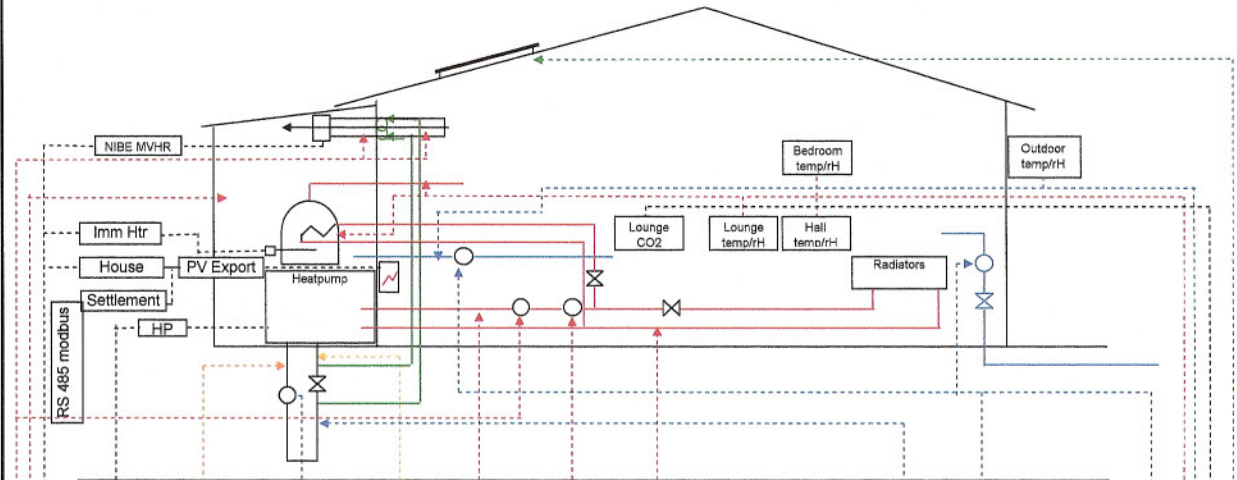


**Penwith Housing Association Retrofit for the Future
t-mac Remote Monitoring (phase 2) Revised 07/10/2011**



Multiple parameters	degC	litres	degC	degC	litres/sec + litres	degC	Off/On	Off/On	degC	litres	degC
10K3A1	Pulse	10K3A1	10K3A1	10K3A1	Pulse	10K3A1	N/O contact	N/O contact	10K3A1	Pulse	10K3A1
Electricity Meters	HP Evap EWT	Ground loop flow rate	HP Evap LWT	HP Space Heating Flow Temperature	HP output flow rate	HP Space Heating Return Temperature	GSHP CH Demand mode	GSHP HWS Demand Mode	Ground loop EWT	HWS total (pulse)	HP Condenser LWT
Modbus	1	2	3	4	5	6	7	8	9	10	11
	degC	RH%	degC	RH%	kWhth	litres	degC	degC	degC	degC	degC
	????	????	????	????	Pulse	Pulse	10K3A1	10K3A1	10K3A1	10K3A1	10K3A1
t-mac (heatpod) phase 2	Conservatory Temperature	Conservatory RH	NIBE h/r coil LAT	NIBE h/r coil LRH	Heat Meter	Total house cw	NIBE h/r coil EAT	HP Condenser LWT contact sensor	HWS (draw off) * pocket sensor	HWS (Cold feed) * pocket sensor	HP Condenser EWT
	12	13	14	15	16	17	18	19	20	21	22

Multiple parameters	degC	RH	degC	RH	degC	RH	degC	RH	Archived data do not use		ppm
4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	4-20mA	Spare	Spare	Lounge CO2
Electricity Meters	Lounge	Lounge	Hall	Hall	Bed 1	Bed 1	External	External	Spare	Spare	Lounge CO2
Modbus	1	2	3	4	5	6	7	8	9	10	11
	kWhe	kWhe	kWhe	kWhe	kWhe						
	Pulse	Pulse	Pulse	Pulse	Pulse						
t-mac (house) phase 1	Monitoring kWh	Stove kWh	PV Export	PV Generation kWh	NIBE Elec Fan+Pump	Spare	Spare	Spare	Spare	Spare	Spare
	12	13	14	15	16	17	18	19	20	21	22

* Moved from Input 9 & 10 Phase 1 t-mac