



### Ir33+ Refrigeration Series

#### Set Point

PRESS & HOLD SET for 1 second "St" will be displayed.

On release of the button the current value of set point will be displayed.

PRESS ARROW UP or DOWN to set the desired value for set point.\*\*

PRESS "SET" to confirm the value.

#### Block level access

Once level F or C has been accessed and a parameter code is displayed:

PRESS & HOLD PRG for 1 second to display block code.

PRESS ARROW UP or DOWN to select the desired block code.

PRESS SET to enter the block. The first parameter of this block will be displayed.

#### Please note

Please read these instructions in conjunction with the parameter list.

It is recommended that the controllers be programmed before connecting or activating the plant to be controlled (eg. Compressors...).

\*\* If the controller keypad is locked, the value will not change. See parameter H2.

#### Literature available

Ir33+ User manual: +03Z0028EN

Smartcella User manual: +0300084EN

#### Frequent parameters (F)

PRESS & HOLD PRG for approx 5 seconds. "0" will then flash, PRESS SET

A) PRESS ARROW UP or DOWN until reaching the parameter to be modified.

B) PRESS SET to display the associated value.

C) PRESS ARROW UP or DOWN to increase or decrease the value.

D) PRESS SET to temporarily save the value.

Repeat the operations A - D to set other parameters.

E) PRESS & HOLD PRG for 5 seconds to permanently save the new values.

#### All parameters (C)

PRESS & HOLD PRG for 5 seconds until the display flashes 0.

PRESS ARROW UP or DOWN to enter the password value "22" then SET.

Repeat the operations A - E to set other parameters and save.

#### HACCP parameters

To view the HACCP alarms details:

PRESS & HOLD SET & AUX, "HAn" will be displayed.

To clear the HACCP alarms when in HACCP menu:

PRESS & HOLD SET & AUX for 5 seconds, "RES" will be displayed.

## Ir33+ Summary of operating parameters

Code	Block	Parameter	Model	Unit	Type	Min.	Max.	Def.	New
/2	Pro	Measurement stability	MSC	-	C	1	15	4	
/3	Pro	Probe display speed	MSC	-	C	0	15	0	
/4	Pro	Virtual probe	MSC	-	C	0	100	0	
/5	Pro	Select °C or °F (0=°C)	MSC	flag	C	0	1	0	
/6	Pro	Decimal point (0=decimal point)	MSC	flag	C	0	1	0	
/t1	Pro	Sensor shown on controller display (1=Control sen)	MSC	-	C	1	7	1	
/tE	Pro	Sensor shown on remote display	MSC	-	C	0	6	0	
/P	Pro	Type of probe (0=standard NTC, 1=high temp NTC)	MSC	-	C	0	1	0	
/A2	Pro	Probe 2 configuration (eg 0=absent, 1=product probe, 2=evaporator probe, 3=condenser probe, 4=antifreeze)	M-C	-	C	0	4	2	
/A3	Pro	Probe 3 configuration (options: same as /A2)	MSC	-	C	0	4	0	
/A4	Pro	Probe 4 configuration (options: same as /A2)	MSC	-	C	0	4	0	
/c1	Pro	Calibration of probe 1	MSC	°C/°F	C	-20	20	0.0	
/c2-5	Pro	Calibration of probe 2-5 /c2=probe 2, /c3=probe 3, /...	MSC	°C/°F	C	-20	20	0.0	
St	Ctl	Temperature set point (IR33 + medium temperature)	-S-	°C/°F	F	r1	r2	2.0	
St	Ctl	Temperature set point (IR33 + low temperature)	--C	°C/°F	F	r1	r2	-18.0	
St	Ctl	Temperature set point (Smartcella)	-SC	°C/°F	F	r1	r2	0.0	
rd	Ctl	Controller differential	-SC	°C/°F	F	0.1	20	2.0	
m	Ctl	Dead Zone (when used 1 Heat 1 Cool)	-SC	°C/°F	C	0	60	4	
rr	Ctl	Reverse (heat) differential in dead zone control	-SC	°C/°F	C	0.1	20	2	
r1	Ctl	Minimum Set Point allowed	MSC	°C/°F	C	-50	r2	-50	
r2	Ctl	Maximum Set Point allowed	MSC	°C/°F	C	r1	200	60	
r3	Ctl	Mode (0=cool with defrost,1=cool only, 2=heat)	-SC	flag	C	0	2	0	
r4	Ctl	Value to increase Set Point by from Digital Input	MSC	°C/°F	C	-20	20	3.0	
r5	Ctl	Enable temperature monitoring	MSC	flag	C	0	1	0	
rt	Ctl	Temperature monitoring interval	MSC	hours	F	0	999	-	
rH	Ctl	Max temperature recorded during period rt	MSC	°C/°F	F	-	-	-	
rL	Ctl	Min temperature recorded during period rt	MSC	°C/°F	F	-	-	-	
c0	CnP	Comp. and fan start delay at power up	-SC	min	C	0	15	0	
c1	CnP	Minimum time between 2 comp starts	-SC	min	C	0	15	0	
c2	CnP	Minimum compressor OFF time	-SC	min	C	0	15	2	
c2	CnP	Minimum compressor OFF time (Smartcella)	-SC	min	C	0	15	0*	
c3	CnP	Minimum compressor ON time	-SC	min	C	0	15	0	
c4	CnP	Duty setting	-SC	min	C	0	100	0	
cc	CnP	Duration of continuous cycle	-SC	hours	C	0	15	0	
c6	CnP	Alarm bypass after continuous cycle	-SC	hours	C	0	15	2	
c7	CnP	Maximum Pump-Down (PD) time	-SC	sec	C	0	900	0	
c8	CnP	Comp. start delay after opening Pump Down valve	-SC	sec	C	0	60	5	
c9	CnP	Enable autostart with Pump Down operation	-SC	flag	C	0	1	0	
c10	CnP	Select Pump-Down by time or pressure switch	-SC	flag	C	0	1	0	
c11	CnP	Second compressor start delay	-SC	s	C	0	250	4	
d0	dEF	Defrost type (0=elec / temp,1=hot gas / temp 2=elec / time, 3=hot gas / time, 4=elec & temp / time)	-SC	flag	C	0	4	0	
dl	dEF	Interval between defrosts (if not using real time)	-SC	hours	F	0	250	8	
dt1	dEF	End defrost temperature, (if d0= 0 or 1)	-SC	°C/°F	F	-50	200	4.0	
dt2	dEF	End defrost temperature, aux evap (if selected)	-SC	°C/°F	F	-50	200	4.0	

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Code	Block	Parameter	Model	Unit	Type	Min.	Max.	Def.	New
dP1	dEF	Maximum defrost duration	-SC	min	F	1	250	30	
dP2	dEF	Maximum defrost duration, 2nd evap (if selected)	-SC	min	F	1	250	30	
d3	dEF	Defrost- delay starting defrost after stopping comp	-SC	min	C	0	250	0	
d4	dEF	Defrost at power up (0=no, 1=yes)	-SC	flag	C	0	1	0	
d5	dEF	Defrost delay at power up (if d4=1)	-SC	min	C	0	250	0	
d6	dEF	Display during def.(0=dF (flash), 1=locked, 2=dEF)	-SC	-	C	0	2	1	
dd	dEF	Dripping time after defrost	-SC	min	F	0	15	2	
d8	dEF	Bypass alarms after defrost	-SC	hours	F	0	15	1	
d8d	dEF	Alarm delay after door open - from dig input	-SC	min	C	0	250	0	
d9	dEF	Defrost priority over compressor protection	-SC	flag	C	0	1	0	
d1/d1/2	dEF	Display defrost probe temp d/1=def P1, d/2=def P2)	MSC	°C/°F	F	-	-	-	
dC	dEF	Time basis for defrost (0=hr/min, 1=min/sec)	-SC	flag	C	0	1	0	
d10	dEF	Compressor run time for demand defrost	-SC	hours	C	0	250	0	
d11	dEF	Comp. run time temp set for demand defrost	-SC	°C/°F	C	-20	20	1.0	
d12	dEF	Advanced defrost enable	-SC	-	C	0	3	0	
dn	dEF	Nominal defrost duration (smart defrost)	-SC	-	C	1	100	65	
dH	dEF	Proportional factor for variation in 'dl' (smart DF)	-SC	-	C	0	100	50	
A0	ALn	Alarm and fan differential	MSC	°C/°F	C	0.1	20	2.0	
A1	ALn	Type of alarm for AL and AH (0=relative, 1=absolute)	MSC	flag	C	0	1	0	
AL	ALn	Low alarm temp (see A1 for absolute or relative)	MSC	°C/°F	F	-50	200	0.0	
AH	ALn	High alarm temp (see A1 for absolute or relative)	MSC	°C/°F	F	-50	200	0.0	
Ad	ALn	Low and high temperature alarm delay	MSC	min	F	0	250	120	
A4	ALn	Configuration of digital input 1	-SC	-	C	0	14	0	
A5	ALn	Configuration of digital input 2	MSC	-	C	0	14	0	
A6	ALn	Duty setting for comp from digital in alarm	-SC	min	C	0	100	0	
A7	ALn	External alarm delay if using digital input	-SC	min	C	0	250	0	
A8	ALn	Enable alarms 'Ed1' and 'Ed2' (defrost end on time)	-SC	flag	C	0	1	0	
Ado	ALn	Door switch light management mode	MSC	flag	C	0	1	0	
Ac	ALn	High condenser temperature alarm set point	-SC	°C/°F	C	0.0	200	70.0	
AE	ALn	High cond. temp. alarm differential	-SC	°C/°F	C	0.1	20	10.0	
Acd	ALn	High cond. temp. alarm delay	-SC	min	C	0	250	0	
AF	ALn	Light sensor off time	-SC	s	C	0	250	0	
ALF	ALn	Antifreeze alarm set point	MSC	°C/°F	C	-50	200	-5	
AdF	ALn	Antifreeze alarm delay	MSC	min	C	0	15	1	
F0	Fan	Fan management (0=according to F2,F3,Fd 1=amb - evap, 2=evap temp)	---C	flag	C	0	2	0	
F1	Fan	Fan start temperature	---C	°C/°F	F	-50	200	5.0	
F2	Fan	Fans cycle with comp (0=no, 1=yes)	---C	flag	C	0	1	0	
F3	Fan	Fans in defrost (0=on, 1=off)	---C	flag	C	0	1	1	
Fd	Fan	Fans delay after dripping	---C	min	F	0	15	1	
F4	Fan	Condenser fan off temperature	MSC	°C/°F	C	-50	200	40.0	
F5	Fan	Condenser fan differential	MSC	°C/°F	C	0.1	20	5.0	
H0	CnF	Serial address	MSC	-	C	0	207	195*	
H1	CnF	Function of relay 4 (0,1=alarm, 2=aux, 3=light..)	MSC	flag	C	0	11	1	
H2	CnF	Keypad and IR locking	MSC	flag	C	1	6	1	
H4	CnF	Disable buzzer (0=enabled, 1=disabled)	MSC	flag	C	0	1	0	

Code	Block	Parameter	Model	Unit	Type	Min.	Max.	Def.	New
H5	Cnf	Function of relay 5	MSC	flag	C	0	11	1	
H6	CnF	Buttons to lock when keypad locked	MSC	-	C	0	255	0	
H8	CnF	Select output to activate with time band	MSC	flag	C	0	1	0	
H9	CnF	Enable set point change with time	MSC	flag	C	0	1	0	
Hdh	CnF	Anti-sweat heater control offset	MSC	°C/°F	C	-50	200	0	
HAn/HFn	HcP	Number of events HA/HF occurred	MSC	-	C	0	15	-	
HA/HF	HcP	Date/time of most recent HA/HF	MSC	-	C	-	-	-	
y__	HcP	Year	****	years	*	0	99	-	
N__	HcP	Month	****	months	*	1	12	-	
d__	HcP	Day	****	days	*	1	7	-	
h__	HcP	Hour	****	hours	*	0	23	-	
n__	HcP	Minute	****	min	*	0	59	-	
t__	HcP	Duration	****	hours	*	0	99	-	
Htd	HcP	HACCP alarm delay	MSC	min	C	0	250	0	
td1-td8	rtc	Defrost time band 1/8	-SC	-	C	-	-	-	
d__	rtc	Day (11=everyday)	****	days	*	0	11	0	
h__	rtc	Hour	****	hours	*	0	23	0	
n__	rtc	Minute	****	min	*	0	59	0	
ton	rtc	Light/aux ON time setting	-SC	-	C	-	-	-	
d__	rtc	Day	****	days	*	0	11	0	
h__	rtc	Hour	****	hours	*	0	23	0	
n__	rtc	Minute	****	min.	*	0	59	0	
tof	rtc	Light/aux OFF time setting	-SC	-	C	-	-	-	
d__	rtc	Day	****	days	*	0	11	0	
h__	rtc	Hour	****	hours	*	0	23	0	
n__	rtc	Minute	****	min.	*	0	59	0	
tc	rtc	Real time clock - current date/time setting	MSC	-	C	-	-	-	
y__	rtc	Current year	****	years	0	0	99	00	
N__	rtc	Current month	****	months	1	1	12	1	
d__	rtc	Current day of the month	****	days	1	1	31	1	
u__	rtc	Current day of the week (1=Monday)	****	days	6	1	7	6	
h__	rtc	Current hour	****	hours	0	0	23	0	
n__	rtc	Current minute	****	min	0	0	59	0	

\* Default value for ir33+, Smartcella C2 = 0, H0 = 1

Code	Description	Typical cause & parameters associated
rE	Virtual control probe fault	Control probe error
E0	Probe 1 fault	Wiring or faulty probe
E1	Probe 2 fault	Wiring or faulty probe
E2	Probe 3 fault	Wiring or faulty probe
__	Probe not enabled	Parameter /tI or /tE not set correctly
LO	Low temperature alarm	Refrigeration fault, check A1, AL & Ad
HI	High temperature alarm	Refrigeration fault, check A1, AH & Ad
IA	Immediate alarm from external contact	External switch wired in digital input to alarm, A4, A5
Etc	Time clock error	Reset clock - parameter tc
CHt	Condenser high temperature alarm	Condenser fault, check Ac
Afr	Antifreeze alarm	Antifreeze probe parameters ALf and Adf