Diagram labels: Expansion valve 1, Expansion valve 2, Thermostat input (High Medium Low Com1, Comp Heat Com2), HP switch, LP switch, 0-10V analogue input (optional), AUX relay, Fault relay, DIP switches, Display, Push button, Indicator lights, High and low pressure transducers, AUX, EXV1, EXV2, HI ME LO C1, COMP HEAT C2, IN #1, IN #2, UC7 Ver.2, Temperzone © 3-2011, DL SL AMB DEI OC IC, B1 A1 G — B A Ground RS485 #1, I2 B2 A2 G — +12V DC B A Ground RS485 #2, V1 — 0-10V out #1, V2 G — 0-10V out #2 Ground, D1 D2 D3 SC — DRED, On G — Remote on/off Ground, 6 Temperature sensor inputs, Earth, Power, High Medium Low Comp Heat, HPT LPT, SSR #1 SSR #2, EARTH, 230 VAC L N — Live Neutral 230V AC, HI ME LO C3 — High Medium Low Com3 Fan output relays, CMC — Compressor contactor, R/V — Reverse cycle valve, SSR #1 — Solid state relay #1, SSR #2 — Solid state relay #2

Faults

LP	Low pressure protection active
HP	High pressure protection active
HI-t	High temperature protection active
FROSt	Indoor coil frost protection active
HI-SL	High suction line temperature protection active
Lo-dSH	Low discharge superheat protection active
Hi-dSH	High discharge superheat protection active
OL	Overload protection active ("IN #2" open circuit)
F10	Outdoor fan fault (no serial communications)
F11	Indoor fan fault (no serial communications)
F12	Low pressure transducer fault (shows as LP)
F13	High pressure transducer fault (shows as HP)
F14	Suction line temperature sensor fault (SL)
F15	Discharge line temperature sensor fault (DL)
F16	De-Ice temperature sensor fault (DEI)
F17	Outdoor coil temperature sensor fault (OC)
F18	Indoor coil temperature sensor fault (IC)
F19	Ambient temperature sensor fault (AMB)
F20	Superheat unknown
F21	Thermostat fault
F22	System 1 or BMS fault (no serial communications)
F23	System 2 fault (no serial communications)
F24	System 3 fault (no serial communications)
F25	System 4 fault (no serial communications)
F26	Invalid DIP switches setting
F27	Invalid fan selection
F28	Invalid economiser selection
F29	Controller overheating
F30	Supply voltage out of bounds
F31	A slave unit reports a fault
F32	0-10V input fault
F33	High discharge superheat protection active
F34	Problem with pressures or transducer readings
F35	Reverse cycle valve fault
F36	Invalid thermostat configuration

Display Messages (Normal Operation)

UC7 X.XX	Name and software version (shown only after power-on) e.g. 4.95
0 (flashing)	Expansion valves are zeroing (shown only after power-on)
dELAY	Unit waits for a random delay time (up to 35s, shown only after power-on)
• (flashing)	Normal mode
– (flashing)	Unit is OFF by Remote On/Off signal
dE-ICE	De-icing the outdoor coil
c	Commissioning mode (lasts for 30 minutes)
t	Test mode (lasts about 1 minute)
HOLd	Compressor held-on or held-off by a timer
dr	DRED energy consumption restriction active

Monitoring of pressures and temperatures.
Press the push button to cycle through the following options (round robin fashion):

• or c	No temperature display (default)
SLP	Suction line pressure (kPa)
Et	Evaporating temperature (°C)
SLt	Suction line temperature (°C)
SSH	Suction side superheat (K)
dLP	Discharge line pressure (kPa)
Ct	Condensing temperature (°C)
dLt	Discharge line temperature (°C)
dSH	Discharge side superheat (K)

Test Function

To activate test mode:
• Thermostat and compressor must be OFF.
• Press and hold pushbutton for 2 to 4 seconds until the display shows 't', then release. Test mode starts immediately.
Outputs are activated one by one in the order listed; duration 3 seconds each and with 3 seconds pause between: **R/V, CMC, OD fan Lo-Med-Hi, ID fan Lo-Med-Hi, SSR1, SSR2, AUX.** When the test sequence is completed the unit returns to normal mode.

To activate commissioning mode:
• Thermostat and compressor must be OFF.
• Press and hold pushbutton for 6 to 8 seconds until the display shows '**c**', then release. Commissioning mode starts immediately.
During commissioning mode timers are reduced to be able to quickly test the unit. Commissioning mode ends after 30 minutes and returns to normal mode.