DISPLAY CABINET CONTROLLER LCIL

FOR MECHANICAL AND ELECTRONIC EXPANSION VALVES

Type LCIL is a unit suitable for the **control** of Linde single evaporator ATR refrigerated display cabinets with all types of defrost. The unit controls the cabinet temperature by measuring 3 air temperatures and operating a pulsed expansion valve, liquid solenoid valve or condensing unit.

The pulsed expansion valve is controlled using a pressure transducer and suction temperature sensor.

The unit can be set for terminating or **controlling the defrost**. Defrost can be detected by a sensor mounted on the suction line, JTL Network communications, a voltage free contact closure or a real time clock within the unit. Up to 12 defrosts per day can be achieved by setting a schedule of defrost start times and durations in the unit.

The defrost is terminated when the temperature of the air leaving the evaporator or the evaporator temperature exceeds an adjustable **defrost termination** value, or when an adjustable time is reached. Evaporator **fans** are controlled during defrost.

The unit detects and **alarms high temperatures**. The alarm level and its response time are adjustable. High temperature alarms are cancelled during defrost.

Cabinet temperatures together with alarm and defrost mode messages can be indicated locally by using JTL **display** units.

Type LCIL provides a comprehensive alarm reporting, **data-logging** and **remote access** when connected to a JTL Communications Unit.

Type LCIL can be used with off cycle, electric, 2, 3 pipe or ring main gas defrost systems.

FEATURES

- Linde ATR compatible
- Suction pressure input
- Temperature measurement inputs
- Temperature display drives
- Relay outputs
- Maintenance unit socket
- JTL Network communications sockets
- Network initiated defrost option
- Network initiated lighting control
- Network initiated blind control
- Network initiated shutdown facility
- Defrost input contact
- Suction temperature defrost detection
- Up to 12 timed defrosts per day
- Blind and lighting override input contact
- Default data set-up switches
- Non-volatile set-up memory
- Watchdog to ensure reliable operation
- Battery supported data-logging memory
- Battery supported real time clock

HARDWARE

- Temperature sensor inputs 5
- Sensor types supported . . . . . JTL
- Temperature display drives . . . . . 2 (using CONVD4 splitter)
- Voltage-free contact outputs 5
- Optionally isolated high voltage inputs . . . . . 2 (240 V max)
- Data logging memory capacity . . . . . 930 points on 4 channels

TECHNICAL SPECIFICATION

Temperature sensor input 1	Air On (Well case)
Temperature sensor input 2	Air Off
Temperature sensor input 3	Evaporator
Temperature sensor input 4	Suction Line
Temperature sensor input 5	Air on (Half glass door)
Suction pressure input	4-20 mA
Refrigerant choice	R22, R502, R404A, R404B, R407, R507, R408
Input 1	Lighting and Blind override
Input 2	Defrost initiation
Output 1	Blind closed/Lights off
Output 2	Fan Control
Output 3	Liquid valve control (Normally closed valve)
Output 4 (changeover contact)	Defrost control
Output 5	Pulsed expansion valve
Relay output rating	2 A resistive (240 V max)
Communications port	RS485 2 wire
Communications data rate	4800/38400 baud (auto detected)
Communications protocol	JTL zone protocol
Controller dimensions (L x W x H)	208 x 167 x 43 mm
Controller weight	0.52 kg
Power supply (Standard)	230 V 48-62 Hz
(Optional)	110 V

ORDERING INFORMATION

LCIL	Controller

Power Supply Options:

For 110 V append - 110 to order code

CE This unit conforms with the relevant EU standards when fitted in accordance with its installation instructions.

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JTL SYSTEMS LTD

Sales: 41 Kingfisher Court, Hambridge Road, NEWBURY, Berkshire, RG14 5SJ Tel: (01635) 263646
Service: 1 Petre House, Petre Street, SHEFFIELD, S. Yorks, S4 8LJ Tel: (0114) 256 0908