

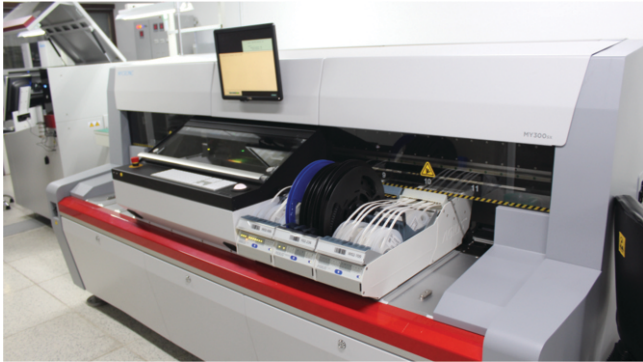


crYO



Controllers For
Refrigeration Industry

MULTISPAN



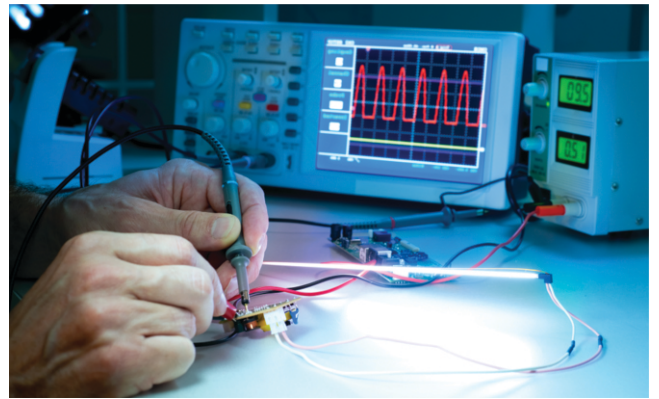
Electronic Assembly
Fully Integrated SMT Line



Plastic Enclosure Manufacturing
In-house Injection Moulding



Testing & Quality Control



Reliability Laboratory





CC 510

Cooling Controller (10A Compressor Output)

Model

MODEL	CC-510
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display	3 digit, 0.56", 7 Segment RED/WHITE Display Relay Output Status Indication
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Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Relay Output	1C/O (NO-C-NC)
--------------	----------------

Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Relay Delay Time	0 to 999 min
Relay Mode	Cool or Heat
Defrost time	1 to 999 min
Defrost Frequency	1 to 999 Hour

Specification for NTC Sensor

Thermistor Range	-50 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

Terminal Diagram

CC 510-B1-01-W

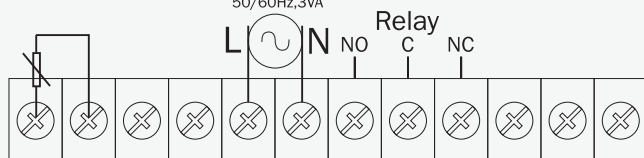


Made in India

NTC Sensor

-50°C to 99.9°C

230V AC
50/60Hz,3VA





CC 520

Cooling Controller (20A Compressor Output)

Model

MODEL	CC-520
Dimension (HxWxD) mm	37 x 78 x 78
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display	3 digit, 0.56", 7 Segment RED/WHITE Display Relay Output Status Indication
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Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Relay Output	1C/O (NO-C)
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Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Relay Delay Time	0 to 999 min
Relay Mode	Cool or Heat
Defrost time	1 to 999 min
Defrost Frequency	1 to 999 Hour

Specification for NTC Sensor

Thermistor Range	-50 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

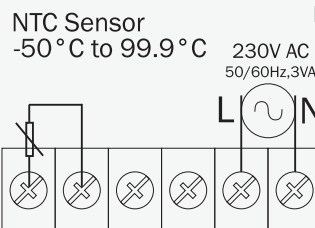
Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

Terminal Diagram

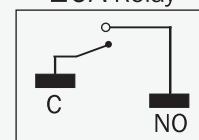
CC 520-B1-01-W



Made in India



20A Relay





CC 512

Cooling Controller
1 Compressor Output (10A)
+ Alarm (10A)

Model

MODEL	CC-512
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display	3 digit, 0.62", 7 Segment RED/WHITE Display 1st & 2nd Relay Output Status Indication
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Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Relay Output	1st Relay For Compressor (NO-C-NC) & 2nd Relay For Alarm (NO-C-NC)
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Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Compressor Delay Time	0 to 999 min

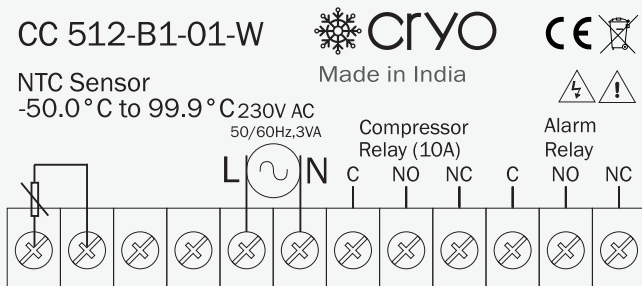
Specification for NTC Sensor

Thermistor Range	-50.0 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

Terminal Diagram





WITH EXTERNAL
BUZZER

CC 515

Cooling Controller
1 Compressor Output (10A)
+ Buzzer (12V DC)

Model

MODEL	CC-515
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display	3 digit, 0.62", 7 Segment RED/WHITE Display 1st & 2nd Relay Output Status Indication
---------	---

Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Output	1st Relay For Compressor (NO-C-NC) & 2nd Output For Buzzer
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Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Compressor Delay Time	0 to 999 min

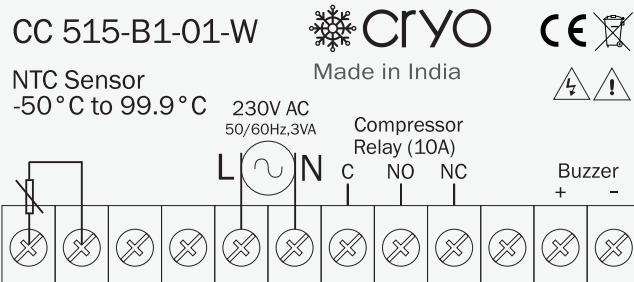
Specification for NTC Sensor

Thermistor Range	-50.0 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

Terminal Diagram





CC 522

Cooling Controller
1 Compressor Output (20A)
+ Alarm (5A)

Model

MODEL	CC-522
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display	3 digit, 0.62", 7 Segment RED/WHITE Display 1st & 2nd Relay Output Status Indication
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Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Relay Output	1st Relay For Compressor (NO-C) & 2nd Relay For Alarm (NO-C-NC)
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Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Compressor Delay Time	0 to 999 min

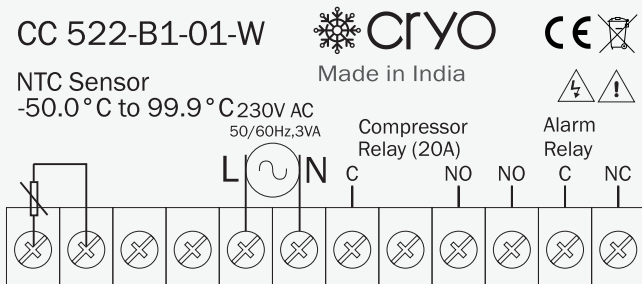
Specification for NTC Sensor

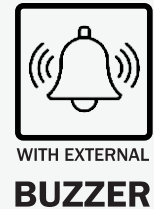
Thermistor Range	-50.0 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

Terminal Diagram





CC 525

Cooling Controller
1 Compressor Output (20A)
+ Buzzer (12V DC)

Model

MODEL	CC-525
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display	3 digit, 0.62", 7 Segment RED/WHITE Display 1st & 2nd Relay Output Status Indication
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Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Output	1st Relay For Compressor (NO-C) & 2nd Output For Buzzer
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Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Compressor Delay Time	0 to 999 min

Specification for NTC Sensor

Thermistor Range	-50.0 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

Terminal Diagram

CC 525-B1-01-W

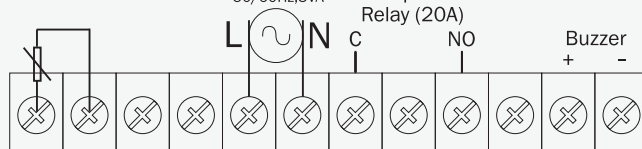


Made in India

NTC Sensor
-50.0°C to 99.9°C

230V AC
50/60Hz,3VA

Compressor
Relay (20A)





CC 521

Cooling Controller
1 Compressor Output (10A)
+ Heater for Defrost (10A)

Model

MODEL	CC-521
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display 3 digit, 0.62",
 7 Segment RED/WHITE Display
 1st & 2nd Relay Output Status
 Indication

Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Relay Output 1st Relay For Compressor
 (NO-C-NC)
 & 2nd Relay For Heater
 (NO-C-NC)

Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Compressor Delay Time	0 to 999 min
Defrost time	1 to 99 minute/Second
Defrost Frequency	1 to 99 Hour/Minute

Specification for NTC Sensor

Thermistor Range	-50.0 to 99.9°C
Nominal Resistance	10K Ohms

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max @230V AC

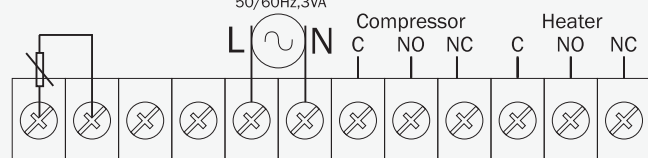
Terminal Diagram

CC 521-B1-01-W



Made in India

NTC Sensor
 -50.0°C to 99.9°C 230V AC
 50/60Hz,3VA





CC 552

Cooling Controller
2 Compressor Output (10A+10A)

Model

MODEL	CC-552
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (HxD) mm	29 x 70

Display Indication

Display 3 digit, 0.62",
 7 Segment RED/WHITE Display
 1st & 2nd Relay Output Status
 Indication

Input

Sensor	NTC Sensor
Resolution	0.1°C / 1°C
Accuracy	± 1% FSD (Full Scale Defection)

Output

Relay Output 2 Relay For Compressor
 (NO-C-NC)

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/ 24V DC/12V DC (Factory set)
Power Consumption	3VA Max@230V AC

Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0°C
Offset Adjustment	-9.0 to +9.0°C
Relay Mode	Cool

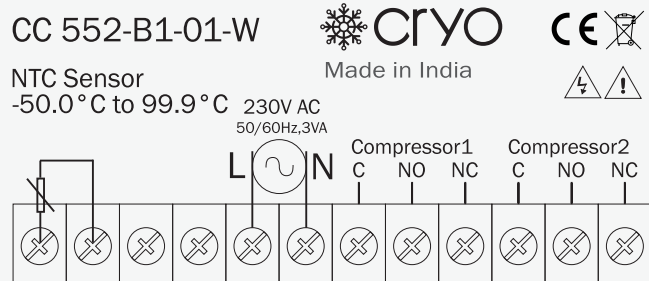
Time Parameter

- Relay Delay Time 0 to 20 min
- Time duration after which 2nd compressor will be SWITCHED ON so it can contribute to achieving the required setpoint. Here both compressors will be ON 0 to 30 min
- Minimum delay time between SWITCH OFF of each compressor, so both compressors never stay off simultaneously 0 to 15 Sec
- Setting of Time duration during which compressor overloading is to be avoided 0 to 12 Hour

Specification for NTC Sensor

Thermistor Range	-50.0 to 99.9°C
Nominal Resistance	10K Ohms

Terminal Diagram





MHC 512

Humidity Controller (10A+10A)

Model

MODEL	MHC-512
Dimension (HxWxD) mm	37 x 78 x 70
Panel Cutout (mm)	29 x 70

Display Indication

Display	3 digit, 0.62", 7 Segment RED/WHITE Display 2 Relay Output Status Indication
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Input

Sensor	(RH-85 or RH-100) Humidity Sensor Factory Set
Resolution	0.1% RH
Range	0 to 100% (Subject to Type of Sensor)
Accuracy	± 1% FSD (Full Scale Deflection) (Actual Accuracy will depend on Specified Accuracy of Selected Sensor)

Output

Relay Output	2 Nos (1st Relay For Humidification or Dehumidification & 2nd Relay For Alarm)
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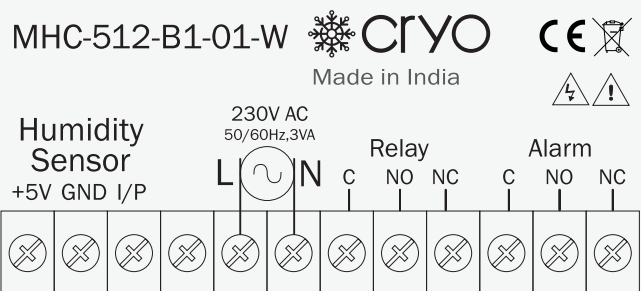
Specification

Control Action	ON-OFF
Hysteresis	0.1 to 20.0 °C
Offset Adjustment	-9.0 to +9.0 °C
Alarm Output	High/Low Alarm

Auxiliary Supply

Supply Voltage	230V AC, 50/60 Hz/24V DC/12V DC (Factory set)
Power Consumption	3VA Max@230V AC

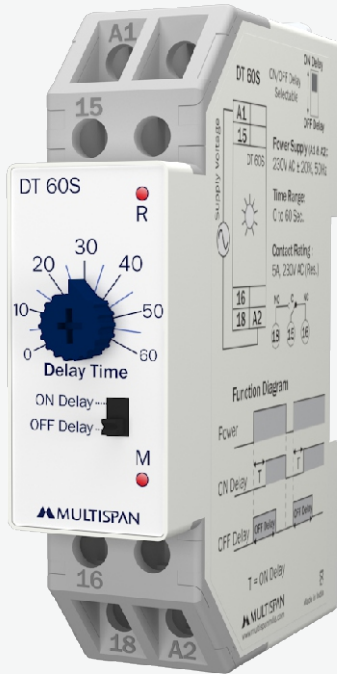
Terminal Diagram



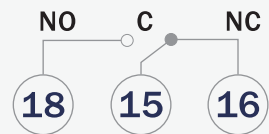
DELAY TIMER

FIXED TIME RANGE

DT-10S/30S/60S/15M/30M



ON Delay
 ↑ ■ ON/OFF Delay Selectable
 ↓ □ OFF Delay

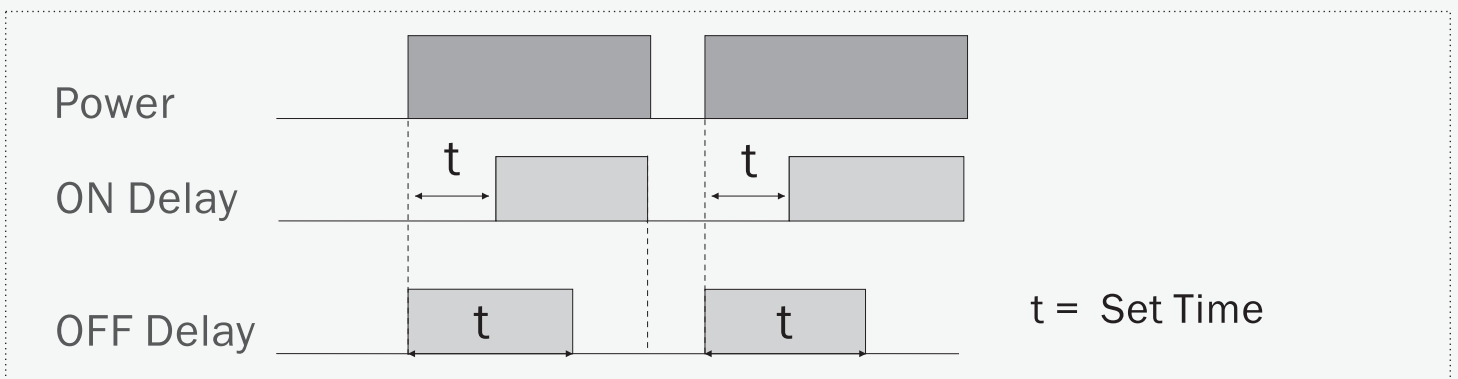


Terminal Connection

Key Specifications

Dimension (HxWxD) mm	90 x 22.5 x 72	
Mounting	Din rail mounting	
TIME RANGE	0 to 10 Sec (DT-10S) 0 to 30 Sec (DT-30S) 0 to 60 Sec (DT-60S)	0 to 15 Min (DT-15M) 0 to 30 Min (DT-30M)
OUTPUT	1 Relay O/P (5A, 230V AC) Res. load	
POWER SUPPLY	230V AC $\pm 20\%$, 50Hz	

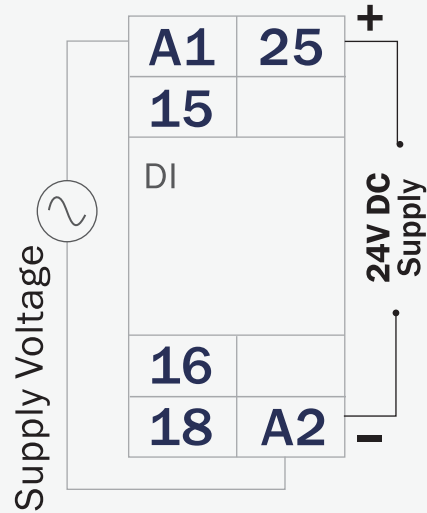
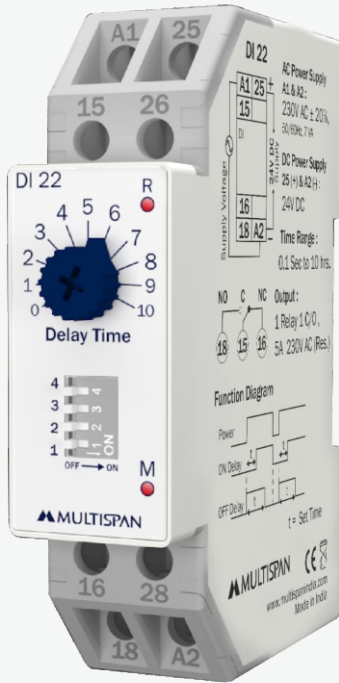
Function Diagram



DELAY TIMER

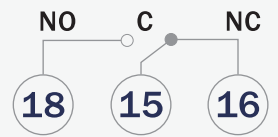
MULTIRANGE

DI-22



AC Power Supply
A1 & A2 :
230V AC \pm 20%,
50/60Hz, 7 VA

DC Power Supply
25 (+) & A2 (-) :
24V DC

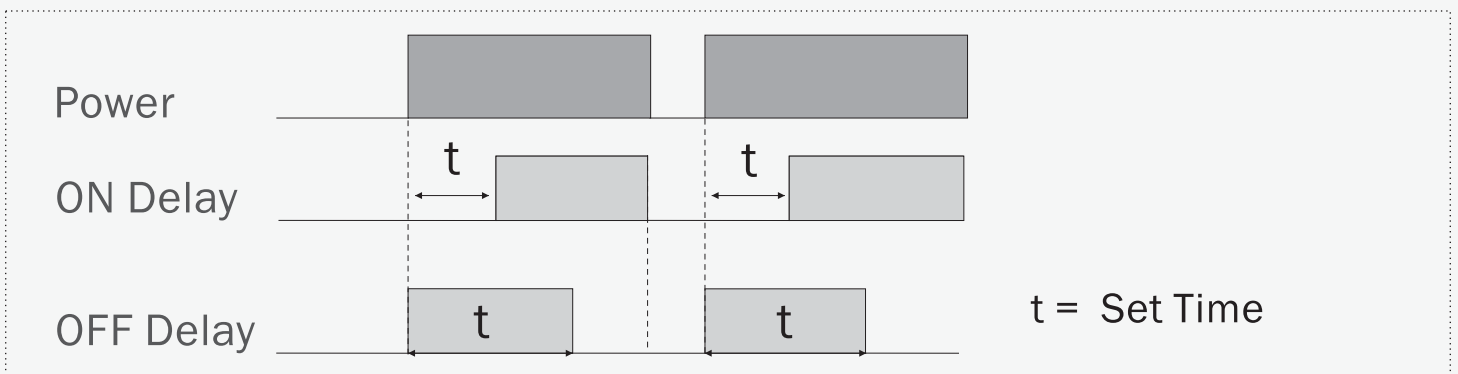


Terminal Connection

Key Specifications

Dimension (HxWxD) mm	90 x 22.5 x 72
Mounting	Din rail mounting
TIME RANGE	0.1 Sec to 10 Hour
OUTPUT	1 Relay O/P (5A, 230V AC) Res. load
POWER SUPPLY	230V AC \pm 20%, 50Hz & 24V DC

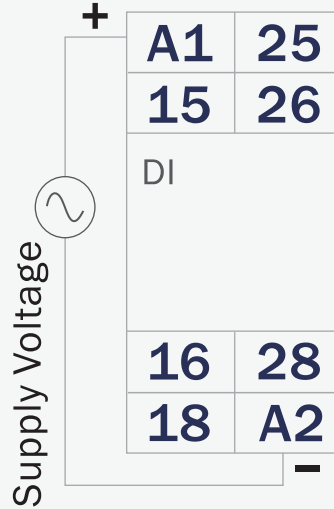
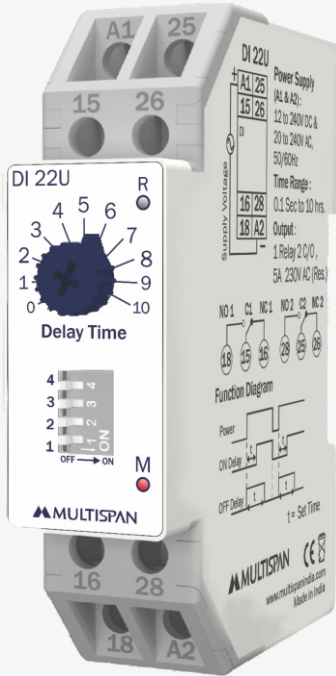
Function Diagram



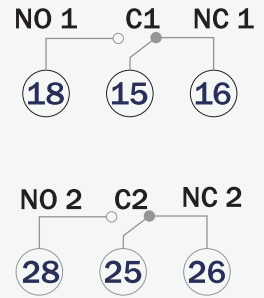
DELAY TIMER

MULTIRANGE UNIVERSAL SUPPLY

DI-22U



Power Supply (A1 & A2) :
12V DC to 240V DC &
20 to 240V AC ,50/60Hz

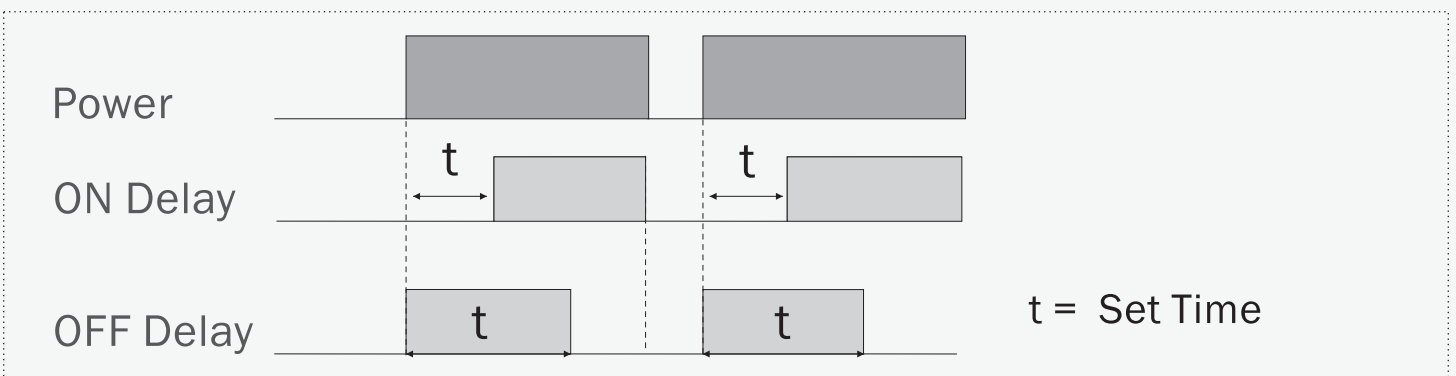


Terminal Connection

Key Specifications

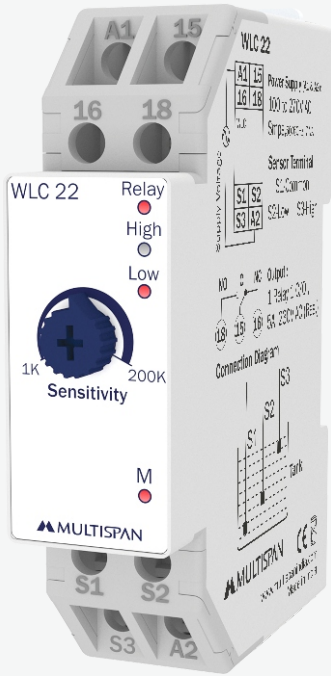
Dimension (HxWxD) mm	90 x 22.5 x 72
Mounting	Din rail mounting
TIME RANGE	0.1 Sec to 10 Hour
OUTPUT	1 Relay O/P (2C/O, 5A 230V AC) Res. load
POWER SUPPLY	12V DC to 240V DC & 20 to 240V AC,50/60Hz

Function Diagram



WATER LEVEL CONTROLLER

WLC-22



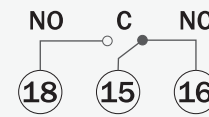
A1	15
16	18
WLC	
S1	S2
S3	A2

Power Supply (A1 & A2):

100 to 270V AC
Smps, 50/60Hz, 7 VA

Sensor Terminal

S1-Common, S2-Low, S3-High



Terminal Connection

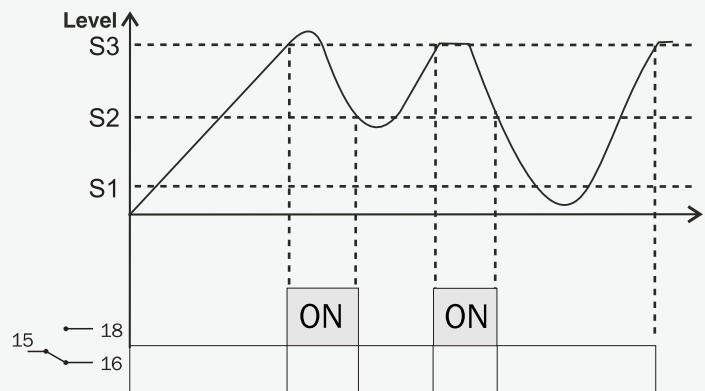
Key Specifications

Dimension (HxWxD) mm	90 x 22.5 x 72
Mounting	Din rail mounting
INPUT	3 Nos. Probs
OUTPUT	1 Relay 1C/O 5A, 230V AC (Resistive Load)
SENSITIVITY	1 to 200K Ohms
POWER SUPPLY	100 to 270V AC, 50/60Hz

TESTING CHART

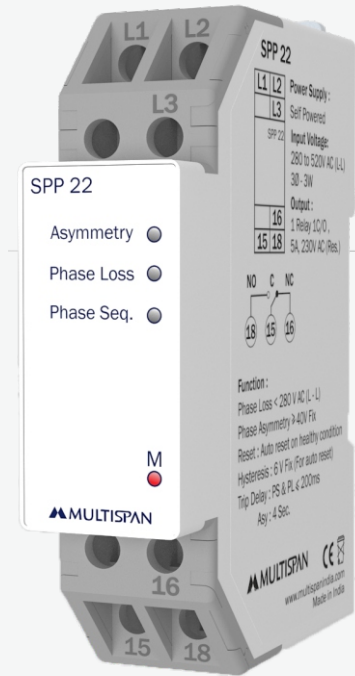
SR NO.	S1	S2	S3	RELAY OUTPUT
1	OUT	OUT	OUT	OFF
2	IN	OUT	OUT	OFF
3	IN	IN	OUT	OFF
4	IN	IN	IN	ON
5	IN	IN	OUT	ON
6	IN	OUT	OUT	OFF

TIMING DIAGRAM



SINGLE PHASE PREVENTOR

SPP-22



L1	L2
	L3
SPP	
	16
15	18

Tripping Parameter

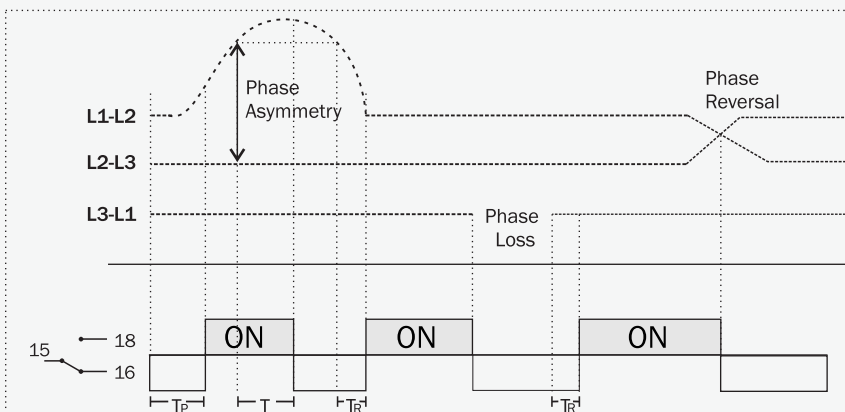
- Phase loss
- Phase sequence
- Phase asymmetry

Terminal Connection

Key Specifications

Dimension (HxWxD) mm	90 x 22.5 x 72
Mounting	Din rail mounting
INPUT	Input Voltage : 280 to 520V AC (L-L), 3Ø-3W
OUTPUT	1 Relay O/P (5A, 230V AC) Res. load
POWER SUPPLY	No Power Supply to be given separately

Function Diagram



T_p = Power ON Delay (<200ms)

T = Trip Delay (<5 Sec)

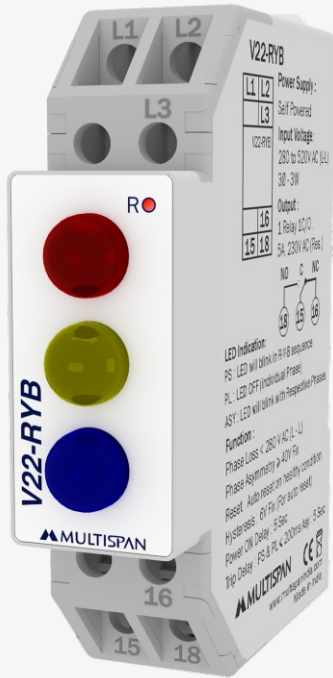
T_R = Reset Time (<200ms)

Function :

- Phase Loss < 280V AC (L - L)
- Phase Asymmetry \geq 40V Fix
- Hysteresis : 6V Fix

VOLTAGE PROTECTION DEVICE

V22-RYB



L1	L2
	L3
V22-RYB	
	16
15	18

Tripping Parameter

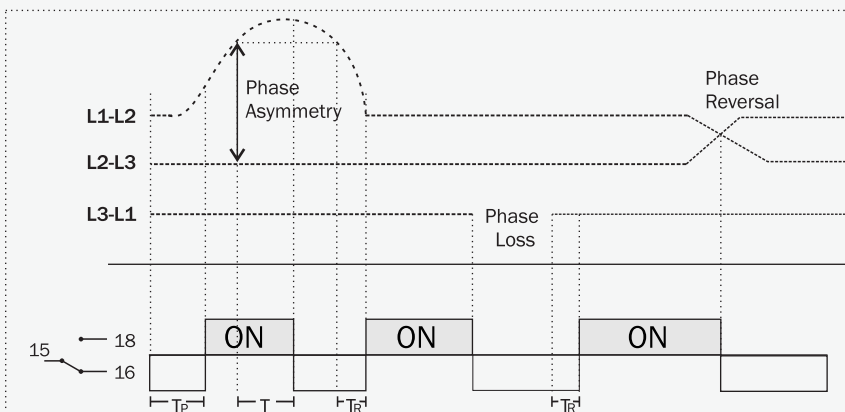
Phase loss
Phase sequence
Phase asymmetry

Terminal Connection

Key Specifications

Dimension (HxWxD) mm	90 x 22.5 x 67.5
Mounting	Din rail mounting
INPUT	Input Voltage : 280 to 520V AC (L-L), 3Ø-3W
OUTPUT	1 Relay O/P (5A, 230V AC) Res. load
POWER SUPPLY	No Power Supply to be given separately

Function Diagram



T_p = Power ON Delay (<200ms)

T = Trip Delay (<5 Sec)

T_R = Reset Time (<200ms)

Function :

Phase Loss < 280V AC (L - L)

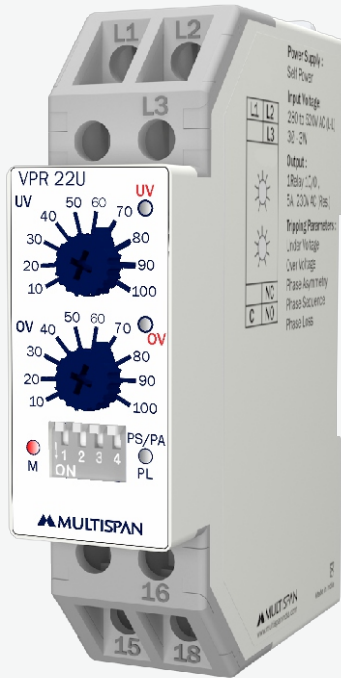
Phase Asymmetry \geq 40V Fix

Hysteresis : 6V Fix

VOLTAGE PROTECTION RELAY

SELECTABLE TIME PARAMETER

VPR-22U



L1	L2
	L3
VPR	
	16
15	18

Tripping Parameter

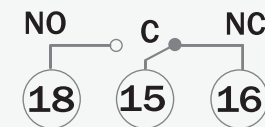
Under Voltage

Over Voltage

Phase asymmetry

Phase sequence

Phase loss

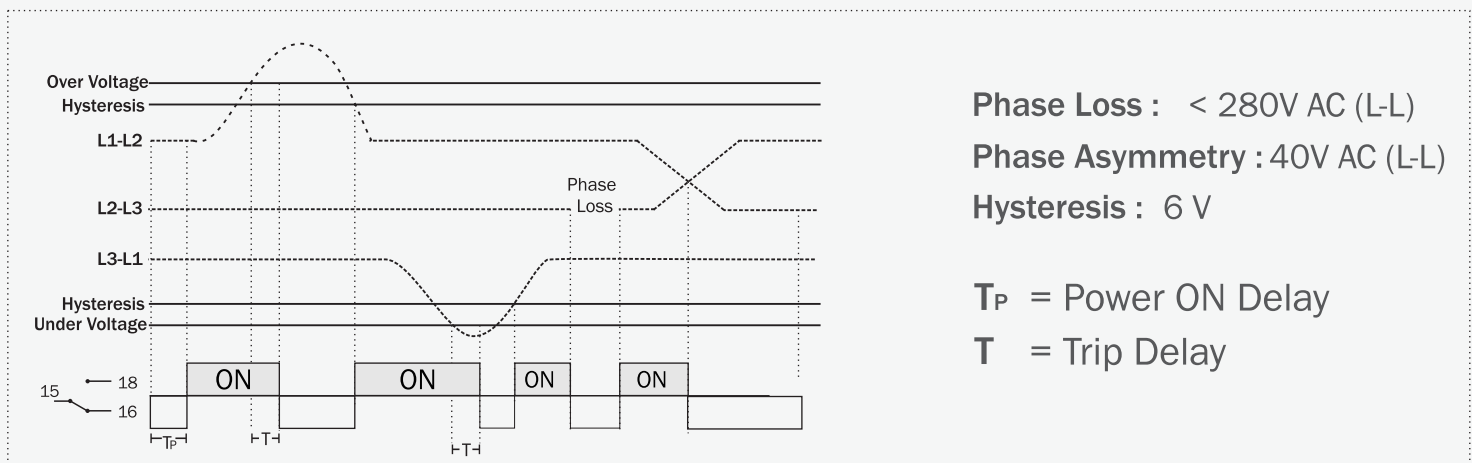


Terminal Connection

Key Specifications

Dimension (HxWxD) mm	90 x 22.5 x 67.5
Mounting	Din rail mounting
INPUT	Input Voltage : 280 to 520V AC (L-L), 3Ø-3W Rated Voltage : 415V AC (L-L)
OUTPUT	1 Relay O/P (5A, 230V AC) Res. load
POWER SUPPLY	No Power Supply to be given separately

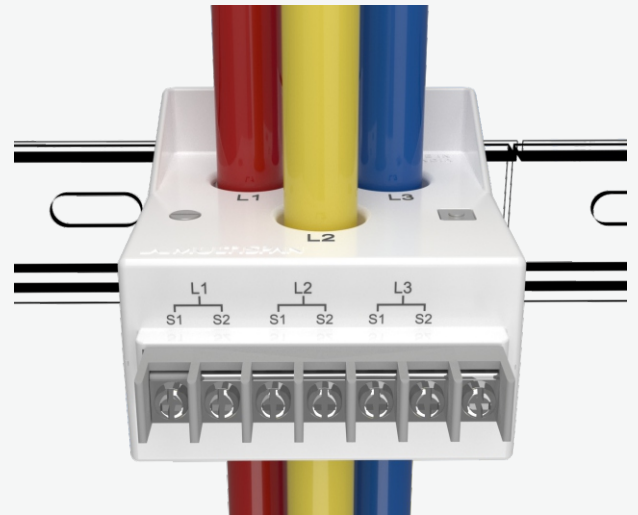
Function Diagram



MOTOR PROTECTION RELAYS

125Amp

now with
3CT



MPD-192-A2-100

Motor Protection Relay

INPUT

Current & Voltage

CT

Upto 60Amp

3Ø-3W & 3Ø-4W

Selectable

Protection Parameters:

- Over Current
- Under Current
- Over Voltage
- Under Voltage
- Over Frequency
- Under Frequency
- Unbalance
- Short Circuit
- Single Phase Prevention
- Lock Rotor Point
- Phase Sequence
- Neutral Loss

Data Loggers

Temperature &
Process



**16
Input**



**8
Output**



**RS 485
MODBUS**



Data Logging Facility
with Easy to download data in
Excel File

PC Interfacing Software
also available for both 8 & 16 Channel



VOLTAGE MONITORING RELAY



VMR-132 & VMR-232

Voltage Monitoring Relay

INPUT

Voltage

3Ø-3W / 3Ø-4W / 1Ø-2W

Selectable

Protection Parameters:

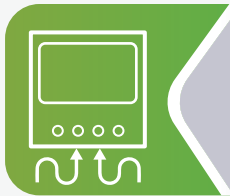
- Over Voltage
- Under Voltage
- Asymmetry
- Over Frequency
- Under Frequency
- Phase Loss
- Phase Sequence

Humidity & Temperature Controller



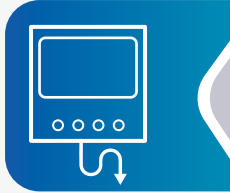
MHT-1202 & MHT-9044

Humidity & Temperature Controller



Input

Humidity & PT-100/3W



Output

1 Relay for Humidity
1 Relay for Temperature



RS 485 MODBUS

User-friendly & accurate solutions

Multispan is a leading company involved in the development and production of PID Temperature Controllers , Power & Energy Meters, Protection Relays, Timers & Counters as well as customised solutions for various industrial applications. As an owner-managed family business, we employ about 300+ staff with 75+ domestic channel sales partner network in India plus product distribution in 25+ countries.

With marked customer orientation, consistently high quality and vast innovation capability, Multispan develops specific solutions for many industries and applications

Our focus

Provide user-friendly accurate solutions in a way it makes a difference for every industry



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