

# SURVEYING INSTRUMENTS

SET310

SET310S

SET510

SET510S

SET610

SET610S

Electronic Total Station

SET500/SET500S/SET600/SET600S

.

19. 『

』

가

.

1.	.....	3
2.	.....	4
3.	ON/OFF.....	7
4.	.....	9
5.	.....	12
6.	.....	16
7.	.....	20
8.	(SETTING - OUT ).....	23
9.	(OFFSET) .....	28
10.	.....	32
11.	.....	34
12.	.....	36
13.	.....	41
14.	.....	43
15.	.....	48
16.	.....	55
17.	.....	56
18.	.....	59
19.	.....	62
20.	Option .....	64
21.	.....	66
22.	.....	69

1. [REDACTED]

1) SET가

2)

SET

가

3) SET

4) SET

5) SET

6)

7) SET

Off

가

8)

9) SET가

2.

## 2.1

• SET 12 가 .

, 4 , 5 .

•

$$\{\text{ON}\} : \quad \text{ON}$$

$\{\text{ON}\} + \{\text{☀}\} : \text{OFF}$

•

 : ON

•

가 가 .

$\{F1\} \sim \{F4\}$  :                ,                .

•

{FUNC} :

SET 3 .

 $\{\text{BS}\} :$ 

$\{\text{ESC}\}$  : , .

{SFT} : Shift ON/OFF

$$\left\{ \begin{array}{c} \square \\ \leftarrow \end{array} \right\} :$$

■

$$\{ \quad \} / \{ \quad \} : \quad , \quad .$$
$$\{ \quad \} / \{ \quad \} : \quad , \quad ,$$

Option .

## 2.2

SET510		SOKKIA	
NO. XXXXXX			
Ver. XXX-XX-XX			
JOB1			

: Unit

		PC	-30
		ppm	0
S			
ZA			
HAR			P1
		0	

•  
S :  
H :  
V :  
[ ]

•  
ZA :  
HAR : ( )

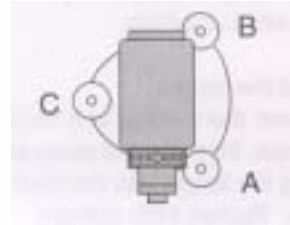
• PC :

• ppm :

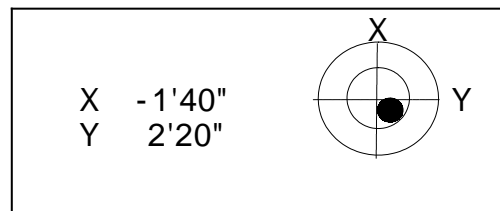
## 2.3

.

- 1) [ ]<sup>2</sup>  
 X( ),  
 Y( )



- 2) X A, B  
 Y C 0°



±3',

±4'

### 3. ON/OFF

#### 3.1. ON

- ON

Absolute Encoder 0SET가

		PC	-30
		ppm	0
S			■
ZA	100°16	20	
HAR	70°26	23	P1
		0	

“Out of range”

가

가

		PC	-30
		ppm	0
S			■
ZA	Out of range		
HAR			P1
		0	

#### 3.2. OFF

- ON

OFF

### 3.3

• {FUNC}

		PC	-30
		ppm	0
S			█
ZA	100°16 23		
HAR	130°46 26		P1
█	█	0	█

		PC	-30
		ppm	0
S			█
ZA	100°16 23		
HAR	130°46 26		P2
█	█	█	█

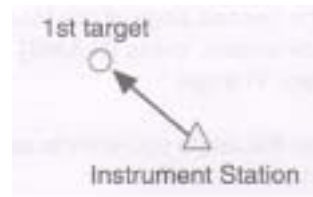
		PC	-30
		ppm	0
S			█
ZA	100°16 23		
HAR	130°46 26		P3
█	█	█	█



4.                     

4.1 2 ( 0° )

1)



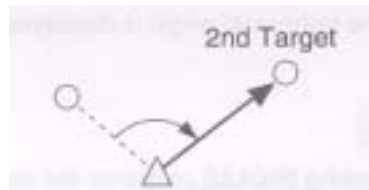
2) 1 [ 0 ]

[ 0 ]가 [ 0 ]  
0°

	PC	-30
	ppm	0
S		■
ZA	89°40 24	
HAR	0°00 00	P1
<span style="background-color: black; color: black;">          </span>	<span style="background-color: black; color: black;">          </span> 0 <span style="background-color: black; color: black;">          </span>	

3)

(HAR)  
(A, B)



4.2 ( )

1)


2) 2 [ ]



3) “ ” .

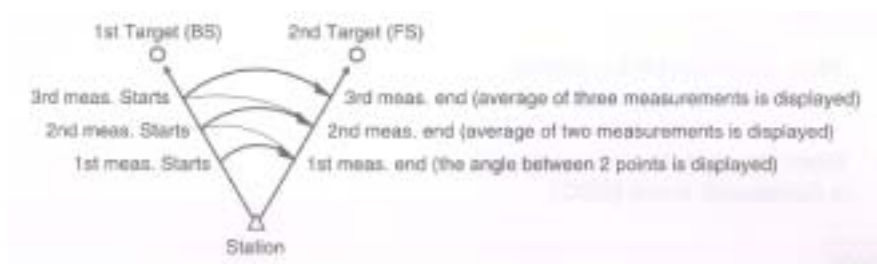
HAR : 125.1212			
1	2	3	4

4)  . 가



		PC	-30
		ppm	0
S			
ZA	100°16 20		
HAR	125°12 12		P1
	0		

“18.” [ ] .

### 4.3





1) 2 [ ] “ ” .  
0°가 .

HARp	0°00 00
	0
	0°00 00
	

2) [OK] .

3) , [OK] .

1 가 : [ ]  
 (“ ” 가 )

HARp	100°16 20
	2
	50°08 10
	

4) 2 , [OK] .  
 2

5) , [OK] .  
 3

가 “HaRp” , 가  
 “ ” .

6) 4)~5) .

7)  .

5.

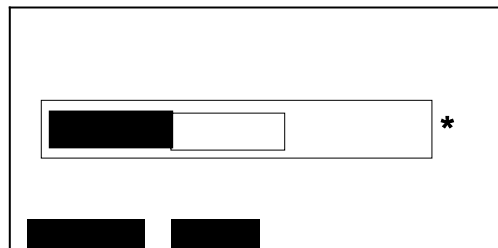
4가 .

- 
- Type
- 
- 

## 5.1

1) “18. ” [ ] .

2) [ ] .



- [ ] .
  - [ \* ] .
  - [ ] 가 [ \* ] .
- [OFF] .

## 5.2

.

1)

.

2)

1

[ ]

.

EDM


(

,

,

)가

.

”	”	PC	-30
		ppm	0
			

3) [ ]

3가

.

[SDIST] :

[HDIST] :

[VDIST] :

## 5.3

• “18.

”

[ ]

.

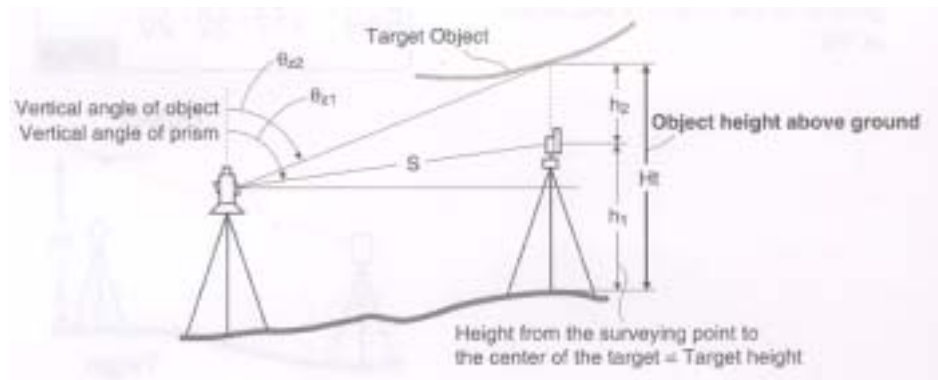
가

.

## 5.4

$$H_t = h_1 + h_2$$

$$h_2 = S \sin z_1 \times \cot z_2 - S \cos z_1$$



1)

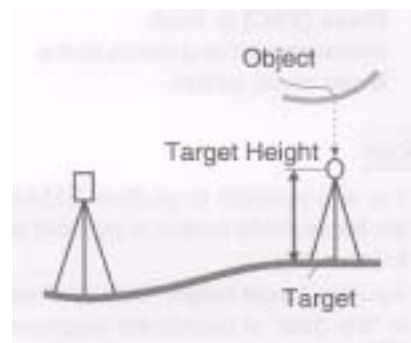
2) "18." [ ]

1 [ ]

" "

" "

[ ]

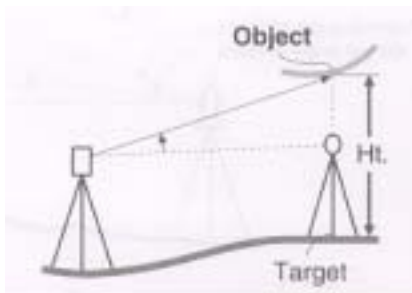


3) 1 [ ]

S/H/V

Ht.	6.255m
S	13.120m
ZA	89°59 50
HAR	117°32 20

4) 2 [ ] “ ”



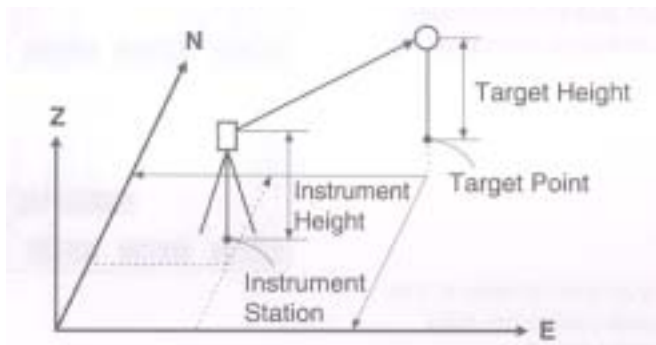
5) [ ] .

Ht.	6.255m
S	13.120m
ZA	89°59 50
HAR	117°32 20
	<div style="background-color: black; width: 100px; height: 15px;"></div>

6) [ ] .  
[ ] :

6.

- ,
- 3 .
- ,
- 가 .
- 
- 



## 6.1

- 1) , , .
- 2) 1 [ ] .
- 3) “ ” .  
“ ” [ ] , , .

N0:	370.000
E0:	100.000
Z0:	123.000
	1.400m
	1.200m
1	2
3	4



## 6.2

• “

” [ ] .

•

1) “ ” [ ] .

			37
			38
			40
			51
			45
P			

: “ ”

/ : JOB

2) { } { } .

[ ] .

3) ☐ 가 .

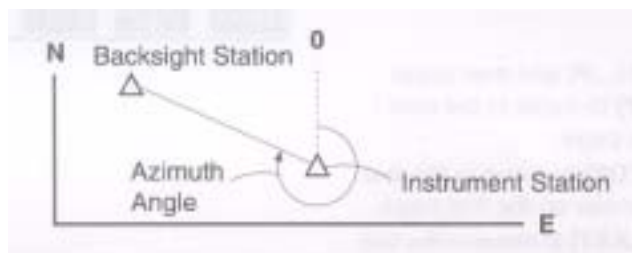
4) [OK] .

## 6.3

•

•

•



1) “ ” .

2) “ ” .

3) [ ] [ ]

.

/			
NBS:	170.000		
EBS:	470.000		
ZBS:	123.000		
1	2	3	4

4) [OK] .

ZA	89°59 55
HAR	117°32 20

5) [ ] .

“ ”

.

HAR : 125.1212			
1	2	3	4

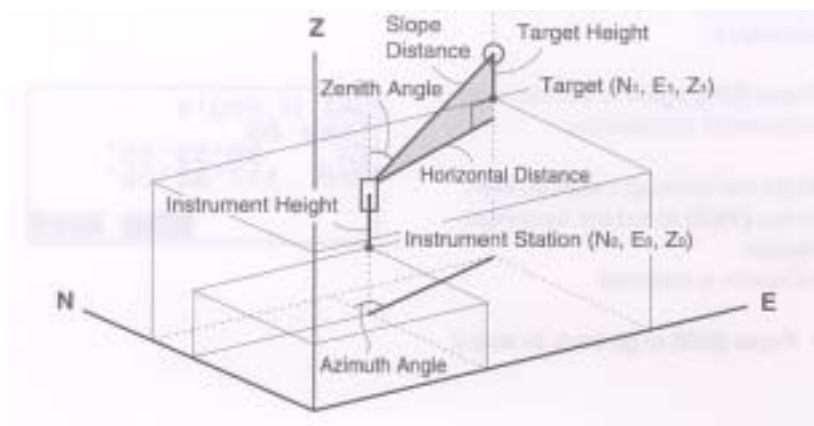
## 6.4 3

$$N_1 \text{Coordinate} = N_0 + S \times \sin z \cos h$$

$$E_1 \text{Coordinate} = E_0 + S \times \sin z \sin h$$

$$Z_1 \text{Coordinate} = Z_0 + Mh + S \times \cos z - Ph$$

$N_0$  :            N            S :            ih :  
 $E_0$  :            E            :            fh :  
 $Z_0$  :            Z            Az :



1)

2) “

N	240.490
E	340.550
Z	305.740
ZA	89°59 50
HAR	180°59 50

3)

[ ]

4)

[ ]

5)

[ ]

7.

.

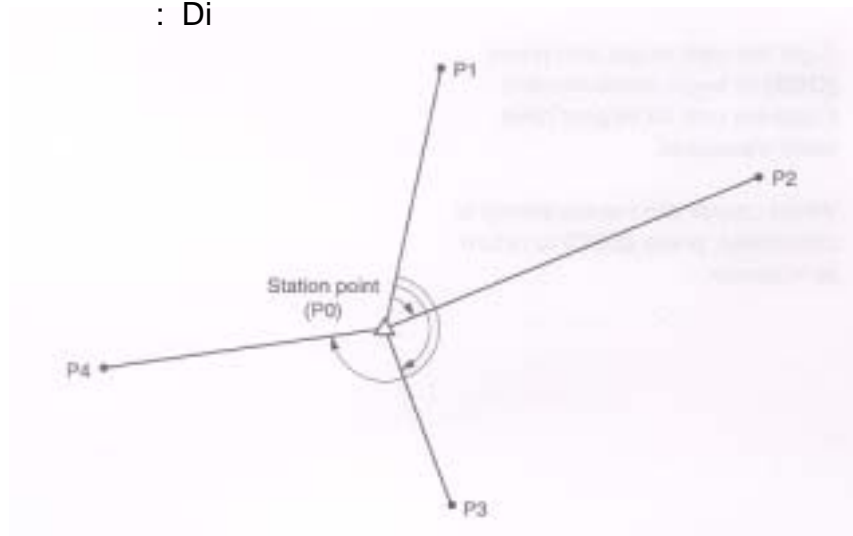
: (Xi,Ei,Zi)

: (No,Eo,Zo)

: Hi

: Vi

: Di



• SET

2~10

가

2

가

3

가

가

1) 2

[ ]

“ ”

"NEZ"

[ ]

[ ]

1st Pt.	
NP:	170.000
EP:	470.000
ZP:	123.000
	1.400m
1	2
3	4

2)

3)

	1st Pt.
N	170.000
E	470.000
Z	123.000

4)

5)

3

6)

7) [ ]

( N, E)가

N	240.490
E	340.550
Z	305.740
N	0.0010m
E	0.0020m
	OK

[ ] :

[ ] :

[ ]

	N	E
1st	-0.001	0.001
*2nd	0.005	0.010
3rd	-0.001	0.001
4th	0.003	-0.002
		가

가 Esc .  
 [ 가] : 가 .  
 [ ] :



8) 2 [ ] “ ” .  
 " " .  
 .  
 .  
 . 10 .

1st Pt.			
ZP:	123.000		
	1.400m		
<span style="background-color: black; color: white; padding: 2px;">1</span>	<span style="background-color: black; color: white; padding: 2px;">2</span>	<span style="background-color: black; color: white; padding: 2px;">3</span>	<span style="background-color: black; color: white; padding: 2px;">4</span>

“NEZ” .

• SET  
 N, E

Z .

• ( ) 3  
 가 가 .

가 가

가 .

3 .

8.

.

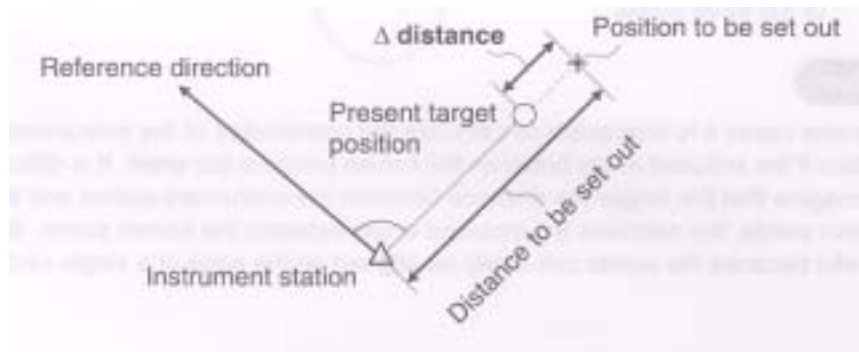
.

,

가

가

=



.

“ ”

.

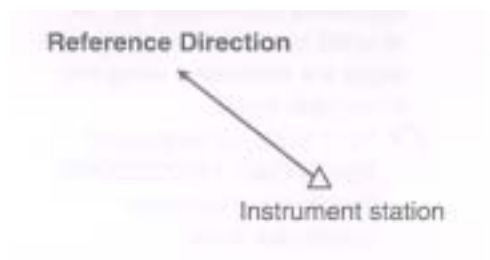
8.1

.

1)

0

.



2)

3

[ ]

.

3)

“ ”

.

H : H

P1 OK

[ ] "H".

[ ]

H : 470.000m  
120

1 2 3 4

4) [OK]

“ ”

가

	H	0.820m	0°09 50	2.480m	89°59 50	180°59 50
H						
ZA						
HAR						

“ H S” [+], [-]

5) [↔] .  
 “ ” . 가  
 가

H	0.820m		
ZA	0°09 50		
HAR	2.480m		
	89°59 50		
	180°59 50		



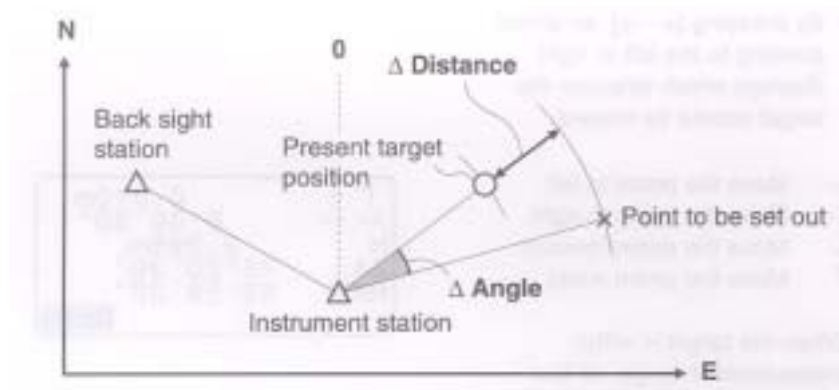
6)                      0°가                      .  
가 ±30"                      가                      .

```
[SDIST] :      Setting out
[HDIST] :      Setting out
[VDIST] :      Setting out      (
[COORD] :      Setting out
[HT] :         Setting out
```

9) “ H” 가 0m가  
[ ] .  
±1cm 가 .

- 25 -

## 8.2



가

1) 3 [ ] .

2) “6. ”  
“ ”

3) “ ” .

H			
H	:		
			P1 OK

{FUNC}

H			
H	:		
			P2

$$[ \quad ]$$

H	
NP:	170.000
EP:	100.000
ZP:	123.000
	1.400m
1	2
3	4

4) . [OK] .

H  
38.067m  
180°59 50  
OK

[ ] .  
[OK] .

5)  $0^\circ$ 가 .....  
       가  $\pm 30''$  .....가 .....

7) [      ]                      .

가                      .

H	0.820m
	0°09 50
H	2.480m
ZA	89°59 50
HAR	180°59 50

8) “ H” 가 0m가  
[ ] ..  
±1cm 가 .

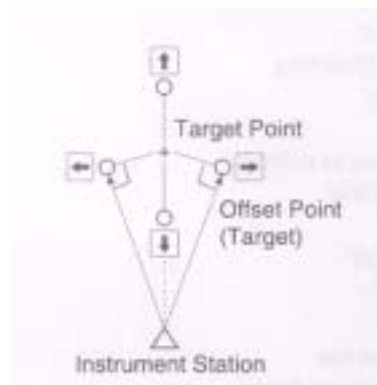
9) 가 0m가 .

9.

- .
- ( )

### 9.1

- , 가  
90° .



가

- 1) [ ] ,  
“ ” .
- 2) 3 [ ] .
- 3) “ ” .
- 4) .  
-  
-

S	34.770m		
ZA	80°16 20		
HAR	100°16 20		
	2 m		
1	2	3	4

: 가  
 : 가  
 : 가  
 : 가

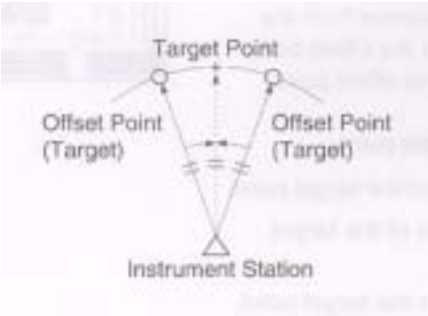
5) [OK] .  
 “ ” ,  
 , , .

S	10.169m
ZA	90°24 24
HAR	100°16 20
	NEZ

6) [NEZ] 가 [ ]  
 가 .

9.2

.  
 가  
 가  
 가  
 .



1) ,  
 [ ] .  
 “ ” .

2) 3 [ ] .

3) “ ” .

S	34.770m
ZA	80°16 20
HAR	100°16 20
	?
<input type="text"/>	<input type="button" value="OK"/>

4) [OK] .

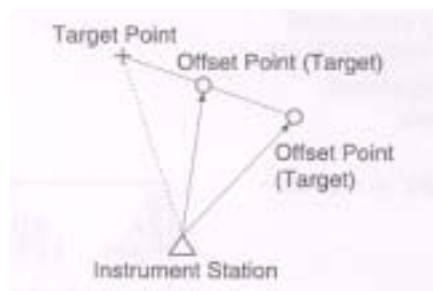
“ ” ,  
, , .

S	34.980m
ZA	100°16 20
HAR	143°26 30
<input type="text"/>	<input type="text" value="NEZ"/>

5) [NEZ] 가 [ ] 가

### 9.3 (2 )

• 2  
( ) .

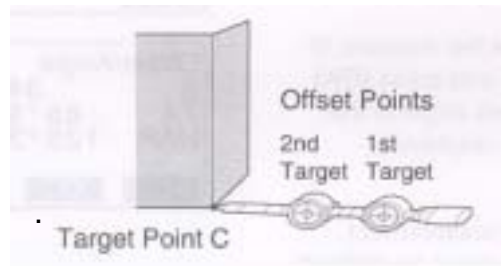


2 (2RT500)

- 2 .  
- .  
- .

1) 3 [ ]

2) “2”




3) [OK]  
[ ]

	2
ZA	87°18 53
HAR	100°16 20
OK	

4) [OK]  
가

5) [ ]  
“ ”

B-C :	1.2m		
1	2	3	4

6)   
“ ”  
가

2	
N	10.480
E	20.693
Z	15.277

10.

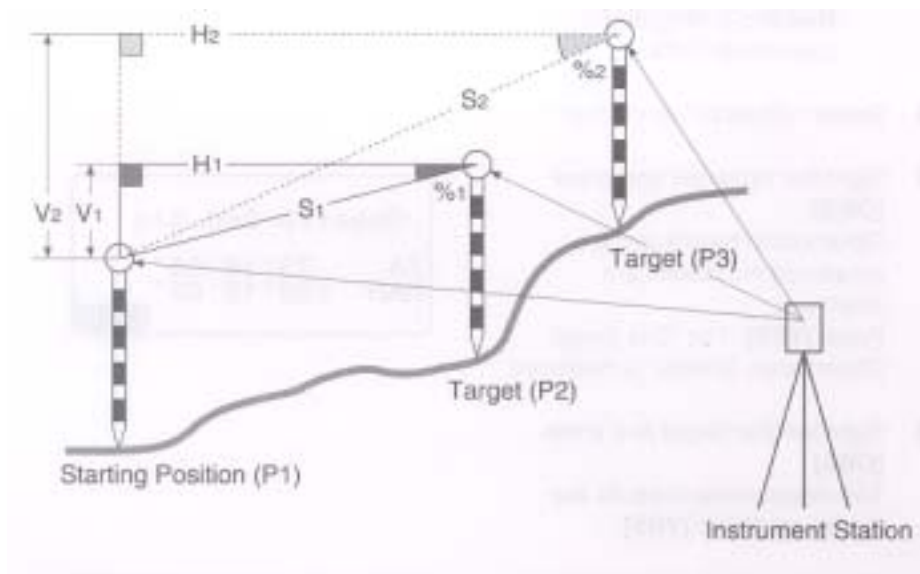
•  $\left( \frac{1}{\sqrt{2}} \right)$

$\left( \frac{1}{\sqrt{2}} \right)$ , , .

$$\cdot 2 \quad (V)$$

1) (P1)  $\vdash \neg \neg A \rightarrow A$ ,  $\vdash A \rightarrow \neg \neg A$ .

2) (P2) 3 [ ] .



3) “ ” .

S	20.757m
H	27.345m
Z	10.012m

S :

$$H :$$
$$V :$$

4)  $\left[ \begin{array}{c} \text{ } \\ \text{ } \end{array} \right]$  .

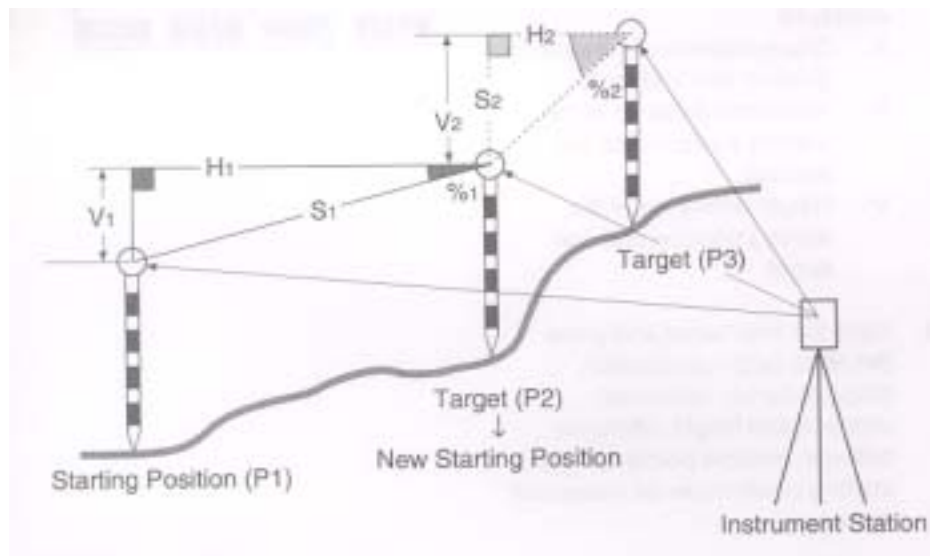


[     ]     :

[     /% ] :     가 %     .

[     ] :

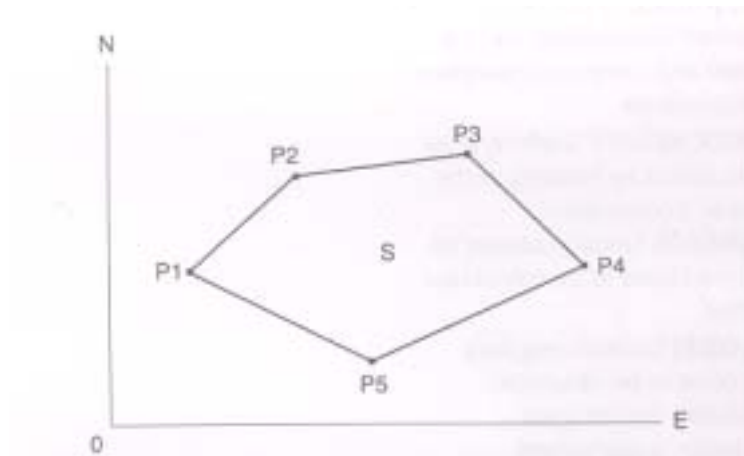
## 10.1



1) “     ”     [     ]     .  
 “     ”     .

2) [     ]     .

11.                     



INPUT

: P1(N1,E1)  
: P2(N2,E2)  
: P3(N3,E3)

OUTPUT

: S

.

1)            2            [            ]            .

2) “            ”            “            ”            .

01 :	
02 :	
03 :	
04 :	
05 :	
	<span style="background-color: black; color: black;">                    </span>

3) [            ]            .            [            ]            .            가            .

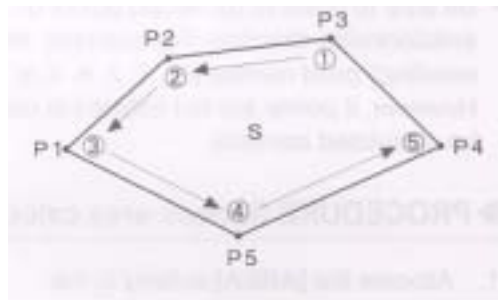
N	12.480
E	120.693
Z	15.277
ZA	89°18' 23
HAR	187°18' 53
OK	

[OK] Pt\_01 .

```
01 : Pt_01  
02 :  
03 :  
04 :  
05 :
```

4)  $\left[ \begin{array}{c} 1 \\ 0 \\ 0 \end{array} \right]$ .

5) [      ] .


$$[ \quad ]$$

가 1, 2, 3, 4, 5

5, 4, 3, 2, 1

.3

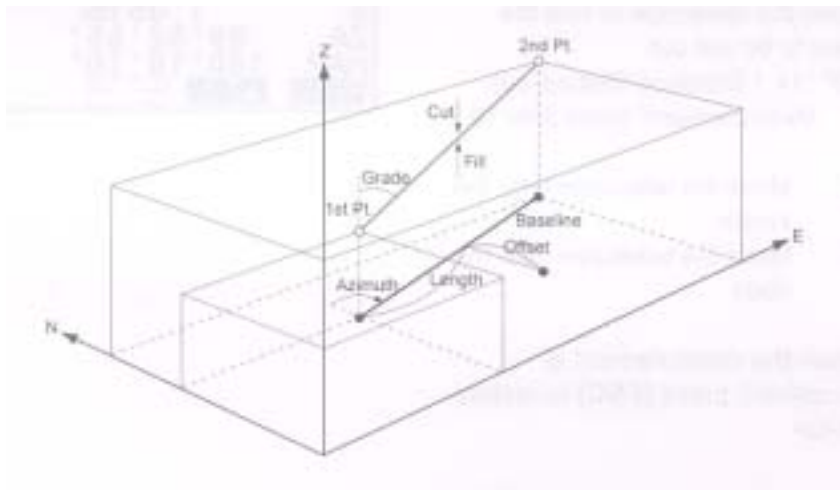
468.064m<sup>2</sup>  
0.00468ha

OK

## 12.

### 12.1

$$\text{Scale}(X,Y) = H \cdot \left( \frac{X}{H} \right) \cdot \left( \frac{Y}{H} \right)$$



가 “1”

.

1) 2 [ ]

2)

3) “ [ ] [ ]

NP:	100.238
EP:	40.928
ZP:	115.000
	1 2 3 4

4)

[OK]

NP:	113.464
EP:	91.088
ZP:	123.000
	P1 OK

5) {FUNC}

[ ]가

[ ]

NP:	113.464
EP:	91.088
ZP:	123.000
	P2

6)

[ ]

NP:	100.238
EP:	40.928
ZP:	115.000

[ ]

7)

8)

“ H”  
H” 가

	100°16'20"
H	51.854m
H	51.855m
ScaleX	1.000091
ScaleY	1.000091
Sy=1	Sy=Sx
OK	

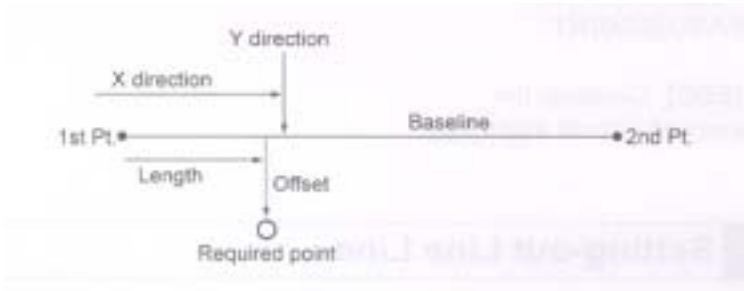
%15.422

1:\*\* % OK

9) [OK] “ ” .

12.2 -

. .



1) [     ] . (X     )  
(Y     ) . [OK] .



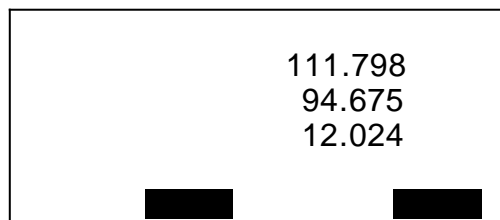
(+), (-) .  
 “0” .



2) [ ] [ ] .

3)

,  
 ( / )가 가  
 .

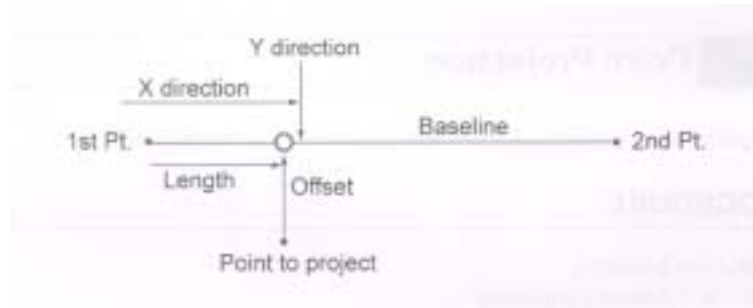


4) [ ] 가 .



13.

.



1) 2 [ ] .  
“ ” “ ”

2) .

3) “ ” .

13.1

• 12. .

13.2

1) [ ] .

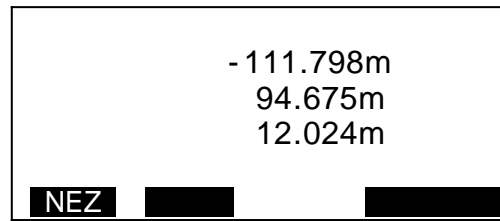
Np:	111.798
Ep:	94.675
Zp:	12.024
<div style="display: flex; justify-content: space-between;"> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>	
<div style="display: inline-block; border: 1px solid black; padding: 2px;">P1</div> <div style="display: inline-block; border: 1px solid black; padding: 2px;">OK</div>	

2) [ ] .

3) [ ] .

4)

가 .



5) [NEZ] 가 .

6) [ ] 가 .

7) [ ] .

8. .

## 14. [REDACTED]

• 가

가

### 14.1

1)

2)

3

[ ]

“

”

“

”

[ ]

/	rec 10000
S	134.980m
ZA	123°16 20
HAR	143°26 33
	1
[REDACTED]	[REDACTED]

3) [ ]

, ,

[OK]

S	234.773m
ZA	80°16 20
HAR	100°16 20
	[REDACTED] 1
	1.234m
1	2
3	4

4)

[ ]

[ ] :

SET

가

,

가

가

/	rec 2923
S	134.980m
ZA	123°16 20
HAR	143°26 33
	1

[ ] : “ ” , “ ” .

## 14.2

1) 3 [ ] .

2) “ ” .

/		rec 2922
ZA	123°16 20	
HAR	143°26 33	
		2
	0	

3)  $\left[ \begin{array}{c} 1 \\ 0 \\ 0 \end{array} \right]$ .

ZA 80°16' 20" A  
HAR 100°16' 20"

2

1.234m

1 2 3 4

4) \_\_\_\_\_, \_\_\_\_\_, [OK] \_\_\_\_\_.

## 14.3

1) “ ” .

2) 3 [ ].

3) “ ” .

	/	rec 2921
N		344.284
E		125.891
Z		23.564
		3

4) , , [OK] .

N		344.284	
E		125.891	
Z		23.564	
			3
		1.234m	
1	2	3	4

## 14.4

• .

1) 3 [ ] .

2) “ ” .

3) [ ] .

- - -

N0:	274344.284			
E0:	178125.891			
Z0:	123.564			
	4			
	1.234m			
	1	2	3	4

: CL

: SOKKIA

OK

: May/29/2000

: 11:45:15

:

:

:

OK

: 15

: 1013hPa

ppm : 0

OK

0ppm

4) [OK] .

14.5

. .

1) 3 [ ] .

2) “ ” .

/
rec 2823

OK

3) [ ] .

60 ( / )

## 14.6

1) 3 [ ] .

2) “ ” .  
“ ” .

				37
				38
				40
				51
				45
P				

[ , ] :


[ -P] :

( , )

[ ] :

[ ] :

[ ] :

3)  .

N	144.730
E	234.837
Z	21.345
	51
	1.345m

## 15. [REDACTED]

- 가 “ ” [ ] .
- .
- 
- 
- 
- 
- ,
- 

### 15.1

- .

- 10 가 , JOB01 .

1) “ ” .

2) “ ” .

: JOB1	
S.F. = 1.00000000	
: JOB1	
[REDACTED]	S.F.

3)[ ] .

SOKKIA	45
* TEST	246
3-1	5
JOB4	0



“ \* ”

.

4) [S.F]

JOB 1  
S.F. = 1.00000000

OK

## 15.2

1)

“ ”

.

2) “

”

.

JOB4

A

A

B

C

D

3)

.

## 15.3

1)

“ ”

.

2) “

”

.

3)

.



		rec 9640
N		274344.284
E		178125.891
Z		123.564
		4

•

1) “ ” “ ” .

2) “ ” .  
“ ” .

SDR	12
-----	----

3) “ ” .

•

4) “ ” .

15.5

• 1

•

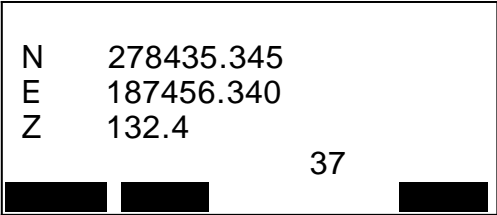
1) “ ” “ ” .

2) “ ” .





3)  .



4) “ ” .

15.7

• .

1) “ ” “ ” .

2) “ ” .



15.8

1) “ ” “ ” .

2) “ ” 가 .



16.

1) “ ” “ ” .

2) “ ” .

JOB01	OUT
SOKKIA	45
* TEST	246
3 - 1	5
JOB4	0
	OK

3)  .

4) “OUT” [OK] .

SDR

5) “SDR” [OK] .

“ \* ”

“17. ” “17.4 ”

Communication Software (WCOMMS, COMMS PLUS)

## 17. [REDACTED]

가

### 17.1 EDM

2 [ ] .

	:	" "
	:	
PC	:	-30

	:	15
	:	1013hPa
ppm	:	0
0ppm		[REDACTED]

: [ , ]  
 " " "n="

"1"	1	" "
"1"	1	

: [ , ]  
 ( ) ( )

PC :  
 :  
 :

ppm :

가 .





17.2

1) [ ] .

2) “ ” .

coll.	:	S
	:	(H, V)
	:	
	:	
	:	Zenith

:	1"
:	N-E-Z

coll.	:	(S , H , V )
	:	
	:	
	:	,
	:	( , )
	:	
	:	(1"/5")
	:	

17.3

1) [ ] .

2) “ ” .

	OFF	:	30
		:	4
EDM		:	On
		:	5
		:	Off
EDM		:	off
EDM ALC		:	

OFF : Off  
 :  
 EDM : On/Off  
 :  
 : On/Off  
 EDM :On/Off  
 EDM ALC : /

## 17.4

.

Baut rate	: 1200bps
Data bits	: 8bit
Parity	: Not set
Stop bit	: 5
Check sum	:
Xon/Xoff	:

Baud rate :1200bps, 2400bps, 4800bps,  
 9600bps, 19200bps, 38400bps  
 Data bits : 8bit, 7bit  
 Parity : Not set, Odd, Even  
 Stop bit : 1bit, 2bit  
 Check sum : ,  
 Xon/Xoff : ,

## 17.5

.

:
: hPa
: degree
: meter

: ,  
 : hPa, mmHg, inchHg  
 : degree, gon, mil : meter, feet, inch

## 18.

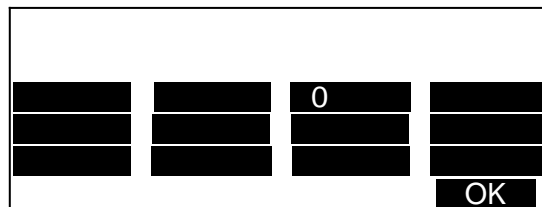
• SET

, 1 2  
 가

1) [ ] .

2) “ ” .

3) “ ”  
 “ ” .



1 : [ ] [ ] [0] [ ]

2 : [ ] [ ] [ ] [ ]

3 : [ ] [ ] [ ] [ ]

4) [ , ] [ , ]

5) [OK] .

6) “ ” 1,  
 2 .

1
2
1

7)

“ ”

“ ”

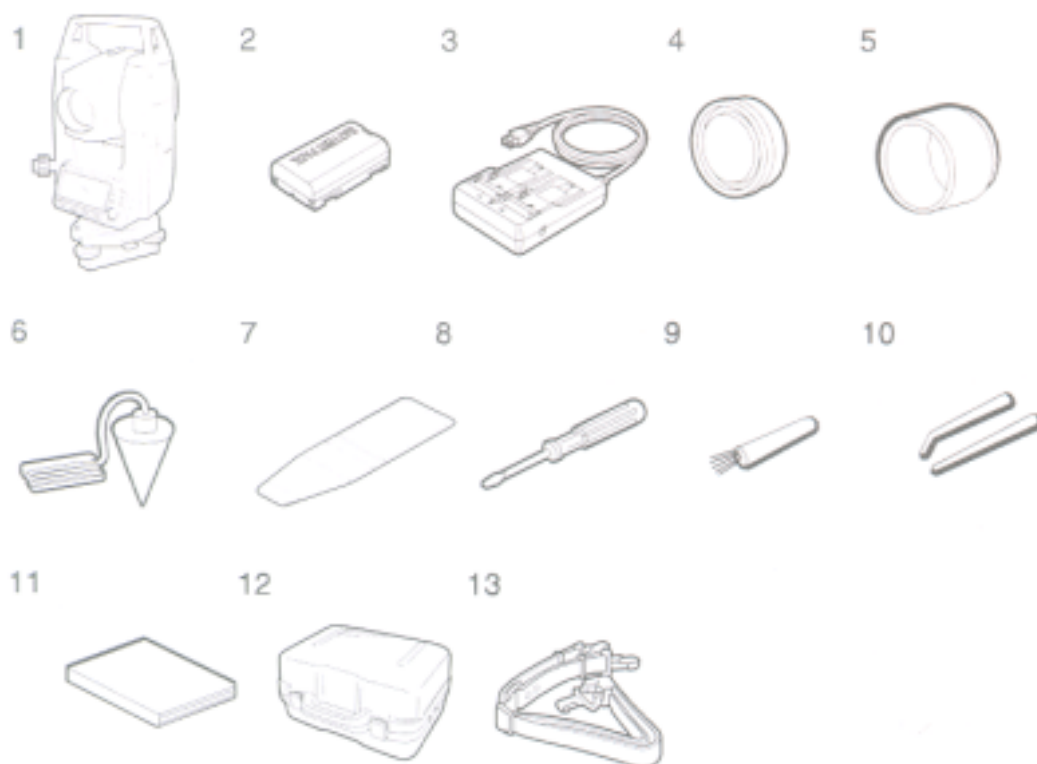
.

1
2

.

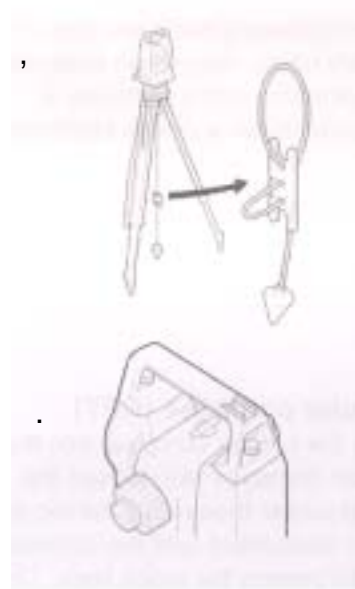
[       ]	
[       ]	(S=       , H=       , V=       )
[ 0     ]	0°
[       ]	
[       ]	
[       ]	
[       ]	(Setting out       )
[       ]	
[       ]	
[       ]	EDM (       ,       )
[       ]	
[       ]	
[       ]	
[       ]	
[       ]	
[ .     ]	/
[     /%]	/     %
[       ]	/
[       ]	
[       ]	
[       ]	
[       ]	
[F/M]	Meter/Feet
[       ]	
[       ]	
[       ]	
[ - - - ]	

# 19.



1.	.....1	7.	.....1
2.	(BDC46) (SET310/510).....2 (SET610).....1	8.	.....1
3.	(CDC61/62).....1	9.	.....1
4.	.....1	10.	.....1
5.	.....1	11.	.....1
6.	.....1	12.	(SC196).....1
		13.	.....1

S  
가



## 20. Option

(SF14)

SF14

3V DC  
R03/AAA×2  
0.5m~2.0m  
37 keys  
IP44  
162(W)×63(D)×19(H)mm  
0.12Kg ( )



(CP7)

2

「正」

(磁北)



UNIT (SCRC2A)

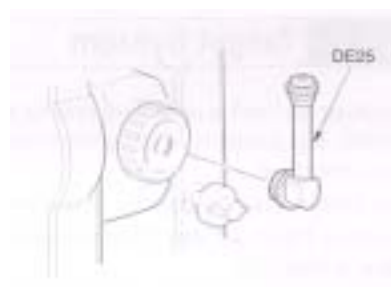
SET 310/510 CF Unit

(EL6)

SET610

30×  
3"

Diagonal eyepiece (DE25)





(OF3A)



Cable		PC	Cable
DOC25	Seiko/Epson		
DOC27	IBM/Toshiba J3100		
DOC1	Cable	PC	가
		PC	.

21.

• SET

가  
가

.

.

.

가 .

가 .

Checksum error

SET

『 17.4

』

.

.

.

『 17.4

』

.

Flash write error!

Flash mount error!

가 .

.

,

.

.

.

2

2

Out of range

%

(1000% )

±89°

가 9999.999

가

RAM

170mm

45mm(EDM:48mm)

SET310/510 : 30×

SET610 : 26×

SET310/510 : 3"

SET610 : 3.5"

1° 130"

1.0m

1 Speed

5

Absolute Encorder

Degree/Gon/Mil (     가 )

-3599°59'59" ~ 3599°59'59"

1"/5" (     가 )

SET310 : 3"(1mgon)

SET510 : 5"(1.5mgon)

SET610 : 6"(1.9mgon)

0.5

ON(V&H/V)/OFF (     가 )

2

±3'

:     /     (     가 )

: Zenith/Vertical/Vertical±90°

(     가 )

SOKKIA ,  
 ( 가 20Km,  
 가 )

SET310/510 RS90N-K : 3.0~70m  
 RS50N-K : 3.0~50m  
 RS10N-K : 3.0~20m  
 Compact prism CP01 : 1.0~700m  
 Standard prism AP×1 : 1.0~2,000m  
 Standard prism AP×3 : 1.0~2,200m

SET610 RS90N-K : 3.0~60m  
 RS50N-K : 3.0~50m  
 RS10N-K : 3.0~20m  
 Compact prism CP01 : 1.0~600m  
 Standard prism AP×1 : 1.0~1,600m  
 Standard prism AP×3 : 1.0~1,800m  
 , : 0.001m  
 : 0.01m  
 4200m  
 :  $\pm(3+2\text{ppm} \times D)\text{mm}$   
 :  $\pm(5+5\text{ppm} \times D)\text{mm}$   
 :  $\pm(4+3\text{ppm} \times D)\text{mm}$   
 :  $\pm(5+5\text{ppm} \times D)\text{mm}$   
 (D: , :mm)  
 (single/repeat/average)  
 (single/repeat)  
 ( 가 )  
 :  
 2.8sec+ 1.6sec (2.4sec)  
 :  
 2.3sec+ 0.8sec (1.9sec)  
 :  
 1.8sec+ 0.3sec (1.4sec)  
 ( ): EDM standby On  
 Infrared LED

: -30~60 (1 )  
 : 500~1,400hPa(1hPa )  
 375~1,050mmHg(1mmHg )  
 ppm : -499~499(1ppm )  
 -99 ~ 99mm(1mm )  
 .  
 On(K=0.142/K=0.20)/Off

Ni-ion BDC46  
 4  
 5 (25 )  
 2 (CDC61/62 )

LCD  
 192 dots×80dots : SET310/510  
 SET610  
 15  
 Off 30 Off  
 10,000  
 Serial, RS232C  
 SET310 : 30"/2mm  
 SET510 : 40"/2mm  
 SET610 : 60"/2mm  
 : 10"/2mm  
 :  
 : 3×  
 : 0.3 m

1 Level  
 -20~50  
 -30~70  
 , IP66  
 165(W)×170(D)×341(H)mm ( )  
 SET310/510/610S : 5.2Kg  
 ( , ) SET610 : 5.1Kg  
 SET310S/510S : 5.3Kg