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WARNING 13 - Be sure to take appropriate care following safety guidelines both of the [Methyl Orange MSDS](#) and when using hot water. 111

WARNING 14 – Removing the installation guide can be dangerous. The force required to extract the guide from the bark is significant and causes it to be released rapidly with little control. Under these circumstances the very sharp mounting pins have the potential to cause minor injury to the user's fingers. To avoid this potential issue it is recommended to use a flat blade screw driver to lever the guide out slowly and carefully. 113

WARNING 15 - Holes must be drilled slowly. If you attempt to force the drill into the stem you WILL break the drill bit. The power drill should be set to “drill speed” (for variable speed power drills) and the trigger fully depressed so that the drill bit is spinning at the highest speed. This will produce a clean cut of the fibres and reduce tearing and bruising of the xylem cells. The drill bit should not be pushed or forced into the stem under any circumstances. This simply increases wounding and forces fibres to be compressed into the end of the hole making needle insertion difficult or impossible. Use short, slow increments in drilling the hole removing the drill bit regularly to remove waste fibres and debris from the flutes of the drill bit. A small wire brush is useful for cleaning drill flutes during this process. Installing sap flow sensors is not for the “Fast and the Furious”! Remember Aesop’s fable of the Hare and the Tortoise, slow and steady wins the race! 114

WARNING 16 – NEVER use a hammer or heavy object to hammer the needles into place. This will damage the needles. 118

WARNING 17 - It is recommended that the regional settings of the Instrument are set to those of the computer that will be used to process the Sap Flow data. Failure to do this will result in a data file that is unreadable in both Excel and Sap Flow Tool Software because the file structure is the opposite of what the computer is configured for. 125

WARNING 18 – It is very important that the integrity of the original *.CSV data file be maintained. Opening this file in Excel will corrupt the native Comma Separated Values file format as Excel introduces hidden formatting markers. These hidden markers have the potential to make the file unreadable in Sap Flow Tool. It is recommended that if the CSV file is opened in Excel save file as an *.XLSX file format maintaining the original file name, but do not save any changes to the original *.CSV file. 125

WARNING 19 – Do NOT attempt to download a *.BIN file via the USB cable or MCC1 wireless modem. It is too large. You must download this file type by removing the MicroSD card. 126

WARNING 20 - Failure to select “Append Mode” without renaming the log file will simply overwrite the contents of the existing log file. 135

WARNING 21 - this calibration function must only be used if a suitable calibration reference and isothermal calibration chamber is available. Failure to meet this criteria will result in an erroneous calibration being stored in the instrument that will cause the Sap Flow Meter to measure inaccurately. 166