#### **UA range (TEV control)**

Introduced 2011

Includes JTL patented PREDICT defrost scheduling

Din rail enclosure with:

5 electromechanical relays

7 temperature sensors (2 part screw connections)

1 socket for Mark 2 LCD displays (RJ45)

2 voltage free digital inputs

2 JTL network connections (RJ8)

#### Variants

Product	Introduced	Withdrawn	Spares until	Senor type	Features
UACN	2013			5K thermistor	PREDICT defrost scheduling. Functionally replaces RCCS, RCCT, LCCS, LCCT, LACN
UACT	2011			5K thermistor	6 relays for control of 4 evaporators coldrooms with independent defrost termination
UACA	tba			PT1000	PREDICT defrost scheduling

# **UA range (PEV control)**

Introduced 2012

Includes JTL patented SUCCEEDS pulsed expansion valve control

Includes JTL patented PREDICT defrost scheduling

Din rail enclosure with:

- 4 electromechanical relays
- 1 solid state relay
- 5 temperature sensors (2 part screw connections)
- 1 pressure sensor (2 part screw connections)
- 1 sockets for Mark 2 LCD displays (RJ45)
- 2 voltage free digital inputs
- 2 JTL network connections (RJ8)

### Variants

Product	Introduced	Withdrawn	Spares until	Currently replace with	Sensor type	Features
UACJ	tba				5k thermistor	PREDICT defrost scheduling. Functionally replaces LCIS, LACE
UACI	2012				PT1000	PREDICT defrost scheduling Functionally replaces LCIS, LACE, LACI

# **UA range (Propotional control)**

Introduced 2016

Din rail enclosure with:

- 4 electromechanical relays
- 3 temperature sensors (2 part screw connections)
- 1 analogue input (0-10 V)
- 2 analogue outputs (0-10 V
- 4 voltage free digital inputs
- 1 Socket for mark 2 digital display (RJ45)
- 2 JTL network connections (RJ8)

# <u>Variants</u>

Product	Introduced	Withdrawn	Spares until	Currently replace with	Sensor type	Features
UACU	2016				5k thermistor	Propotional output for flow control

#### LA range (TEV control)

Introduced 2004

Includes JTL patented PREDICT defrost scheduling

#### Comprises 1 board with:

- 5 electromechanical relays
- 7 5k thermistor temperature sensors (2 part screw connections)
- 2 sockets for Mark 2 LED displays (RJ45 & 7 pin DIN)
- 2 opto isolated digital inputs (230 V)
- 2 JTL network connections (RJ8)

#### **Variants**

Product	Introduced	Withdrawn	Spares until	Currently replace with	New designs	Features
LACN	2004	2013	2017	UACN-SPR	UACN	PREDICT defrost scheduling. Functionally replaces RCCS, RCCT, LCCS, LCCT
LACT	2007	2011			UACT	6 relays for control of 4 evaporators coldrooms with independent defrost termination

# LA range (PEV control)

Introduced 2004

Includes JTL patented SUCCEEDS pulsed expansion valve control

Includes JTL patented PREDICT defrost scheduling

# Comprises 1 board with:

- 4 electromechanical relays
- 1 solid state relay
- 5 temperature sensors (2 part screw connections)
- 1 pressure sensor (2 part screw connections)
- 2 sockets for Mark 2 LED displays (RJ45 & 7 pin DIN)
- 2 opto isolated digital inputs (230 V)
- 2 JTL network connections (RJ8)

### Variants

Product	Introduced	Withdrawn	Spares until	Currently replace with	Sensor type	New designs	Features
LACE	2004	2012			5k thermistor	UACI (PEV) UACN (TEV)	PEV and TEV control PREDICT defrost scheduling. Functionally replaces LCIS
LACI	2007	2012			PT1000	UACI	RJ45 display socket only

### LC range (upgrade 2)

Original models introduced 1996

Withdrawn 2004

Includes JTL patented SUCCEEDS pulsed expansion valve control

### Comprises 1 board with:

- 4 electromechanical relays
- 1 solid state relay
- 5 5k thermistor temperature sensors (DIN)
- 1 pressure sensor (DIN)
- 17 pin DIN socket for Mark 1 LED display
- 2 opto isolated digital inputs (230 V)
- 2 JTL network connections (DIN)

#### **Variants**

Product	Introduced	Withdrawn	Spares until	Currently replace with	New installations	Features
LCIS	1996	2004			UACI (PEV) UACN (TEV)	PEV and TEV control

# LC range (upgrade 1)

Original models introduced 1994 Withdrawn 2004 Spare parts still available

Comprises 1 board with:

- 5 electromechanical relays
- 7 5k thermistor temperature sensors (DIN) (See note 1)
- 17 pin DIN socket for Mark 1 LED display
- 2 opto isolated digital inputs (230 V)
- 2 JTL network connections (DIN)

### **Variants**

Product	Introduced	Withdrawn	Spares until	Currently replace with	New installations	Features
LC2C	1993					Staged control for 2 compressors and all defrost types
LCCE	1995	1996	2017	UACN-USPR2	UACN	For Timed Electric Defrost
LCCP	1994	1998	2017	UACN-USPR2	UACN	Gas defrost
LCCU	2002	2004			UACN	LCPT with screw terminals for temperature sensors Keyswitch display support

Note 1: LCCE and LCCP support 2k thermistor sensors

### LC range (original)

Original models introduced 1993 Withdrawn 1996 Replacement parts available

Comprises 1 board with:

- 4 electromechanical relays
- 7 2k and 5k thermistor temperature sensors (DIN)
- 1 5 pin DIN socket for Mark 1 LED displays
- 2 opto isolated digital inputs (230 V)
- 1 JTL network connections (screw)

#### **Variants**

Product	Introduced	Withdrawn	Spares until	Currently replace with	New installations	Features
LCCS	1991	1996	2002	UACN-USPR1	UACN	Gas defrost
LCCT	1993	1996	2002	UACN-USPR1	UACN	Real time defrost clcok

# **EC** range

Introduced 1986 Withdrawn 1996 Spare parts still available

Comprises 1 board with:

- 2 electromechanical relays
- 7 5k thermistor temperature sensors (DIN) (See notes 2 4)
- 1 5 pin DIN socket for Mark 1 LED displays
- 2 volt free digital inputs (low voltage)
- 2 JTL network connections (DIN)

#### **Variants**

Product	Introduced	Withdrawn	Spares until	Currently replace with	New installations	Features
ECCR	1989	1991	1992	UACN-USPR1	UACN	For REA Bott
ECCS	1988	1996	2010	UACN-USPR1	UACN	Off cycle defrost
ECCT	1990	1996	2010	UACN-USPR1	UACN	Real time defrost clock

Note 2: ECCR supports 2k2 thermistor sensors

Note 3: ECCS from v4 supports 2k thermistor sensors

Note 4: ECCT from v3 supports 2k thermistor sensors

### **RC** range

Introduced 1986 Withdrawn 1993 Replacement parts available

Comprised 2 boards joined by a flexible cable with:

- 4 electromechanical relays
- 7 5k thermistor temperature sensors (DIN) (See notes 5, 6)
- 1 5 pin DIN socket for Mark 1 LED displays
- 1 volt free digital input (low voltage)
- 2 JTL network connections (DIN)

### Variants:

Product	Introduced	Withdrawn	Spares until	Currently replaced with	New installations	Features
RCCS	1986	1993	2002	UACN-USPR1	UACN	Gas defrost
RCCT	1988	1993	2002	UACN-USPR1	UACN	Real time defrost clock

Note 5: RCCS from v17 supports 2k thermistor sensors

Note 6: RCCT from v4 supports 2k thermistor sensors