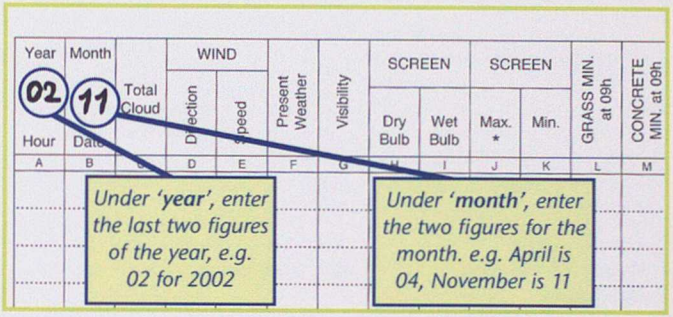
Making climate observations

This guide explains how to make a climatological observation and how to fill in the Pocket Register.

- Please use the Pocket Register (Metform 3100) so that the data are correctly copied onto the Monthly Return of Daily Observations (Metform 3208b), which is sent at the end of each month.
- Only fill in the columns that are relevant to the elements observed at your station.
- If you have problems (e.g. a broken or damaged instrument), please leave the usual entry blank but add a brief note in the remarks column explaining what happened.



✓ Begin a new page of the register at the start of each new month.

Steps required *(when making climate observations)*

Steps	Column	Entry	Units	Example	Check	Notes
Take pen/pencil, Pocket Register/notepad and sunshine card out to the enclosure	A	Obs. time — use two figures		09	Observations should always be taken at 0900 UTC, unless otherwise agreed with Met Office	In British Summer Time, 0900 UTC is 10 a.m. 'clock time'
Note the time and day	B	Day of the month — use two figures		21	Remember leap years	

Steps *(Continued)*	Column	Entry	Units	Example	Check	Notes
Note the amount of sky covered by cloud	C	Total amount of cloud — use one figure	Eighths	3	Only use 9 for sky not visible	The 'Cloud observation and coding' booklet can help you determine cloud amount
Note wind direction	D	Mean wind direction — use two figures	Degrees	07	Use 16 main compass points, converted to degrees; use two figures, e.g. 'westerly' would be 27 *(for 270°)*	Degrees must not exceed 36. Use 00 for calm *(no direction)*
Note wind speed	E	Mean wind speed — use two figures	Knots	09	Estimate with Beaufort scale, then convert to knots	Use 00 for calm *(no speed)*
Note the present weather — is there any precipitation?	F	Present weather *(two figure code)*		17	Make sure present weather matches the rest of the observation *(e.g. if you report drifting snow, there must be a strong wind)*	Always report the most significant aspect of the weather *(e.g. thunderstorm rather than fog)*
Estimate visibility using known distances of local landmarks	G	LOWEST horizontal visibility in any direction *(one figure code)*		5	Make sure your visibility is compatible with the rest of your observation — if you report fog, your visibility MUST be code 3 or less	X means the lowest horizontal visibility in any direction is in the range 0–19 m
Open screen door, read and note dry-bulb temperature	H	Dry-bulb temperature	°C and tenths	7.2	The dry bulb will normally be higher *(warmer)* than the wet bulb. If the air is very moist, such as in fog, the dry- and wet-bulb temperatures may be the same	See 'Temperature and relative humidity' booklet for resolving general thermometer problems
Read and note wet bulb	I	Wet-bulb temperature	°C and tenths	4.8	If wet bulb is higher than dry bulb, or they read the same when the air is dry, the muslin may be dry	When the reading is a whole degree,write the tenths figure as a zero *(e.g. 8.0)*. When temperatures are below freezing, use a minus sign *(e.g. -2.3)*
Read and reset maximum	J	Maximum temperature	°C and tenths	12.4	Daily max. will normally be above the 0900 UTC reading, but can occasionally be the same	

Steps *(Continued)*	Column	Entry	Units	Example	Check	Notes
Read and reset minimum	K	Minimum temperature	°C and tenths	2.7	Daily min. will normally be below the 0900 UTC reading, but can occasionally be the same	See 'Temperature and relative humidity' booklet for resolving general thermometer problems When the reading is a whole degree *(e.g. 8.0)*, write the tenths figure as a zero. When temperatures are below freezing, use a minus sign *(e.g. –2.3)*
Read, then pick up and reset grass minimum	L	Grass minimum temperature	°C and tenths	1.4	If the reading is higher than the air min., check for bubbles in the thermometer — the grass min. will usually be lower than the air min	
Read and reset concrete minimum	M	Concrete minimum	°C and tenths	0.9	If the reading is higher than the air min., check for bubbles in the thermometer — the concrete min. will usually be lower than the air min	
Read soil temperatures	N to R	Soil temperatures	°C and tenths	3.5	At 30 cm or deeper, daily changes in soil temperatures are normally less than 1 °C and rarely fall below freezing in the UK	When the reading is a whole degree *(e.g. 8.0)*, write the tenths figure as a zero. Also, when temperatures are below freezing, use a minus sign *(e.g. –2.3)*
Assess state of ground *(remember codes are different if there is snow/ measurable ice cover)*	S	State of ground if NO snow or measurable ice cover *(one figure code)*		4	Must only be a code in EITHER column S OR T, NOT in both	Must be between 0 and 9, although 5,6,7 and 8 are very rarely used in the UK
	T	State of ground if there IS a covering of snow or measurable ice cover *(one figure code)*		9		

Steps *(Continued)*	Column	Entry	Units	Example	Check	Notes
If snow is present, make three measurements of snow depth and note the average	U	Mean depth of lying snow	Whole cm	3	Only enter a depth if snow, snow grains, hail or ice pellets are covering half the ground or more, otherwise leave blank. Make sure columns S and T are consistent with the snow measurement	If snow depth is negligible and cannot be measured, enter an X in the column
Take the rain measure, lift funnel off the rain gauge, measure and record all the precipitation (carry out in several stages if large amounts are present). Replace the empty bottle and funnel. Empty the rain measure completely.	V	Total precipitation amount	mm and tenths	11.9	If precipitation is falling at the time of observation, neither the record for the 24-hour total 'thrown back' to the previous day, nor that for the 24-hour total following it, are to be recorded as zero. Record 'TRACE' if <0.05 mm is measured, or you definitely know some precipitation has fallen but no rainfall is detected in the gauge	Precipitation includes all rain, snow drizzle, hail, etc. AND any liquid deposits from fog, heavy dew or hoar frost that have accumulated in the rain gauge. Solid precipitation *(e.g. snow)* should be thawed and measured as liquid water. See 'Precipitation' booklet for further guidance
	W,X	No entry needed				
Remove the sunshine card, noting the date and time on card. Replace with new card	Y	Total amount of sunshine	Hours and tenths	0.5	Enter the amount against the day it occurred (measure sunrise to sunset)	One tenth of an hour is six minutes

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