PR2x Series

The PR2x Series of products are a compact design refrigeration controller with energy management options.

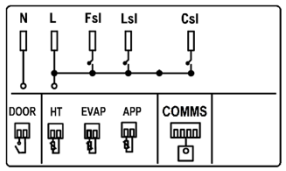
The Sealed fascia with touch controls provide a slick front easy to operate and maintain clean.

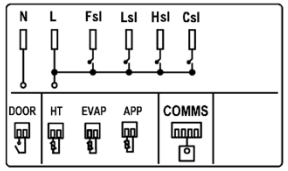
LED INDICATOR	
	Door
	Compressor
	Evaporator fan

BUTTONS	
	Up
	Set
	Down

ELECTRICAL CONNECTIONS

All mains AC voltage input and output connections should be made with 90o Female Spade/Tab insulated connectors, 6.3mm (1/4 inch) wide, using wire of appropriate current rating.





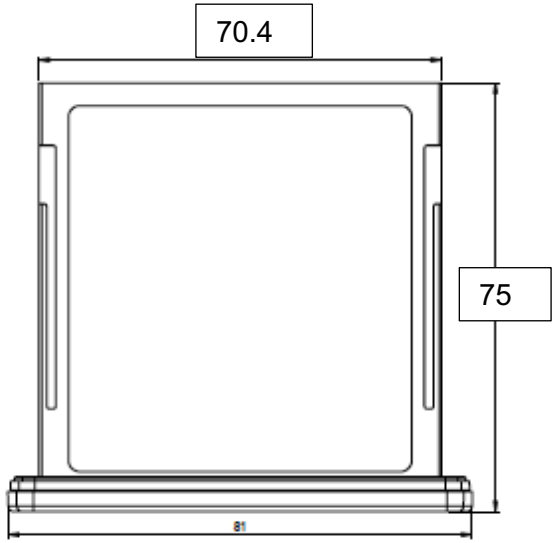
N - Mains Neutral (in)
L - Mains Live (in)
FSL - Fan switched live (out)
CSL - Compressor switched live (out)
LSL - Light switched live (out)
HSL - Heater switched live (out)
Communications port
Door switch input
Evap sensor input
Condenser sensor input
Appliance sensor input

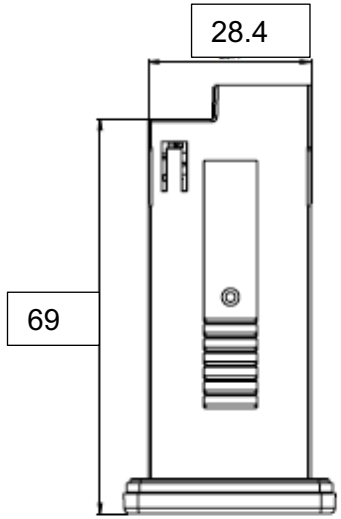
Approved Ratings		Maximum IEC rating 240AC
PR23 EMD 3 OUTPUTS	Compressor	9(9) A p.f. 0.6
	Lights	2(2) A p.f. 0.6
	Fan Motor	2(2) A p.f. 0.6
PR24 EMD 4 OUTPUTS	Compressor	9(9) A p.f. 0.6
	Lights	2(2) A p.f. 0.6
	Fan Motor	2(2) A p.f. 0.6
	Heater	2(2) A p.f. 0.6

elstat

ENVIROMENTAL RATINGS

Characteristic	Value
Ingress Protection	IP65 Front Fascia, IP00 at rear
Maximum Operating Temperature	50oC (122oF)





TEMPERATURE INPUT RANGES

Sensor	Input Range
Appliance Sensor	-35oC to +50oC
Condenser Sensor	-35oC to +50oC
Evaportor Sensor	-35oC to +50oC

PRODUCT APPROVALS

CE	**CONFORMITÉ EUROPÉENE / EUROPEAN CONFORMITY (CE)** EN60730-1 EN60730-2-9
IEC	**INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)** IEC60730-1 IEC60730-2-9 Glow wire: IEC60335-1
EMC	**ELECTROMAGNETIC COMPATIBILITY (EMC)** EN55014-1, EN55014-2, EN61000-6-1, EN61000-6-3, EN61000-3-2, EN61000-3-3

ID	Description	Default	Min	Max	Precision	Unit	Definition
SP	**S**et Point	3	-10	10	0.1	Celsius	Temperature at which the compressor is switched OFF
DF	**D**ifferential	4	0	10	0.1	Celsius	Temperature increase above SP at which compressor is switched ON
SS	Savings Set Point	8	-10	10	0.1	Celsius	Temperature at which the compressor is switched OFF during Energy Saving Mode
SD	Savings Differential	4	0	10	0.1	Celsius	Temperature increase above SSP at which compressor is switched ON during Energy Savings Mode
C1	APP temp Calibration	0	-10	10	0.1	Celsius	Appliance temperature calibration factor added to app temperature measurement
C2	EVAP temp Calibration	0	-10	10	0.1	Celsius	Evaporator temperature calibration factor added to evap temperature measurement
UP	Uninterrupted Pull-down	20	0	30	1	Celsius	App temperature that, If exceeded, initiates an uninterrupted pull-down. 0 = disabled (no uninterrupted pull-down) The parameter should not be set less than SP + DIF or DTD whichever is the greater
SC	Season Offset	6	0	5	1	Integer	Offset value for the different Seasons ONLY if Season Flag = 1(Summer)
CF	Temperature Scale	0	0	1	n/a	Integer	Configures the controller to display temperature in either Celsius or Fahrenheit.
RT	Rest time	3	1	30	1	minutes	Minimum time before compressor can be switched ON after being switched OFF
DP	Display Mode	1	0	1	n/a	Integer	0 = 'USE' on display during Operational Mode, 1 = Display Temp during Operational 2= Display Manipulation
DE	Defrost Interval	6	0	199	1	hours	Length of time between defrost cycles
DD	Defrost duration	15	1	199	1	mins	Length of the defrost period
DT	Defrost termination Temperature	10	-5	30	1	Celsius	Temperature threshold that, if reached during a defrost period, causes the defrost period to be terminated
DR	Defrost method	0	0	2	n/a	Integer	0 = Time based defrost (APP temp or time based termination) 1 = Temperature based defrost (EVAP sensor activation / termination) 2 = Time based (EVAP sensor termination) **Note when DF = 0, EVAP sensor input is disabled**
DA	Defrost activation temperature	-6	-30	5	1	Celsius	Sets the temperature at which defrost on demand is activated. The defrost activation temperature minimizes the risk of evaporator icing up.
DH	Heating element defrost	0	0	6	n/a	Integer	Controls the behaviour of heating element supplemented defrost If [parameter dH] = 0 then the fan shall be switched ON Heater will be off. Heater will be on for nonzero value of [parameter dH] If [parameter dH] = 1 then the fan shall be switched ON regardless of any other parameter given to FN and FF or fan behavior during the active defrost cycle If [parameter dH] = 3 then the fan shall remain OFF for 1minute following the end of the active defrost cycle regardless of any other parameter of fan behavior given to FN and FF If [parameter dH] = 4 then the fan shall remain OFF for 2 minutes following the end of the active defrost cycle regardless of any other parameter of fan behavior given to FN and FF If [parameter dH] = 5 then the fan shall remain OFF for 3 minutes following the end of the active defrost cycle regardless of any other parameter of fan behavior given to FN and FF If [parameter dH] = 6 the compressor shall be switched ON (following the end of compressor rest time if appropriate) during the active defrost cycle.

							when set to dH = 2 the Heater only should be on (and the fan OFF).
FP	Fan set point	15	1	60	1	Celsius	Temperature above which the evaporator fan will run continuously regardless of door open or closed
FN	Fan cycle ON	30	1	30	1	Time (minutes)	The duration of fan on time when the compressor is OFF
FF	Fan cycle OFF	1	0	30	1	Time (minutes)	The duration of fan OFF time when the compressor is OFF. Setting to 0 effectively disables fan cycling and should be used in OFC applications
T1	Timeout 1	6	0	12	1	hours	Length of Time Fridge stays ON from the Last Door Opening
HT	Condenser high temperature	0	50	100	1	Celsius	Condenser HT alarm threshold. If exceed HT alarm is activated. If set to any value less than 0 the HT sensor is disabled
AD	Alarm Delay	2	2	30	1	Time (minutes)	Delay before door alarms are triggered. 0 means door alarms are disabled
CT	Refrigeration failure time	72	4	100	1	hours	Length of time in hours that must elapse before refrigeration system failure alarm is activated
FU	Freeze up protection temp	0	-20	10	1	Celsius	Temperature at which freeze up protection is activated
LB	LED Brightness	50	0	100	1	Integer	LED Brightness Level
AR	Marketing Mode	0	0	1	n/a	Integer	Marketing mode is when the lights are left on even when the store is closed such that the cooler is in Energy Savings Mode. This is normally used when the cooler is in a prominent position as an advertising aid Ar = 0 – lights OFF in 'energy save mode' Ar = 1 – lights ON in 'energy save mode'
D2	Display Stability(Filter)	0	0	240	1	Integer	Length of time Display takes to update after a Temperature change in 0.5 Second increments
T2	Timeout 2	6	0	12	1	hours	Length of Time the Fridge Enters Standby after T1 has elapsed
BU	Button Mode	0	0	3	n/a	Integer	Main Fascia Button Mode Bu = 0 – UP/DWN/SELECT Bu = 1 – ECO/DEFROST/ALM Bu = 2 – ECO/SEASON/ALM Bu = 3 – ECO/LIGHT/ALM
SF	Season Flag	0	0	1	1	Integer	Season Flag (Winter = 0 , Summer = 1) Editable by shortcut from the Main Fascia as well
DC	Decimal Place	1	0	1	1	Integer	Decimal Place e.g. 0 = Whole number e.g. 2C 1 = 2.3 C
OF	Displayed Offset	0	-10	10	1	Integer	Offset the Display by X
DL	Display Low	0	-10	15	1	Integer	Lowest Value displayed DP = 2
DU	Display High	15	0	20	1	Integer	Highest Value Displayed DP = 2
HE	Display High Error	55	0	55	1	Integer	Shows HE Display Alarm Value to High DP = 2 (High Error)
HD	HT alarm temperature differential	30	0	100	1	Celsius	The temperature drop that must occur on the HT sensor in order for the HT alarm to clear
TT	HT alarm timeout	30	0	240	1	Time (minutes)	The maximum time the HT alarm is active before being cleared