USAF: Identification FIXED-WEATHER-STATION USAF MASTER STATION CATALOG identifier

The identifier that represents a FIXED-WEATHER-STATION.
Length:6

NCDC: Identification FIXED-WEATHER-STATION NCDC WBAN identifier

The identifier that represents a FIXED-WEATHER-STATION.
Length:5

DATE: Identification GEOPHYSICAL-POINT-OBSERVATION date

The date of a GEOPHYSICAL-POINT-OBSERVATION.
Length:8

HRMN: Identification GEOPHYSICAL-POINT-OBSERVATION time

The time of a GEOPHYSICAL-POINT-OBSERVATION based on Coordinated Universal
Time Code (UTC).
Length:4

I: Identification GEOPHYSICAL-POINT-OBSERVATION data source flag

The flag of a GEOPHYSICAL-POINT-OBSERVATION showing the source or combination
of sources used in creating the observation.
Length:1
Default Value:9
Table of Values:

1: USAF hourly observation, candidate for merge with NCDC Surface Hourly (not yet merged, failed element cross-checks)
2: NCDC hourly observation, candidate for merge with USAF Surface Hourly (not yet merged, failed element cross-checks)
3: USAF hourly/NCDC hourly merged observation
4: USAF Surface Hourly observation
5: NCDC hourly observation
6: ASOS/AWOS observation from NCDC*
7: ASOS/AWOS observation merged with USAF Surface Hourly observation*
8: MAPSO observation (NCDC)*
A: USAF hourly/NCDC hourly precipitation merged observation, candidate for merge with NCDC Surface Hourly (not yet merged, failed element cross-checks)
B: NCDC hourly/NCDC hourly precipitation merged observation, candidate for merge with USAF Surface Hourly (not yet merged, failed element cross-checks)
C: USAF hourly/NCDC hourly/NCDC hourly precipitation merged observation
D: USAF hourly/NCDC hourly precipitation merged observation
E: NCDC hourly/NCDC hourly precipitation merged observation
F: Form OMR/1001 - Weather Bureau city office (keyed data)*
G: SAO surface airways observation, pre-1949 (keyed data)*
H: SAO surface airways observation, 1965-1981 format/period (keyed data)*

I: Climate Reference Network observation*
J: Cooperative Network observation*
K: Radiation Network observation*
L: Data from Climate Data Modernization Program (CDMP) data source*
M: National Renewable Energy Laboratory (NREL)*
N: NCAR / NCDC cooperative effort (various national datasets)*

TYPE: Identification GEOPHYSICAL-REPORT-TYPE code

The code that denotes the type of geophysical surface observation.
Length:5
Default Value:99999
Table of Values:

AERO: Aerological report
AUST: Dataset from Australia*
AUTO: Report from an automatic station
BOGUS: Bogus report
BRAZ: Dataset from Brazil*
COOPD: US Cooperative Network summary of day report*
COOPS: US Cooperative Network soil temperature report*
CRB: Climate Reference Book data from CDMP*
CRN05: Climate Reference Network report, with 5-minute reporting interval*
CRN15: Climate Reference Network report, with 15-minute reporting interval*
FM-12: SYNOP Report of surface observation form a fixed land station
FM-13: SHIP Report of surface observation from a sea station
FM-14: SYNOP MOBIL Report of surface observation from a mobile land station
FM-15: METAR Aviation routine weather report
FM-16: SPECI Aviation selected special weather report
FM-18: BUOY Report of a buoy observation
GREEN: Dataset from Greenland*
MESOS: MESONET operated civilian or government agency
MEXIC: Dataset from Mexico*
NSRDB: National Solar Radiation Data Base
PCP15: US 15-minute precipitation network report*
PCP60: US 60-minute precipitation network report*
S-S-A: Synoptic, airways, and auto merged report
SA-AU: Airways and auto merged report
SAO: Airways report (includes record specials)
SAOSP: Airways special report (excluding record specials)
SHEF: Standard Hydrologic Exchange Format
SMARS: Supplementary airways station report
SOD: Summary of day report from U.S. ASOS or AWOS station*
SOM: Summary of month report from U.S. ASOS or AWOS station*
SURF: Surface Radiation Network report*
SY-AE: Synoptic and aero merged report
SY-AU: Synoptic and auto merged report
SY-MT: Synoptic and METAR merged report
SY-SA: Synoptic and airways merged report

WBO: Weather Bureau Office*
WNO: Washington Naval Observatory

DIR: WIND-OBSERVATION direction angle

The angle, measured in a clockwise direction, between true north and the direction from which the wind is blowing.
Length:3
Scale:1
Unit:Angular Degrees
Default Value:999
Table of Values:

999: Missing. If type code (below) = V, then 999 indicates variable wind direction.

Q: WIND-OBSERVATION direction quality code

The code that denotes a quality status of a reported WIND-OBSERVATION direction angle.
Length:1
Default Value:9
Table of Values:

0: Passed gross limits check
1: Passed all quality control checks
2: Suspect
3: Erroneous
4: Passed gross limits check , data originate from an NCDC data source
5: Passed all quality control checks, data originate from an NCDC data source
6: Suspect, data originate from an NCDC data source
7: Erroneous, data originate from an NCDC data source
9: Passed gross limits check if element is present

I: WIND-OBSERVATION type code

The code that denotes the character of the WIND-OBSERVATION.
Length:1
Default Value:9
Table of Values:

A: Abridged Beaufort
B: Beaufort
C: Calm
H: 5-Minute Average Speed
N: Normal
Q: Squall

R: 60-Minute Average Speed
T: 180 Minute Average Speed
V: Variable

SPD: WIND-OBSERVATION speed rate

The rate of horizontal travel of air past a fixed point.
Length:4
Scale:10
Unit:Meters per Second
Default Value:9999

Q: WIND-OBSERVATION speed quality code

The code that denotes a quality status of a reported WIND-OBSERVATION speed
rate.
Length:1
Default Value:9
Table of Values:

0: Passed gross limits check
1: Passed all quality control checks
2: Suspect
3: Erroneous
4: Passed gross limits check , data originate from an NCDC data source
5: Passed all quality control checks, data originate from an NCDC data source
6: Suspect, data originate from an NCDC data source
7: Erroneous, data originate from an NCDC data source
9: Passed gross limits check if element is present

TEMP: AIR-TEMPERATURE-OBSERVATION air temperature

The temperature of the air.
Length:5
Scale:10
Unit:Degrees Celsius
Default Value:+9999

Q: AIR-TEMPERATURE-OBSERVATION air temperature quality code

The code that denotes a quality status of an AIR-TEMPERATURE-OBSERVATION.

Length:1
Table of Values:

0: Passed gross limits check
1: Passed all quality control checks
2: Suspect

3: Erroneous
4: Passed gross limits check , data originate from an NCDC data source
5: Passed all quality control checks, data originate from an NCDC data source
6: Suspect, data originate from an NCDC data source
7: Erroneous, data originate from an NCDC data source
9: Passed gross limits check if element is present
A: Data value flagged as suspect, but accepted as good value
C: Temperature and dewpoint received from Automated Weather Observing Systems (AWOS) are reported in whole degrees Celsius. Automated QC flags these values, but they are accepted as valid.
I: Data value not originally in data, but inserted by validator
M: Manual changes made to value based on information provided by NWS or FAA
P: Data value not originally flagged as suspect, but replaced by validator
R: Data value replaced with value computed by NCDC software
U: Data value replaced with edited value

DEWPT: AIR-TEMPERATURE-OBSERVATION-DEWPOINT temperature

The temperature to which a given parcel of air must be cooled at constant
pressure and water vapor content in order for saturation to occur.
Length:5
Scale:10
Unit:Degrees Celsius
Default Value:+9999

Q: AIR-TEMPERATURE-OBSERVATION-DEWPOINT quality code

The code that denotes a quality status of the reported dew point temperature.

Length:1
Default Value:9
Table of Values:

0: Passed gross limits check
1: Passed all quality control checks
2: Suspect
3: Erroneous
4: Passed gross limits check, data originate from an NCDC data source
5: Passed all quality control checks, data originate from an NCDC data source
6: Suspect, data originate from an NCDC data source
7: Erroneous, data originate from an NCDC data source
9: Passed gross limits check if element is present
A: Data value flagged as suspect, but accepted as good value

C: Temperature and dewpoint received from Automated Weather Observing Systems (AWOS) are reported in whole degrees Celsius. Automated QC flags these values, but they are accepted as valid.
I: Data value not originally in data, but inserted by validator
M: Manual changes made to value based on information provided by NWS or FAA
P: Data value not originally flagged as suspect, but replaced by validator
R: Data value replaced with value computed by NCDC software
U: Data value replaced with edited value

SLP: ATMOSPHERIC-PRESSURE-OBSERVATION sea level pressure

The air pressure relative to Mean Sea Level (MSL).
Length:5
Scale:10
Unit:Hectopascals
Default Value:99999

Q: ATMOSPHERIC-PRESSURE-OBSERVATION sea level pressure quality code

The code that denotes a quality status of the sea level pressure of an
ATMOSPHERIC-PRESSURE-OBSERVATION.
Length:1
Default Value:9
Table of Values:

0: Passed gross limits check
1: Passed all quality control checks
2: Suspect
3: Erroneous
4: Passed gross limits check , data originate from an NCDC data source
5: Passed all quality control checks, data originate from an NCDC data source
6: Suspect, data originate from an NCDC data source
7: Erroneous, data originate from an NCDC data source
9: Passed gross limits check if element is present

RHX: RELATIVE-HUMIDITY-CALCULATION computed relative humidity

new field description
Length:3
Scale:1
Unit:Percent
Default Value:999