

JTL FIRMWARE VARIATIONS		LP410 LP411 LP412
VERSION	DESCRIPTION	DATE
v0.00.0	Production issue	Sept 2013
v0.00.1	Compressor availability items (45x) added. Compressor status items (47x) added. Staging integrated error added on item 191 Items 878 and 879 added for base ID and version. HT (CO2) default set added. Plant fault and Low Oil Level alarm items added. Items 80 and 90 represented as a bit pattern. Compressor alarms added on 900 and 910.	Oct 2013
v0.00.2	Compressor disabled if Owner Scope set to None (0). Inverter restart inhibit timer added on item 349. Inverter max starts per hour parameter added on item 348. Inverter included as final stage of fast unload mode. Compressor ok inputs inhibited if compressor disabled or interface fault. Inverter ok input inhibited if inverter disabled or interface fault. Pressure and temperature units selection added. Total capacity (item 203) has 1 decimal place. Low suction pressure safety level max for HT (CO2) extended to 400 psi. Inverter minimum cutout pressure max for HT (HFC) extended to 60 psi. Alarm present feature added for NC. Changes to reduce impact of interface comms faults on system response. Faults added to items 80 and 90. Accumulated time support added.	Dec 2013
v0.00.3	Run hours timers reworked. Averaging features reworked. Heat rejected value added. Largest step capacity for I gain adjustment. Total capacity of system for I gain adjustment. Speed forcing fixed. High discharge pressure input has settable delay. High discharge pressure releases forcing. FFS reworked. Trading name, Site name and Unit Title added. PID items reworked.	June 2014
v0.00.4	Periodic start time settable in hours (0-168) where 0=disabled. Minimum time between periodic starts is 10% of periodic start time. On start of first staged compressor, imminent periodic starts are put back by the minimum time between periodic starts. Inverter I term error input limit introduced. Inverter step change adjustment introduced. ADC reference alarm added. Inverter data moved to dedicated web page. Minimum compressor stop time lower range changed to 1 second. Minimum compressor run time lower range reduced to 1 second. Modbus pre-transmit delay increased.	Dec 2014
v0.00.5	Comprehensive header data added to datalog file. Email features introduced. 8-character Alias added.	Feb 2015