ANL Smart Energy Plaza DER operational data schema

Table 1. List of measurements from ANL Fronius inverters (single phase)

	Measurements	Phases	Unit	Data Type	Field name	Range
1	Inverter AC terminal voltage (L-N phasor)	A/B/C	V	Float	**PhVphA**	
2	Inverter AC branch currents	A/B/C	A	Float	**AphA**	
3	AC frequency		Hz	Float	**Hz**	
4	Inverter active power	Total	W	Float	**W**	
5	Inverter reactive power	Total	VAR	Float	**Var**	
6	Inverter apparent power	Total	VA	Float	**VA**	
7	Power factor		cos()	Float	**PF**	
8	AC lifetime energy production	Total	WH	Float	**WH**	
9	Inverter DC link voltage		V	Float	**DCA**	
10	Inverter DC link current		A	Float	**DCV**	
11	Inverter DC link power		W	Float	**DCW**	
12	DC lifetime energy production	Total	WH	Float	**DCWH**	
13	Inverter Operating status (off, fault, throttling, normal, etc.)			enum16 (categorical)	**St**	
14	Cabinet temperature		degree C	Float	**TmpCab**	
15	Which inverter controls are currently active			bitfield32	**StActCtl**	**0/1/2**
16	Isolation resistance		Ohms	uint16	**Ris**	
17	Setpoint for maximum apparent power		VA	unit16	**VAMax**	
18	Time window for connect/disconnect.		seconds	unit16	**Conn_WinTms**	0-300
19	Connection control.			enum16	**Conn**	0/1
20	Set active power output to a specified level.		% WMax	unit16	**WMaxLimPct**	**0-100**
21	Reactive power in percent of VArMax.		% VArMax	int16	**VArMaxPct**	**0 to +/- 100**
22	Set power factor to specific value - cosine of angle.		cos()	int16	**OutPFSet**	**-1 to 1**
23	Ramp time for moving active power from current setpoint to new setpoint.		Seconds	uint16	**WMaxLimPct_RmpTms**	**0 - 65534**
24	Ramp time for moving reactive power from current setpoint to new setpoint.		Seconds	uint16	**VArPct_RmpTms**	**0 - 65534**
25	Ramp time for moving from current setpoint to new setpoint.		Seconds	uint16	**OutPFSet_RmpTms**	**0 - 65534**
26	Voltage at the PCC.		V	uint16	**VRef**	