Arable API Data Dictionary

version 1.4

2018-10-29

Contents

Notes on field names:

Because we collect data from the top and bottom of the device, we will indicate these by saying "up-welling" (abbreviated as `uw`) and "down-welling" (abbreviated as `dw`). Upwelling values originate from the bottom of the device and down welling values originate from above. Values for the spectrometer and radiometer will have several values both with the suffix of "uw" and "dw."

hourly			
name	data type	description	unit
time	string	UTC Time (stamp at end)	YYYY-MM-DD HH:MM:SS
device	string	Arable device ID	e.g. A000176
location	string	Location ID	24-digit hex
lat	number	lattitude	Decimal degree
long	number	longitude	Decimal degree
b1dw-b7dw	number	Spectrometer data Bands 1-7 downwelling	W/m^2/band
b1uw-b7uw	number	Spectrometer data Bands 1-7 upwelling	W/m^2/band
lwdw, lwuw	number	Long wave downwelling/upwelling, hourly mean	W/m^2
lfw	boolean	Leaf wetness	[-,1]
p	number	Pressure	kPa
slp	number	Sea Level Pressure	kPa
pardw, paruw	number	Photosynthetically Active Radiation downwelling/upwelling	uE/m^2/s
rh	number	Relative humidity	between 0 and 1
swdw, swuw	number	Short wave downwelling/upwelling, hourly mean	W/m^2
tabove	number	Sky temperature	°C
tair	number	Air temperature	°C
tbelow	number	Leaf/Ground temperature	°C
tdew	number	Dew temperature	°C
prate	number	Precipitation rate	mm/hr
precip	number	Precipitation total	mm

daily			
name	**data type**	**description**	**unit**
time	string	UTC Time (stamp at end)	YYYY-MM-DD HH:MM:SS
device	string	Arable device ID	e.g. A000176
location	string	Location ID	24-digit hex
lat	number	Latitude	Decimal degree
long	number	Longitude	Decimal degree
cgdd	number	Cumulative Growing Degree Days, accumulated from time of install	°C-days
cl	number	Chlorophyll Index	Unitless index
et	number	Evapotranspiration (ET_o)	mm
gdd	number	Growing Degree Days for the day	°C-days
lfairdelta	number	Leaf to Air temperature difference	°C
ndvi	number	Normalized Difference Vegetation Index	Unitless index between -1 and 1
swdw	number	Shortwave Downwelling radiation, daily total	Megajoules/m^2
maxt	number	Daily Maximum Temperature	°C
meant	number	Daily Mean Temperature	°C
mint	number	Daily Minimum Temperature	°C
prate	number	Precipitation rate	mm/day
precip	number	Precipitation for the day	mm
slp	number	Sea Level Pressure	kPa
kc	number	Crop coefficient, K_c	Unitless
etc	number	Crop Evapotranspiration	mm

health			
name	**data type**	**description**	**unit**
time	string	UTC Time (stamp at end)	2017-06-09 20:41:48
device	string	Arable device ID	e.g. A000176
lat	number	latitude	Decimal degree
long	number	longitude	Decimal degree
batt_pct	number	Battery percentage	%
orient_x	number	90 to 90°, where +90 is East facing down (0 is flat)	Degrees
orient_y	number	90 to 90°, where +90 is North facing down (0 is flat)	Degrees
orient_z	number	0-360°, where 0 is North	Degrees
elev	number	elevation	m
tz	number	Timezone, in 15-minute increments	
fw	string	Firmware version	
rssi	number	Cell signal strength	dB
iccid	string	Cellular SIM ID	

aux_raw			
name	**data type**	**description**	**unit**
time	string	Time (stamp at end)	YYYY-MM-DD HH:MM:SS
device	string	Arable device ID	e.g. A000176
location	string	Location ID	24-digit hex
sdi12_value_0-31	number	32 SDI-12 raw voltages	Volts
sdi12_ version	string	SDI-12 Version	
sdi12_vendor_id	string		
sdi12_sensor_model	string	Sensor Model	
sdi12_sensor_version	string	Sensor Version	
sdi12_sensor_sn	string	Sensor Name	
analog	number	Raw voltage	Volts
pulse_ interval	number		
pulse_state	number		
pulse_ falling	number		
pulse_rising	number		