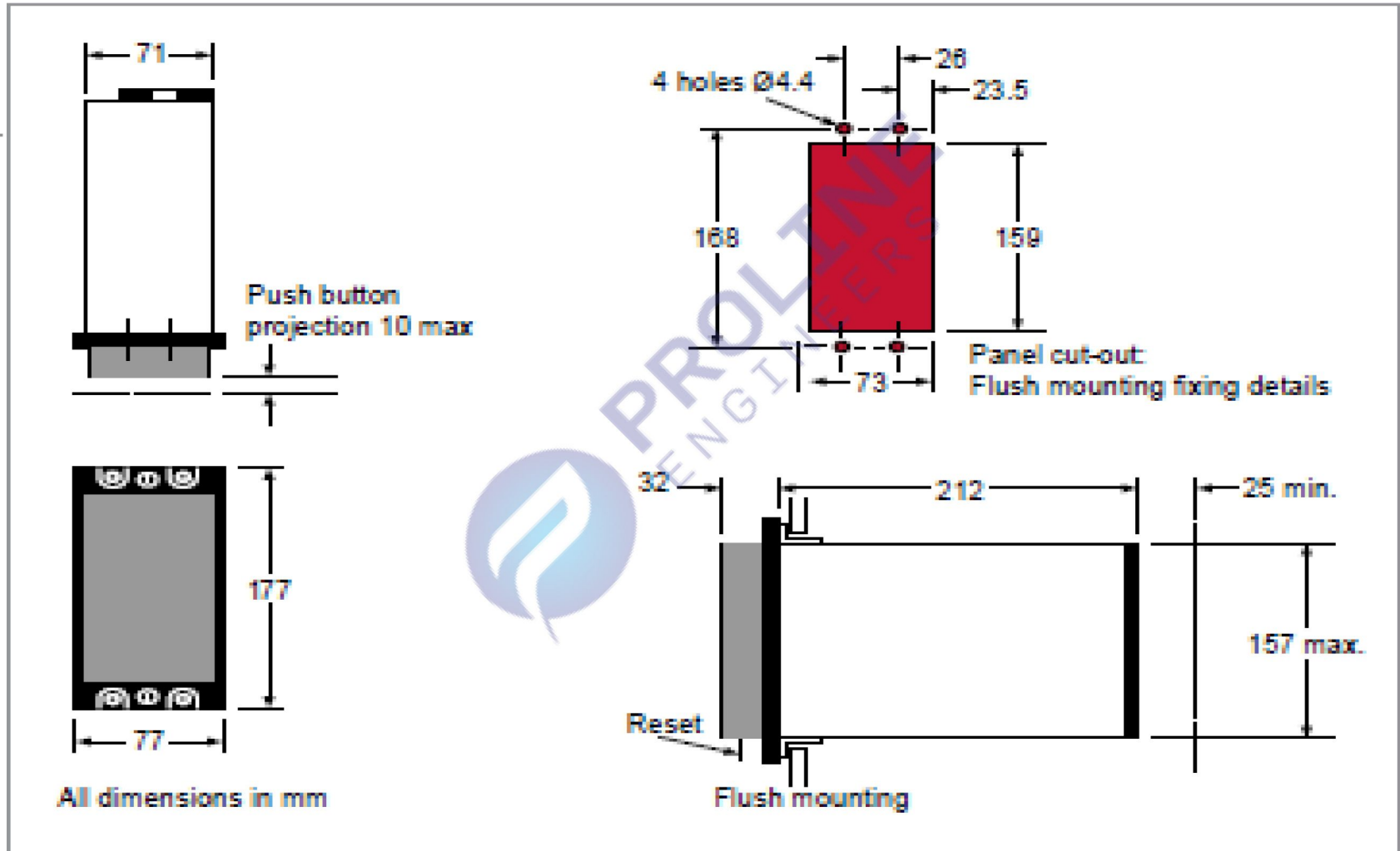
Case and Panel cut-out dimensions for case 1/4N (all dimensions in mm)



Case Size	Maximum number of terminals	Maximum overall dimensions		
1/4N	10	118	105	120

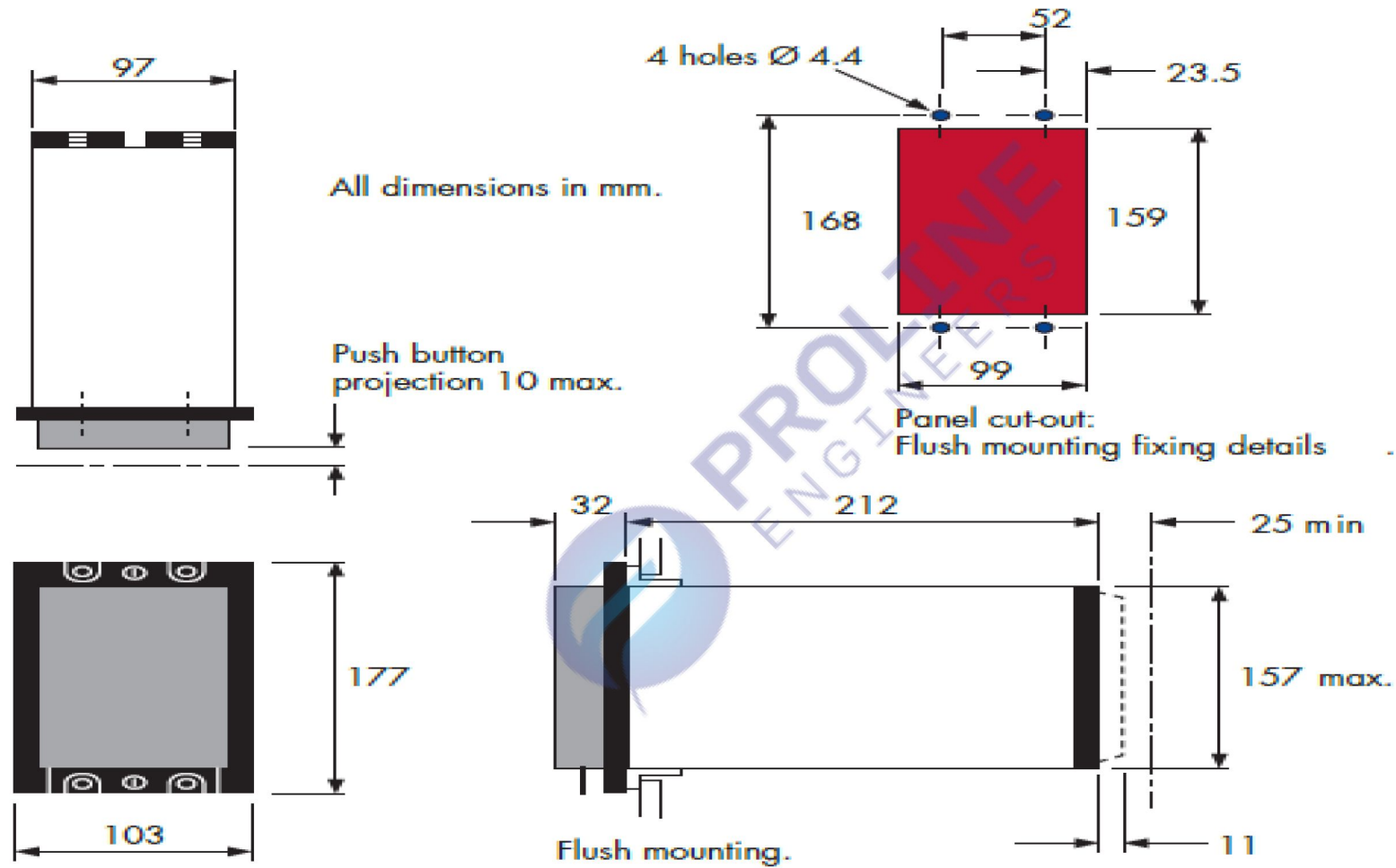


Case Outline Size 3.



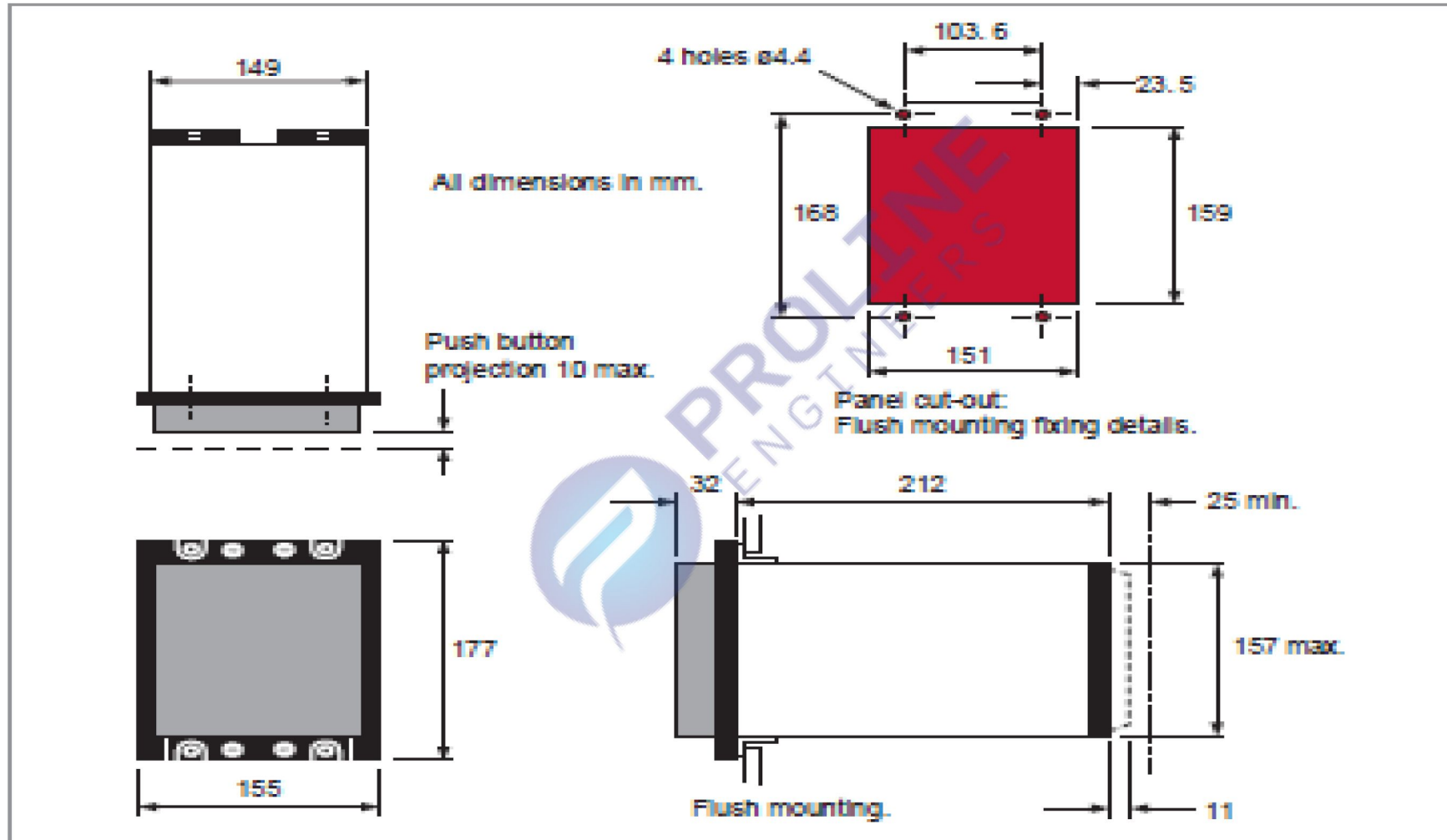


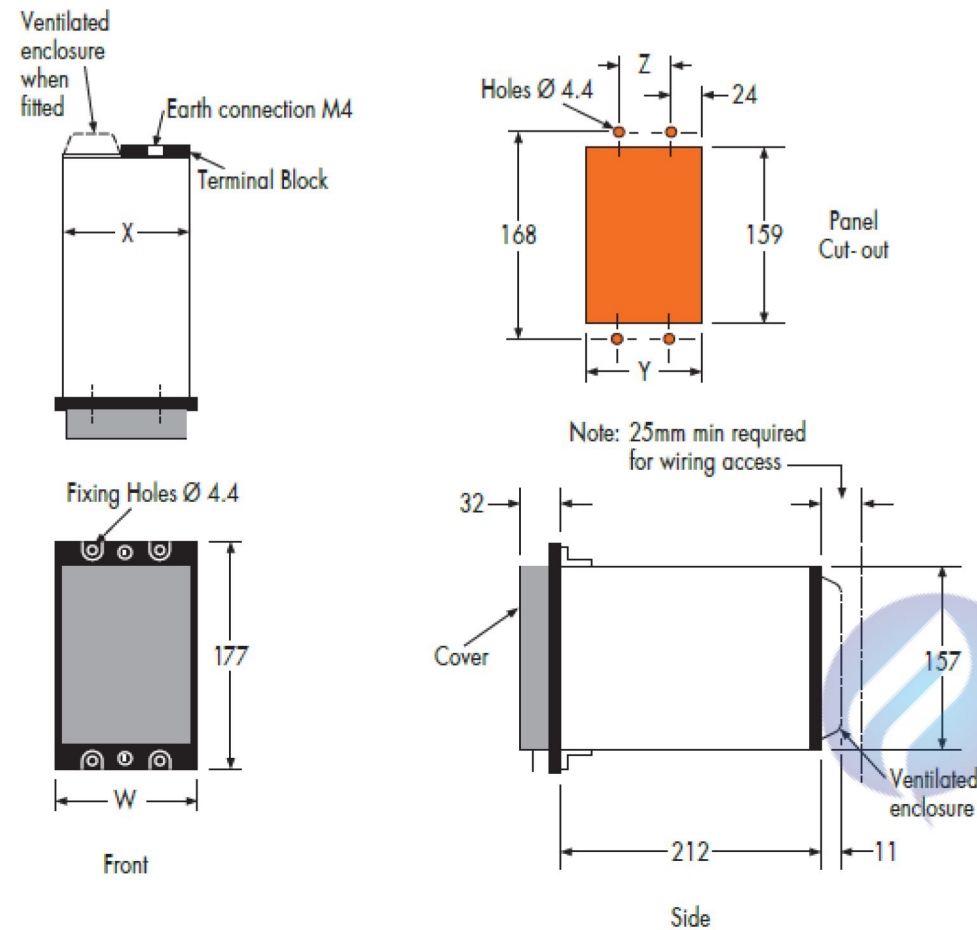
Case Outline Size 4.





## Case outline: size 6





Case Size					
Dimensions in mm	3	4	6	8	16
W	77	103	155	206	414
X	71	97	149	200	408
y	73	99	151	203	411
Z	26	51.8	103.6	155.4	362.6

Figure: Case and panel cut-out dimensions for relay case sizes 3 to 16



Details mentioned in this leaflet is for ease of understanding. In case of any doubt or discrepancy, you may contact GE official for getting confirmation/clarification.



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