

Aerodrome Actual Weather – METAR decode

Code element	Example	Decode	Notes
1 Identification			
<i>METAR or SPECI</i>	METAR	METAR	METAR — Meteorological Airfield Report, SPECI — selected special (not from UK civil aerodromes)
<i>Location indicator</i>	EGLL	London Heathrow	Station four-letter indicator
<i>Date/Time</i>	291020Z	'ten twenty Zulu on the 29th'	
	AUTO	A fully automated report with no human intervention	AUTO Metars will only be disseminated when an aerodrome is closed or at H24 aerodromes, where the accredited met. observer is on duty break overnight. Users are reminded that reports of visibility, present weather and cloud from automated systems should be treated with caution due to the limitations of the sensors themselves and the spatial area sampled by the sensors.
2 Wind			
<i>Wind direction/speed</i>	31015G27KT	'three one zero degrees, fifteen knots, max twenty seven knots'	Max only given if >= 10KT greater than the mean. VRB = variable. 0000KT = calm. Wind direction is given in degrees true.
<i>Extreme direction variance</i>	280V350	'varying between two eight zero and three five zero degrees'	Variation given in clockwise direction, but only when mean speed is greater than 3 KT.
3 Visibility			
<i>Prevailing visibility</i>	3200	'three thousand two hundred metres'	0000 = 'less than 50 metres' 9999 = 'ten kilometres or more'. No direction is required.
<i>Minimum visibility (in addition to the prevailing visibility if required)</i>	1200SW	'Twelve hundred metres to the south-west'	The minimum visibility is also included alongside the prevailing visibility when the visibility in one direction, which is not the prevailing visibility, is less than 1500 metres or less than 50% of the prevailing visibility. A direction is also added as one of the eight points of the compass.
4 RVR			
	R27R/1100	'RVR, runway two seven right, one thousand one hundred metres'	RVR tendency (U = increasing; D = decreasing; N = no change; not reported in UK at present) may be added after figure e.g. R27R/1100D. P1500 = more than 1500 m; M0050 = less than 50 m. Significant variations — example : R24/0950V1100, i.e. varying between two values. (Not from UK civil aerodromes)
5 Present weather			
	+SHRA	'heavy rain showers'	+ = Heavy (well developed in the case of +FC and +PO); - = Light; no qualifier = Moderate. BC=Patches BL=Blowing BR=Mist DR=Drifting DS=Duststorm DU=Dust DZ=Drizzle FC=Funnel cloud FG=Fog FU=Smoke FZ=Freezing GR=Hail (>5mm) GS=Small hail or snow pellets HZ=Haze IC=Ice crystals MI=Shallow PL=Ice pellets PO=Dust devils PR=Banks RA=Rain SA=Sand SH=Showers SG=Snow grains SN=Snow SQ=Squalls SS=Sandstorm TS=Thunderstorm UP=Unidentified Precipitation (AUTO METARs only) VA=Volcanic ash VC=In vicinity Up to three groups may be present, constructed by selecting and combining from the above. Group omitted if no weather to report.
6 Cloud			
	FEW005 SCT010CB BKN025	'few at five hundred feet, scattered cumulonimbus at one thousand feet, broken at two thousand five hundred feet'	FEW='few' (1-2 oktas), SCT='Scattered' (3-4 oktas), BKN='Broken' (5-7 oktas), OVC='Overcast', NSC='No significant cloud' (none below 5000ft and no TCU or CB). There are only two cloud types reported; TCU=towering cumulus and CB=cumulonimbus. VV///='state of sky obscured' (cloud base not discernable): Figures in lieu of '///' give vertical visibility in hundreds of feet. Up to three, but occasionally more, cloud groups may be reported. Cloud heights are given in feet above airfield height. Cloud amounts are measured in oktas - one okta = one eighth of cloud cover.
7 CAVOK*			
	CAVOK	'cav-oh-kay'	Visibility greater or equal to 10 km and the lowest visibility is not reported, no cumulonimbus or towering cumulus, no cloud below 5000 ft or highest MSA (greater) and no weather significant to aviation.
8 Temp and dew point			

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	10/03	'temperature ten degrees Celsius, dew point three degrees Celsius'	If dew point is missing, example would be reported as 10///. M indicates a negative value
9 QNH			
	Q0995	'nine nine five'	Q indicates the sea level pressure hectopascals. If the letter A is used QNH is in inches and hundredths.
10 Recent weather			
	RETS	'recent thunderstorm'	RE = Recent, weather codes given above. Up to three groups may be present.
11 Wind shear			
	WS RWY24	'wind shear runway two four'	Will not be reported at present for UK aerodromes.
12 Colour states			
			Military reports also display a colour state BLU, WHT, GRN, YLO, AMB or RED, coded according to cloud and visibility. BLACK may also be reported when the runway is unusable.
13 Runway states			
			Refer to the CAA's CAP 746 - Meteorological Observations at Aerodromes
14 Trend			
	BECMG FM1100 23035G50KT TEMPO FM0630 TL 0830 3000 SHRA	'becoming from 1100, 230 degrees 35 KT, max 50 KT, temporarily from 0630 until 0830, 3000 metres, Moderate rain showers'	BECMG=Becoming TEMPO=Temporarily NOSIG=No sig change NSW=No sig weather AT=At FM=From TL=Until NSC=No sig cloud Any of the wind, visibility, weather or cloud groups may be used, and CAVOK. Multiple groups may be present.

*CAVOK will replace visibility and cloud groups or highest MSA (whichever is greater) and no weather significant to aviation.

Example

SAUK02 EGGY 301220 METAR
EGLY 301220Z 24015KT 200V280 8000 —RA FEW010 BKN025 18/15
Q0983 TEMPO 3000 RA BKN008 OVC020=

Decode

EGLY: Issued at 1220Z on 30th. Surface wind: mean 240 deg true, 15 KT; varying between 200 and 280 deg; prevailing vis: 8 km; weather: light rain; cloud: 1-2 oktas base 1000 ft, 5-7 oktas 2500 ft; temperature: +18 °C, dew point: +15°C; QNH: 983 mb; Trend: temporarily 3000 m in moderate rain with 5-7 oktas 800 ft.

Example

SAUK02 EGGY 301220 METAR
EGPZ 301220Z 30025G37KT 270V360 6000 1200NE +SHSN SCT005 BKN010CB
03/M01 Q0999 RETS BECMG AT1300 NSW SCT015=

Decode

EGPZ: Issued at 1220Z on 30th. Surface wind: mean 300 deg true, 25 KT; maximum 37 KT, varying between 270 and 360 deg; prevailing vis 6 km, minimum vis 1200 m (to north-east); heavy shower of snow, Cloud; 3-4 oktas base 500 ft, 5-7 oktas CB base 1000 ft, temperature +3°C, dew point -1°C; QNH 999 mb; Thunderstorm since the previous report; Trend: improving at 1300 Zulu to 10 km or more, nil significant weather, 3-4 oktas 1500 ft.