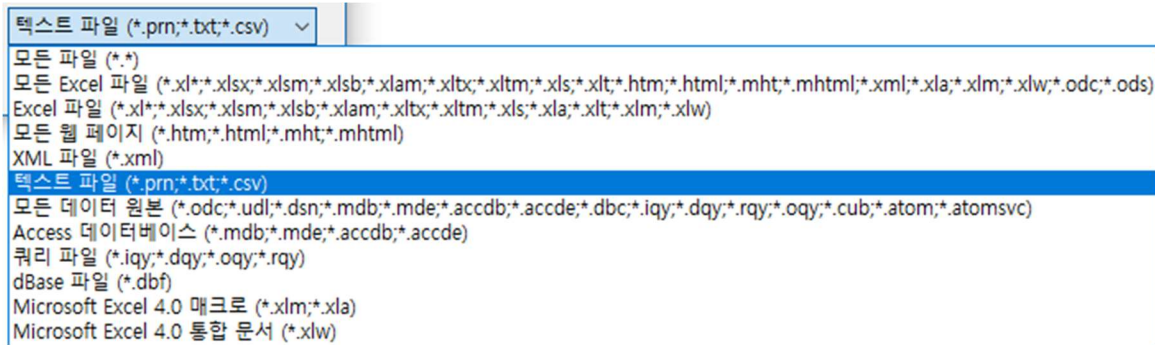# *A-1. Data File Descriptions

Data file that exported, saved or sent by the app can be opened in a spreadsheet program (such as MS Excel) on a PC.

1. Open file

Data file is .csv (Comma-Separated Values) extension file. Double-click a file to open or click Open files to open a file on the program. (MS Excel ; Change the option as below if the file is not appeared on the file list.)

텍스트 파일 (*.prn;*.txt;*.csv)   ∨
모든 파일 (*.*)
모든 Excel 파일 (*.xl*;*.xlsx;*.xlsm;*.xlsb;*.xlam;*.xltx;*.xltm;*.xls;*.xlt;*.htm;*.html;*.mht;*.mhtml;*.xml;*.xla;*.xlm;*.xlw;*.odc;*.ods)
Excel 파일 (*.xl*;*.xlsx;*.xlsm;*.xlsb;*.xlam;*.xltx;*.xltm;*.xls;*.xla;*.xlt;*.xlm;*.xlw)
모든 웹 페이지 (*.htm;*.html;*.mht;*.mhtml)
XML 파일 (*.xml)
텍스트 파일 (*.prn;*.txt;*.csv)
모든 데이터 원본 (*.odc;*.udl;*.dsn;*.mdb;*.mde;*.accdb;*.accde;*.dbc;*.iqy;*.dqy;*.rqy;*.oqy;*.cub;*.atom;*.atomsvc)
Access 데이터베이스 (*.mdb;*.mde;*.accdb;*.accde)
쿼리 파일 (*.iqy;*.dqy;*.oqy;*.rqy)
dBase 파일 (*.dbf)
Microsoft Excel 4.0 매크로 (*.xlm;*.xla)
Microsoft Excel 4.0 통합 문서 (*.xlw)

2. Data Unit

All data in data file means displacements (as distances) by the unit of ㎜ (millimeter).

● Formula to converting angular to displacement.

$$\sin\theta = \frac{displacement}{L}$$

※L = 500㎜ (gauge length), θ = angular data
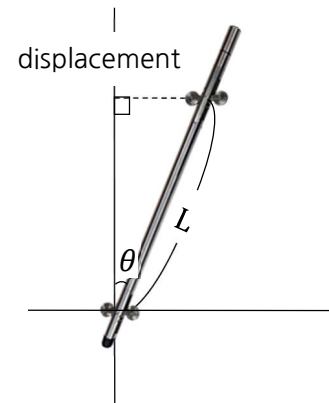
∴ $displacement = 500㎜ \cdot \sin\theta$

3. Data Descriptions

The data table as below is for A-axis. (for B-axis is equally same.)

Depth	A0	A1	A_MEAN	A_CS	A_SUM	A_SUM_INT
-0.5	30.769898	-30.505107	30.637503	0.264792	149.436354	-0.373685
-1	31.070392	-30.838708	30.95455	0.231684	118.798851	-0.385009
-1.5	30.833482	-30.616599	30.725041	0.216883	87.844301	-0.34146
-2	29.514676	-29.320409	29.417543	0.194267	57.119261	-0.314458
-2.5	27.628446	-27.5204	27.574423	0.108046	27.701718	-0.324912
-3	25.926578	-25.81677	25.871674	0.109808	0.127296	-0.307921

● **Depth** : Depth of each recorded data.

● **A0** : Recorded data of A0 direction at each depths.

● **A1** : Recorded data of A1 direction at each depths.

● **A_ MEAN** : Actual displacement at each depths. A_MEAN is a basis of calculating A_SUM.

$$\therefore A_{MEAN} = \frac{(A0 - A1)}{2}$$

● **A_CS** : Checksum of A0 and A1. Checksum is a barometer that denotes a measuring accuracy.

$$\therefore A_{CS} = (A0 + A1)$$

● **A_SUM** : Accumulated displacement of recorded data. A_SUM is accumulation by A_MEAN.

$$e.g.) \text{ at total depth is 10 meters}, A_{SUM} = A_{MEAN}@10m + A_{MEAN}@9.5m + A_{MEAN}@9m + \cdots$$

A chart as displacement from initial in plotting menu is built from A_SUM_INIT data.

● **A_SUM_INIT** : Accumulated displacement from Initial Value set on the app. At a data table of initial value, A_SUM_INIT is always zero(0).

$$\therefore A_{SUM_{INIT}} = A_{SUM} \, of \; initial \; value - current \; A_{SUM}$$

A chart as displacement from initial in plotting menu is built from A_SUM_INIT data.

4. Date Concept