MICROIDEA®

PRODUCT CATALOGUE

2018



DT DTMSMM1/-16 / DTMSMM2 Multi-function Delay Timer

- 10 FUNCTIONS SELECTABLE
- TIME RANGE 0.1s - 10d
- UNIVERSAL SUPPLY 24-75V⎓/24-240V~
- OUTPUT 1 or 2 RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ TYPICAL APPLICATION: AUTOMATION CONTROL

EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

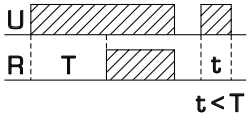
TECHNICAL DATA

INPUT	UNIT	DTMSMM1	DTMSMM1-16	DTMSMM2
Supply voltage DC ±10%	V⎓	24 - 75		24 - 60
Supply voltage AC ±10%	V~	24 - 240		24-48/110-240
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Power consumption (max. AC)	VA	12		
Supply indication (**U**)	-	Green LED		
Impulse length (min)	ms	25		
OUTPUT RELAY				
Rating	-	1 x 8A SPDT 250V~/24V⎓	1 x 16A SPDT 250V~/24V⎓	2 x 8A SPDT 250V~/24V⎓
Max switching power	VA	2000	4000	2000
Max switching voltage	V~	400	440	400
Min switching load	-	10mA 12V⎓	40mA 24V⎓	10mA 12V⎓
Contact life	Mech. / Electr.	30 x 10^3 ops / 100 x 10^3 ops	20 x 10^6 ops / 30 x 10^3 ops	30 x 10^3 ops / 100 x 10^3 ops
Changeover contacts	-	AgNi0.15	Ag-alloy	AgNi0.15
Output Indication (**R**)	-	Red LED		
GENERAL				
Time Range rotary switch (**T**)	-	0.1s - 10d		
Time Deviation	%	5		
Repeat Accuracy	%	0.2 Set value		
Rise time	ms	150		
Working temperature	°C	-20 / +50		
Storage temperature	°C	-30 / +70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	65		
Dimensions	mm	98 x 17.5 x 64		

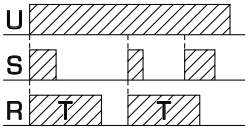
NEW MODEL

FUNCTIONS

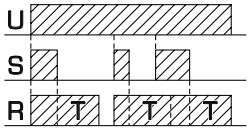
A ON delay



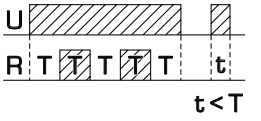
B Signal ON pulse



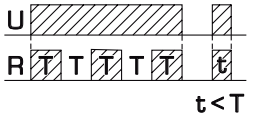
C Signal OFF delay



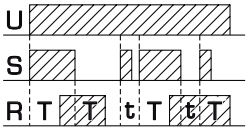
D Symmetrical recycling: OFF start



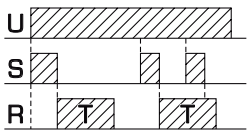
E Symmetrical recycling: ON start



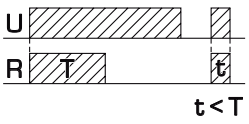
F Signal ON and OFF delay



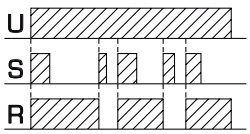
G Signal ON delay



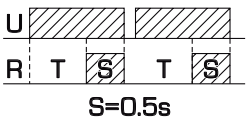
H ON pulse



I Signal ON and OFF

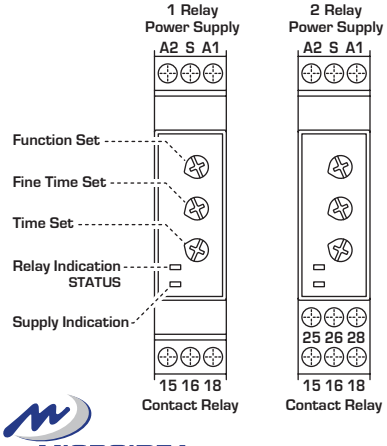


J Pulse Generator

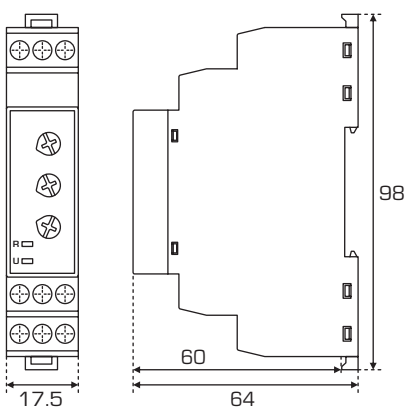


NOTE:
Whenever you change the Function, you must restart the device.

DESCRIPTION

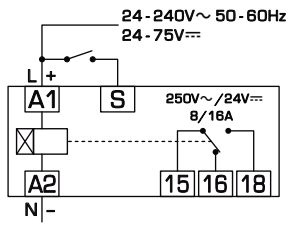


DIMENSIONS (mm)

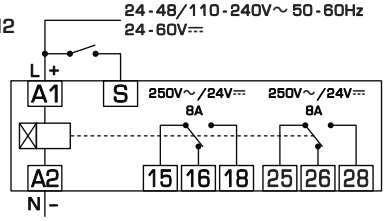


WIRING DIAGRAM

DTMSMM1
DTMSMM1-16



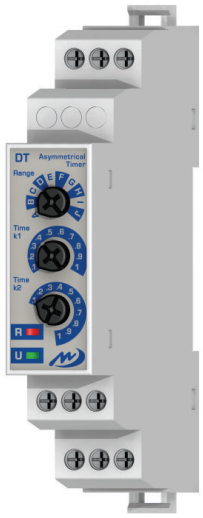
DTMSMM2



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

DT DTMSMA1/-16 / DTMSMA2 Programmable Asymmetrical Timer

- 10 TIME SELECTABLE
- TIME RANGE 0.2s - 20h
- UNIVERSAL SUPPLY 24-75V⎓/24-240V~
- OUTPUT 1 or 2 RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ TYPICAL APPLICATION: AUTOMATION CONTROL

EU Directives - CE Marking:

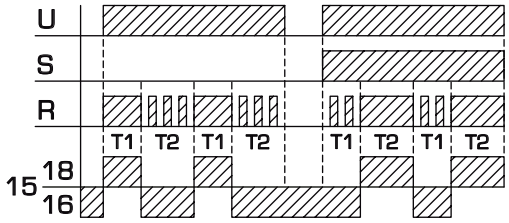
> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

INPUT	UNIT	DTMSMA1	DTMSMA1-16	DTMSMA2
Supply voltage DC ±10%	V⎓	24 - 75		24 - 60
Supply voltage AC ±10%	V~	24 - 240		24-48/110-240
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Power consumption (max. AC)	VA	12		
Supply indication (**U**)	-	Green LED		
Power Reset	ms	200		
OUTPUT RELAY				
Rating	-	1 x 8A SPDT 250V~/24V⎓	1 x 16A SPDT 250V~/24V⎓	2 x 8A SPDT 250V~/24V⎓
Max switching power	VA	2000	4000	2000
Max switching voltage	V~	400	440	400
Min switching load	-	10mA 12V⎓	40mA 24V⎓	10mA 12V⎓
Contact life	Mech. / Electr.	30 x 10^3 ops / 100 x 10^3 ops	20 x 10^6 ops / 30 x 10^3 ops	30 x 10^3 ops / 100 x 10^3 ops
Changeover contacts	-	AgNi0.15	Ag-alloy	AgNi0.15
Output Indication (**R**)	-	Red LED		
GENERAL				
Time Range rotary switch (**T**)	-	0.2s - 20h		
Time Deviation	%	5		
Repeat Accuracy	%	0.2 Set value		
Rise time	ms	150		
Working temperature	°C	-20 / +50		
Storage temperature	°C	-30 / +70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	65		
Dimensions	mm	98 x 17.5 x 64		

NEW MODEL

FUNCTIONS 1 RELAY



FUNCTIONS 2 RELAY

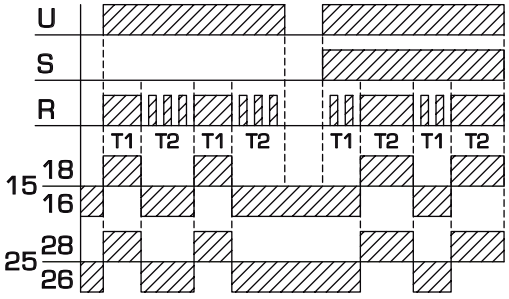
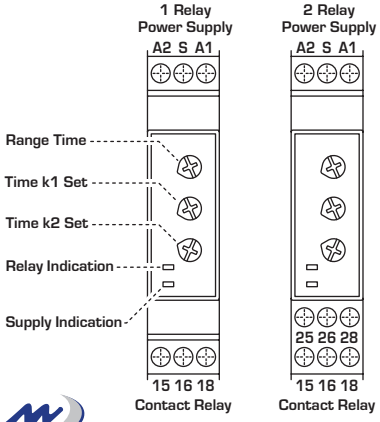


TABLE TIME RANGE SET

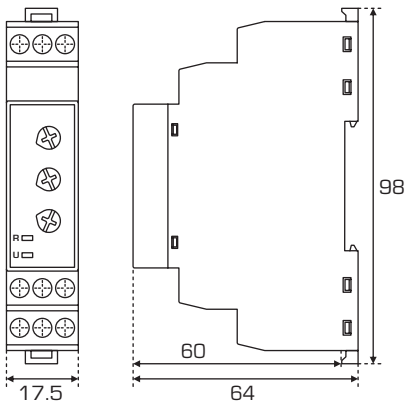
Range	T1 Max	T2 Max
A	2s	2s
B	10s	10s
C	60s	60s
D	10m	60s
E	60m	60s
F	10m	10m
G	60m	60m
H	10h	60m
I	10h	10h
J	20h	20h

Adj T1	Adj T2
k1 **x2s**	k2 **x2s**
k1 **x10s**	k2 **x10s**
k1 **x60s**	k2 **x60s**
k1 **x10m**	k2 **x60s**
k1 **x60m**	k2 **x60s**
k1 **x10m**	k2 **x10m**
k1 **x60m**	k2 **x60m**
k1 **x10h**	k2 **x60m**
k1 **x10h**	k2 **x10h**
k1 **x20h**	k2 **x20h**

DESCRIPTION

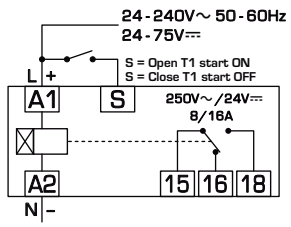


DIMENSIONS (mm)

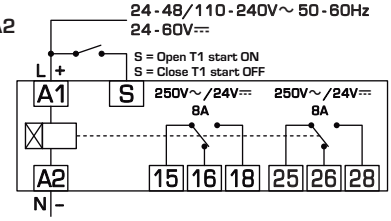


WIRING DIAGRAM

DTMSMA1
DTMSMA1-16



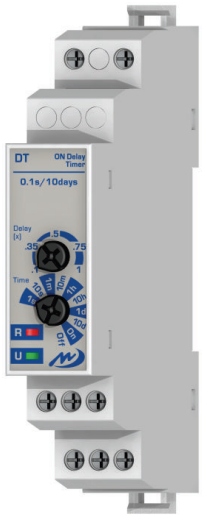
DTMSMA2



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

DT DTMSLD1 / DTMSLD2 ON Delay Timer

- TIME RANGE 0.1s - 10d
- ENERGIZING AT THE END OF TIME DELAY
- UNIVERSAL SUPPLY 24-75V⎓/24-240V~
- OUTPUT 1 or 2 RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ TYPICAL APPLICATION: AUTOMATION CONTROL

EU Directives - CE Marking:

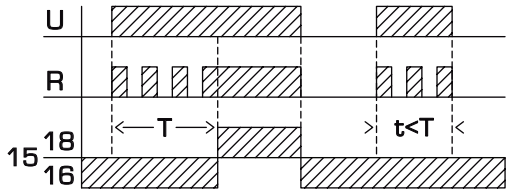
> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

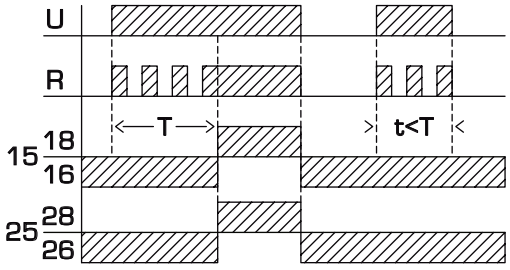
	UNIT	DTMSLD1	DTMSLD2
INPUT			
Supply voltage DC ±10%	V⎓	24 - 75	24 - 60
Supply voltage AC ±10%	V~	24 - 240	24-48/110-240
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Power consumption (max. AC)	VA	12	
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	1 x 8A SPDT 250V~/24V⎓	2 x 8A SPDT 250V~/24V⎓
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Time Range rotary switch (**T**)	-	0.1s - 10d	
Time Deviation	%	5	
Repeat Accuracy	%	0.2 Set value	
Rise time	ms	150	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30 / +70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	45	
Dimensions	mm	98 x 17.5 x 64	

NEW MODEL

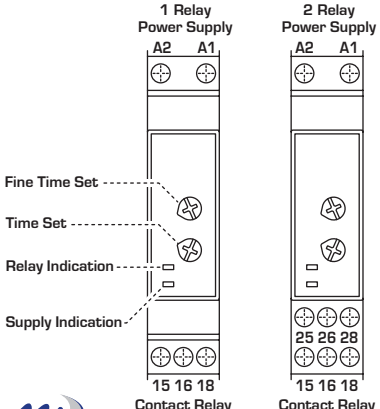
FUNCTIONS 1 RELAY



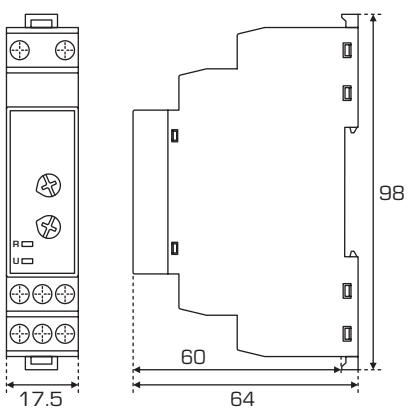
FUNCTIONS 2 RELAY



DESCRIPTION

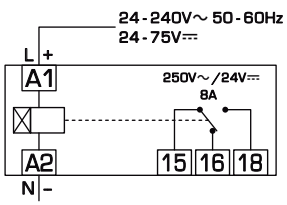


DIMENSIONS (mm)

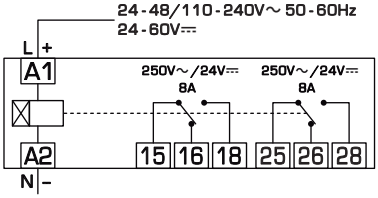


WIRING DIAGRAM

DTMSLD1



DTMSLD2



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

DT DTMSHD1 / DTMSHD2 ON Delay Timer - Fixed

- ENERGIZING AT THE END OF TIME DELAY
- FIXED TIME 1s (customizable on request)
- UNIVERSAL SUPPLY 24-75V⎓/24-240V~
- OUTPUT 1 or 2 RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ TYPICAL APPLICATION: COMPRESSOR

EU Directives - CE Marking:

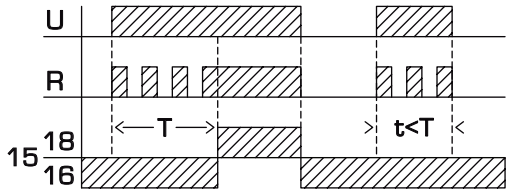
> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

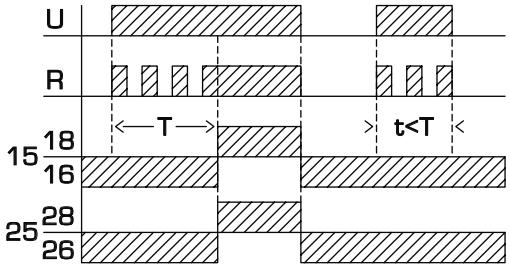
	UNIT	DTMSHD1	DTMSHD2
INPUT			
Supply voltage DC ±10%	V⎓	24 - 75	24 - 60
Supply voltage AC ±10%	V~	24 - 240	24-48/110-240
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Power consumption (max. AC)	VA	12	
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	1 x 8A SPDT 250V~/24V⎓	2 x 8A SPDT 250V~/24V⎓
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Fixed Time (**T**)	s	1	
Min break time	ms	10	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30 / +70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	45	
Dimensions	mm	98 x 17.5 x 64	

NEW MODEL

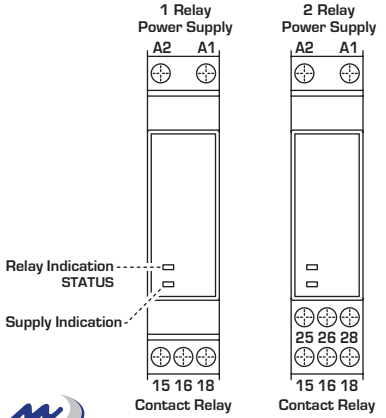
FUNCTIONS 1 RELAY



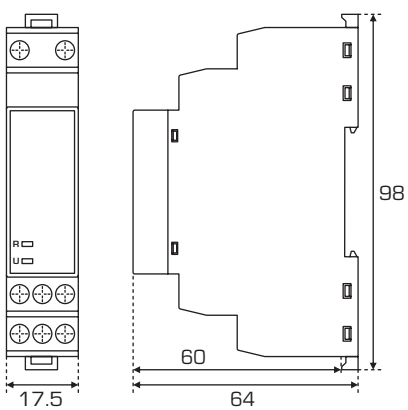
FUNCTIONS 2 RELAY



DESCRIPTION

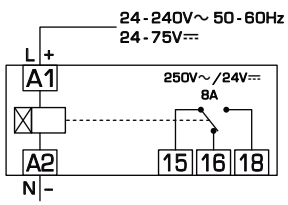


DIMENSIONS (mm)

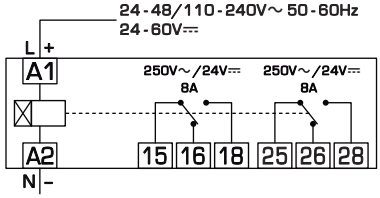


WIRING DIAGRAM

DTMSHD1



DTMSHD2



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

DT DTMSOD1 / DTMSOD2 OFF Delay Timer - Fixed

- DE-ENERGIZING AT THE END OF TIME DELAY
- FIXED TIME 3s (customizable on request)
- UNIVERSAL SUPPLY 24-75V⎓/24-240V~
- OUTPUT 1 or 2 RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ TYPICAL APPLICATION: COMPRESSOR

EU Directives - CE Marking:

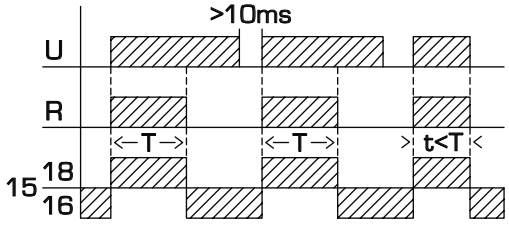
> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

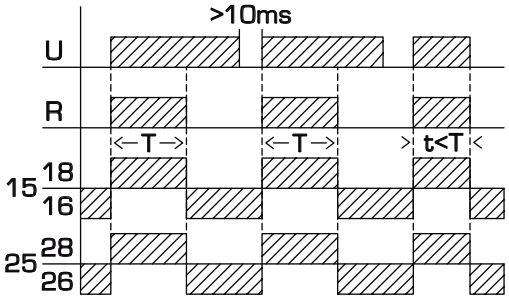
	UNIT	DTMSOD1	DTMSOD2
INPUT			
Supply voltage DC ±10%	V⎓	24 - 75	24 - 60
Supply voltage AC ±10%	V~	24 - 240	24-48/110-240
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Power consumption (max. AC)	VA	12	
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	1 x 8A SPDT 250V~/24V⎓	2 x 8A SPDT 250V~/24V⎓
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Fixed Time (**T**)	s	3	
Min break time	ms	10	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30 / +70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	45	
Dimensions	mm	98 x 17.5 x 64	

NEW MODEL

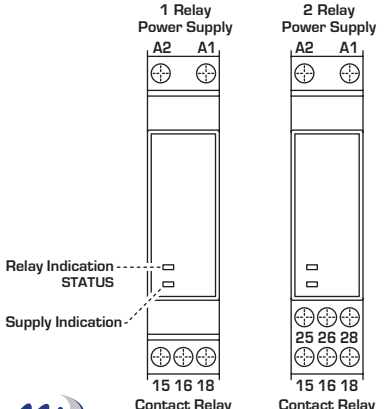
FUNCTIONS 1 RELAY



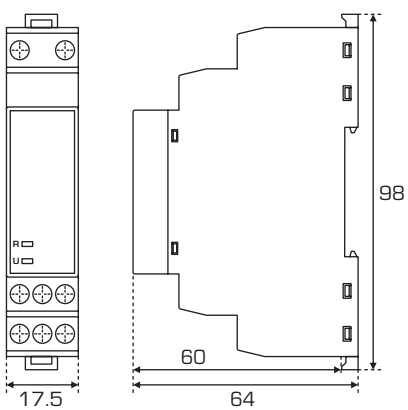
FUNCTIONS 2 RELAY



DESCRIPTION

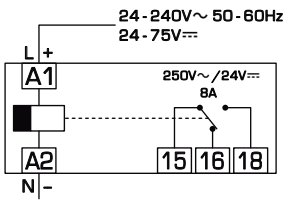


DIMENSIONS (mm)

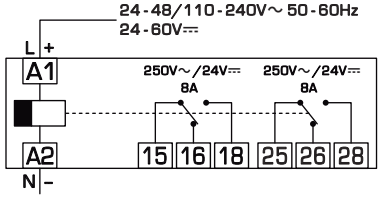


WIRING DIAGRAM

DTMSHD1



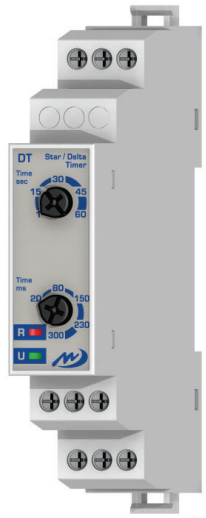
DTMSHD2



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

DT DTM...VQD2/UQD2/OQD2 人△ Star/Delta Timer

- TIME RANGE人: 1 - 60s
- STAR RELAY: ENERGIZES AFTER DELAY
- LED INDICATOR FOR RELAY △ CLOSED
- 2 OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: MOTOR STARTING

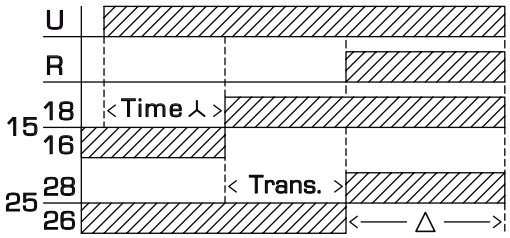
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

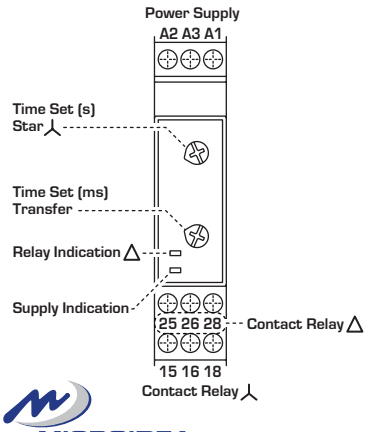
TECHNICAL DATA

INPUT	UNIT	DTMVQD2	DTMUQD2	DTMOQD2
Supply voltage DC ±10%	V⎓	24		/
Supply voltage AC ±10%	V~	24/115	24/240	415
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Power consumption (max. AC)	VA	4.4	10.3	15
Supply indication (**U**)	-	Green LED		
OUTPUT RELAY				
Rating	-	8A - 250V~/24V⎓		8A - 250V~
Max switching power	VA	2000		
Max switching voltage	V~	400		
Min switching load	-	10mA 12V⎓		
Contact life	Mech. / Electr.	30 x 10^3 ops / 100 x 10^3 ops		
Changeover contacts	-	AgNi0.15		
Output Indication (**R**)	-	Red LED		
GENERAL				
Delayed Start (**Time**人)	s	1 - 60		
Transition delay (**Trans.**)	ms	20 - 300		
Rise time	ms	100		
Working temperature	°C	-20 / +50		
Storage temperature	°C	-30 / +70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	45		
Dimensions	mm	98 x 17.5 x 64		

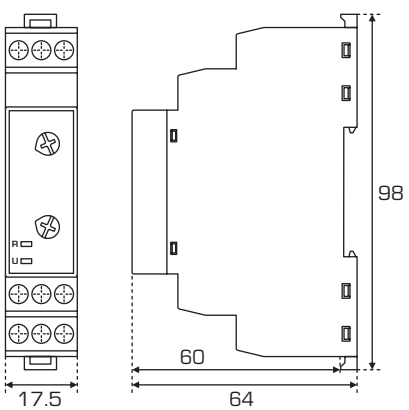
FUNCTIONS



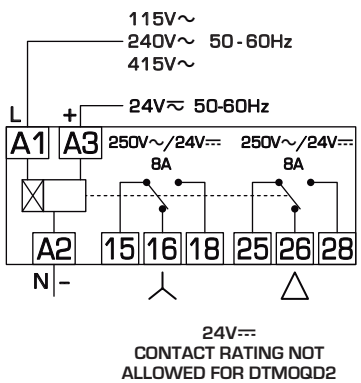
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM

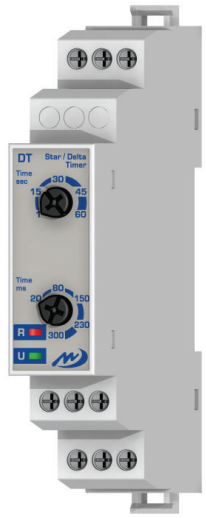


24V⎓
CONTACT RATING NOT ALLOWED FOR DTMOQD2

Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

DT DTM...VQI2/UQI2/OQI2 人△ Star/Delta Timer

- TIME RANGE人: 1 - 60s
- STAR RELAY: ENERGIZES IMMEDIATLY
- LED INDICATOR FOR RELAY △ CLOSED
- 2 OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: MOTOR STARTING

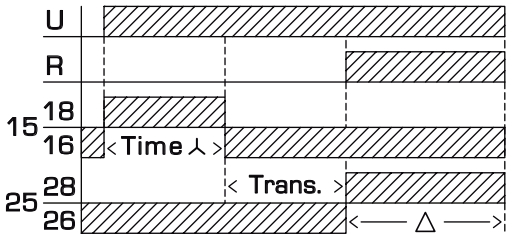
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

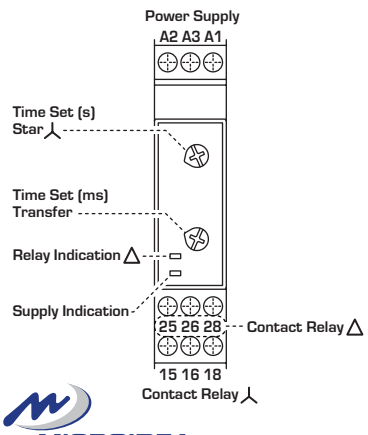
TECHNICAL DATA

INPUT	UNIT	DTMVQI2	DTMUQI2	DTMOQI2
Supply voltage DC ±10%	V⎓	24		/
Supply voltage AC ±10%	V~	24/115	24/240	415
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Power consumption (max. AC)	VA	4.4	10.3	15
Supply indication (**U**)	-	Green LED		
OUTPUT RELAY				
Rating	-	8A - 250V~/24V⎓		8A - 250V~
Max switching power	VA	2000		
Max switching voltage	V~	400		
Min switching load	-	10mA 12V⎓		
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops		
Changeover contacts	-	AgNi0.15		
Output Indication (**R**)	-	Red LED		
GENERAL				
Delayed Start (**Time**人)	s	1 - 60		
Transition delay (**Trans.**)	ms	20 - 300		
Rise time	ms	100		
Working temperature	°C	-20 / +50		
Storage temperature	°C	-30 / +70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	45		
Dimensions	mm	98 x 17.5 x 64		

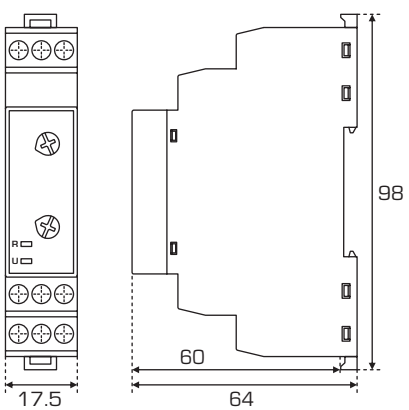
FUNCTIONS



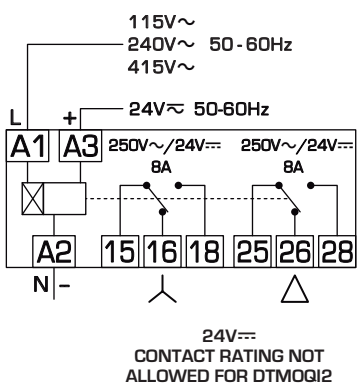
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM

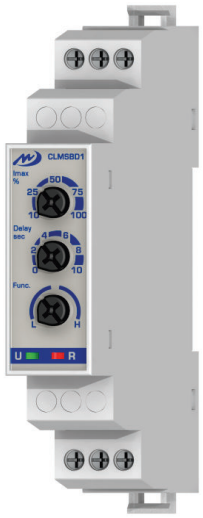


24V⎓
CONTACT RATING NOT
ALLOWED FOR DTMOQI2

Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

CL CLMSBD1-5/16 Under/Over Current Relay

- TIME RANGE 0 - 10s
- USABLE FOR CURRENT SENSING FROM CURRENT TRANSFORMER
- USABLE FOR DC CURRENT OR AC CURRENT AUTO RECOGNIZED
- UNIVERSAL SUPPLY 24V⎓/24-240V~
- SUPPLY ISN'T GALVANICALLY SEPARATED FROM MEASURED CURRENT, IT MUST BE IN THE SAME PHASE
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: MAX LOAD CONTROL ON CONVEYORS

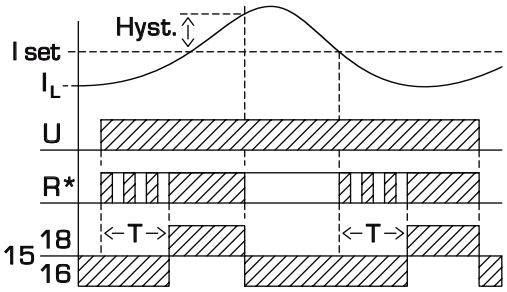
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

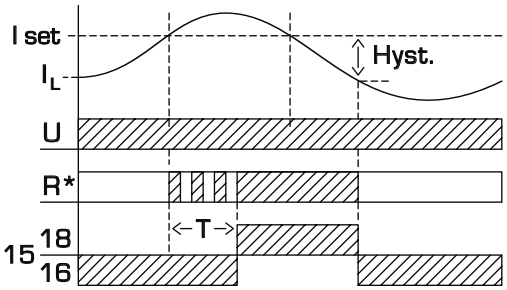
TECHNICAL DATA

	UNIT	CLMSBD1-5	CLMSBD1-16
INPUT			
Supply voltage DC ±10%	V⎓	24	
Supply voltage AC ±10%	V~	24 - 240	
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Power consumption (max. AC)	VA	40	
Current range AC/DC selectable	A	0.25 - 5	0.8 - 15.5
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	8A - 250V~/24V⎓	
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Time Delay (**T**)	s	0 - 10	
Setting Accuracy	%	5	
Repeat Accuracy	%	< 1	
Hysteresis	%	5	
Temperature dependancy	%/°C	< 0.1	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30 / +70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	65	
Dimensions	mm	98 x 17.5 x 64	

L - FUNCTION



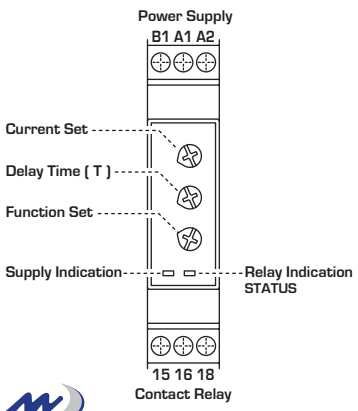
H - FUNCTION



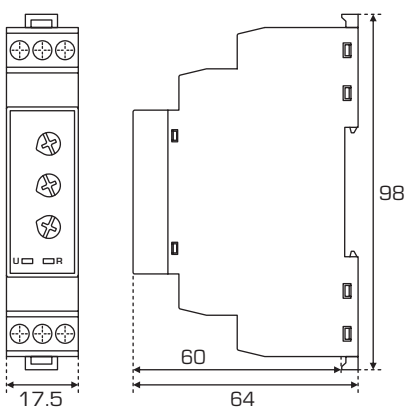
* The **R** Led is Bicolor:
If **I** input is < **I** set. the Led is Green and Relay is OFF
If **I** input is > **I** set. the Led is Red and Relay is ON

▨ = RED
□ = GREEN

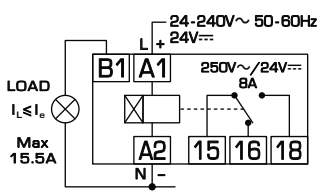
DESCRIPTION

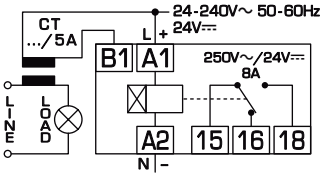


DIMENSIONS (mm)



WIRING DIAGRAM

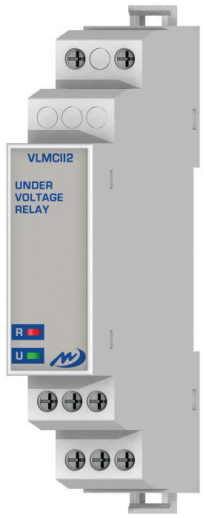




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VL VLMCII2 Under Voltage Relay

- ENERGIZING IMMEDIATLY
- DE-ENERGIZING WHEN THE SUPPLY VOLTAGE DROPS BELOW 20V
- 1 RED LED INDICATOR FOR THE 2 RELAY
- 2 OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: BATTERY MONITORING VOLTAGE

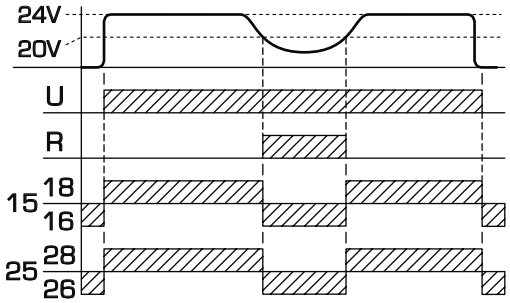
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

	UNIT	VLMCII2
INPUT		
Supply voltage DC ±10%	V⎓	24
Power consumption (max. DC)	W	0.3
Supply indication (**U**)	-	Green LED
OUTPUT RELAY		
Rating	-	8A - 250V~/24V⎓
Max switching power	VA	2000
Max switching voltage	V~	400
Min switching load	-	10mA 12V⎓
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops
Changeover contacts	-	AgNi0.15
Output Indication (**R**)	-	Red LED
GENERAL		
Working temperature	°C	-20 / +50
Storage temperature	°C	-30/+70
Electrical Insulation	kV	4
Overvoltage Category	-	III
Protection degree	IP	20
Pollution degree	-	2
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)
Altitude up to	m	2000
Weight	g	65
Dimensions	mm	98 x 17.5 x 64

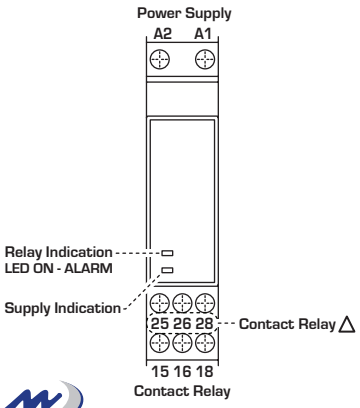
FUNCTIONS



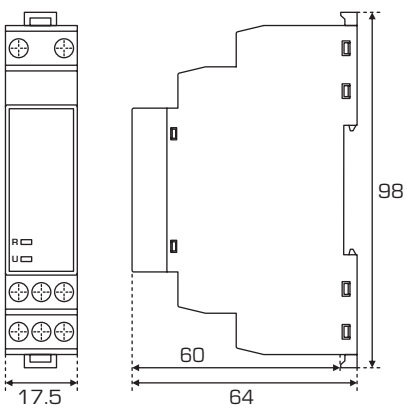
When Line is OK the R led is OFF and Relay is ON

When Line is wrong the R led is ON and Relay is OFF

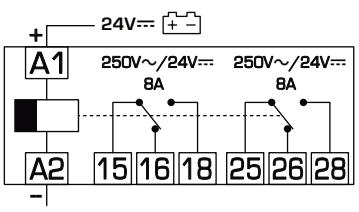
DESCRIPTION



DIMENSIONS (mm)

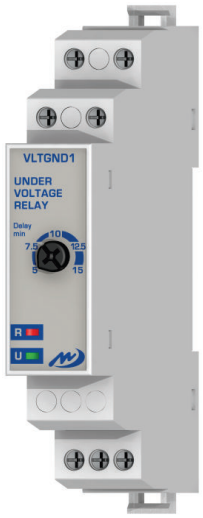


WIRING DIAGRAM



VL VLMFND1 / VLTGND1 Under Voltage Relay

- TIME RANGE 5 - 15min
- DE-ENERGIZING WHEN THE SUPPLY VOLTAGE IS BELOW 75% Ue
- ENERGIZING AT THE END OF TIME DELAY
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: MONITORING VOLTAGE

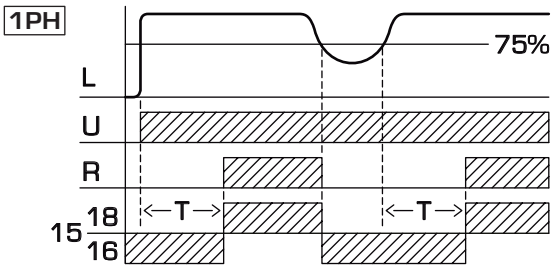
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

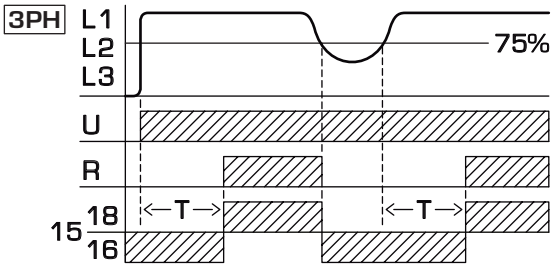
	UNIT	VLMFND1	VLTGND1
INPUT			
Supply voltage AC ±10%	V~	230	400 3N~
Power consumption (max. AC)	VA	7	14
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	8A - 250V~/24V⎓	
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Time Range ±10% (**T**)	min	5 - 15	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30/+70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	55	
Dimensions	mm	98 x 17.5 x 64	

FUNCTIONS - VLMFND1



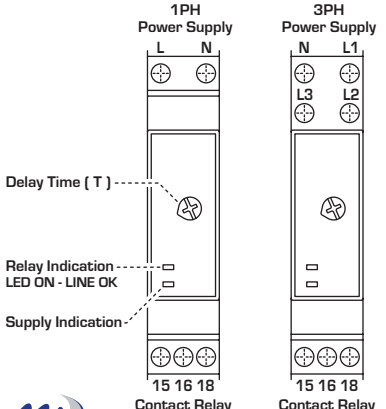
When Line is OK the R led and Relay are ON

FUNCTIONS - VLTGND1

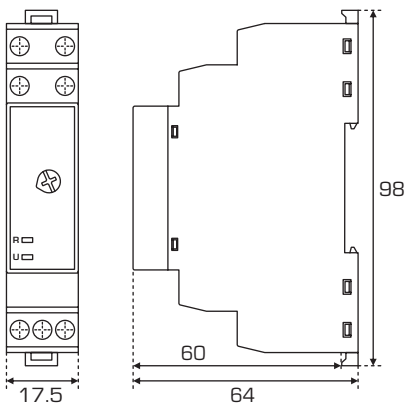


When Line is OK the R led and Relay are ON

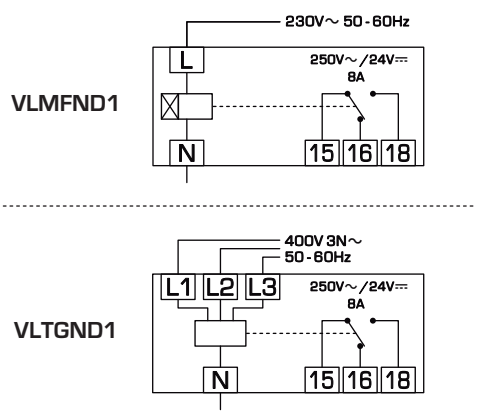
DESCRIPTION



DIMENSIONS (mm)



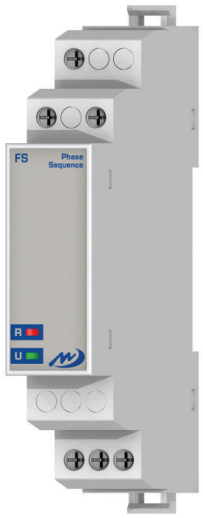
WIRING DIAGRAM



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

FS FST...KII1S/ZII1S/WII1S Phase Sequence Voltage Relay

- UNIVERSAL THREE PHASE SUPPLY
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: PHASE SEQUENCE/ROTATION CONTROL

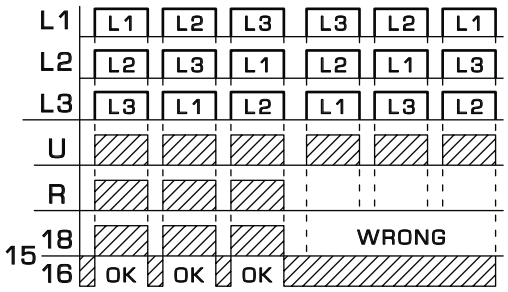
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

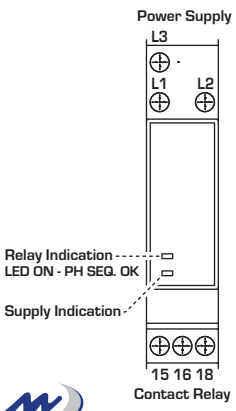
	UNIT	FSTKII1S	FSTZII1S	FSTWII1S
INPUT				
Supply voltage AC ±10%	V~	200-450 3~	300-480 3~	510-690 3~
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Power consumption (max. AC)	VA	20	25	30
Supply indication (**U**)	-	Green LED		
OUTPUT RELAY				
Rating	-	250V~/24V⎓	250V~	
	A	8		
Max switching power	VA	2000		
Max switching voltage	V~	400		
Min switching load	-	10mA 12V⎓		
Contact life	Mech.	30 x 10^3 ops		
	Electr.	100 x 10^3 ops		
Changeover contacts	-	AgNi0.15		
Output Indication (**R**)	-	Red LED		
GENERAL				
Working temperature	°C	-20 / +50		
Storage temperature	°C	-30/+70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	60		
Dimensions	mm	98 x 17.5 x 64		

FUNCTIONS

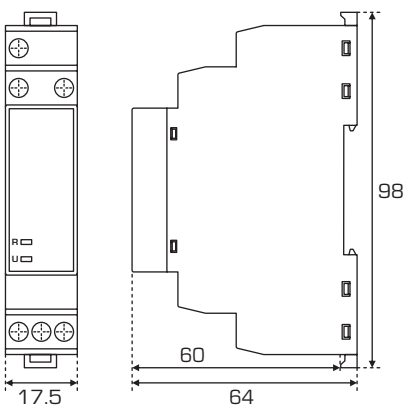


When Phase Sequence is OK the R led and Relay are ON

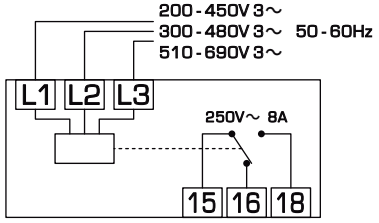
DESCRIPTION



DIMENSIONS (mm)



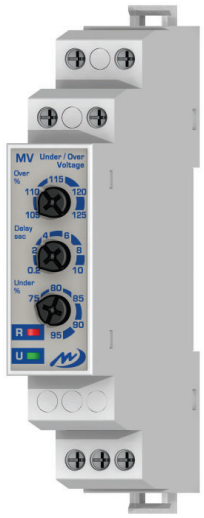
WIRING DIAGRAM



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MV MVTFBD1/S/N Under/Over Voltage Relay

- MEASURES PHASE TO PHASE VOLTAGE
- UNDER AND OVER VOLTAGE TRIP LEVEL SETTING
- UNDER AND OVER VOLTAGE TIME DELAY SETTING
- PHASE SEQUENCE AND LOSS CONTROL (only S or N version)
- NEUTRAL LOSS (only N version)
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: SUPPLY VOLTAGE MONITORING

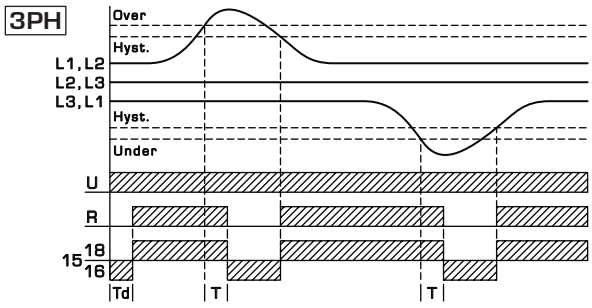
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

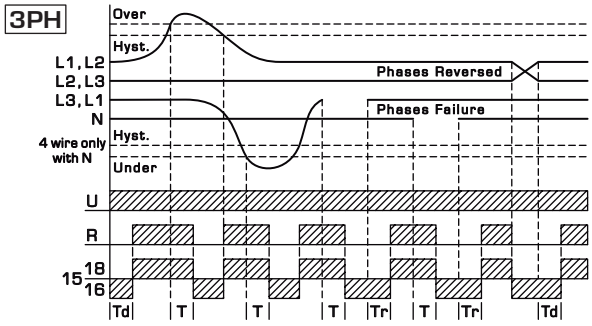
INPUT	UNIT	MVTFBD1	MVTFBD1S	MVTFBD1N
Supply voltage AC ±10%	V~	230 3~	230 3~	230 3N~
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Trip Levels	Under Over	75 - 95% of **U** 105 - 125% of **U**		
Power consumption (max. AC)	VA	13		
Supply indication (**U**)	-	Green LED		
OUTPUT RELAY				
Rating	-	8A - 250V~/24V⎓		
Max switching power	VA	2000		
Max switching voltage	V~	400		
Min switching load	-	10mA 12V⎓		
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops		
Changeover contacts	-	AgNi0.15		
Output Indication (**R**)	-	Red LED		
GENERAL				
Hysteresis (factory set)	%	±2 of trip level		
Response Time	ms	100		
Time Range (**T**)	s	0.2 - 10		
Delay from Failure (**Tr**)	ms	100		
Power on delay (**Td**)	ms	100		
Working temperature	°C	-20 /+50		
Storage temperature	°C	-30/+70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	65		
Dimensions	mm	98 x 17.5 x 64		

FUNCTIONS - MVTFBD1



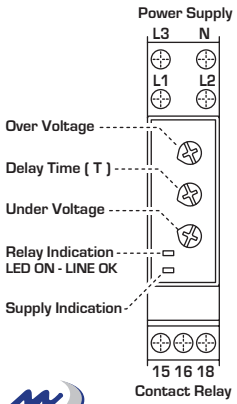
When Line is OK the R led and Relay are ON
(Without Phase Sequence)

FUNCTIONS - MVTFBD1S/N

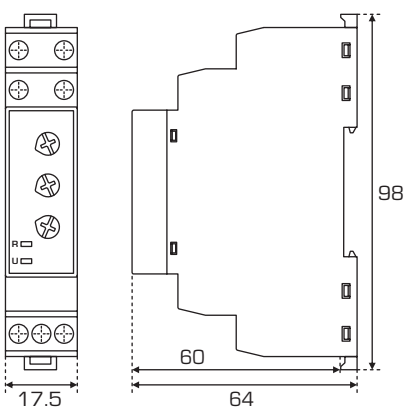


When Line and Phases are OK the R led and Relay are ON

DESCRIPTION

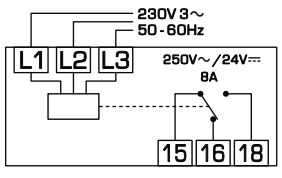


DIMENSIONS (mm)

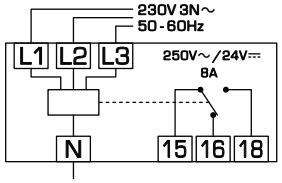


WIRING DIAGRAM

MVTFBD1
MVTFBD1S
Without N



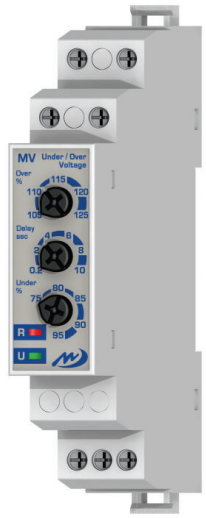
MVTFBD1N
With N



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MV MVTGBD1/S/N Under/Over Voltage Relay

- MEASURES PHASE TO PHASE VOLTAGE
- UNDER AND OVER VOLTAGE TRIP LEVEL SETTING
- UNDER AND OVER VOLTAGE TIME DELAY SETTING
- PHASE SEQUENCE AND LOSS CONTROL (only S or N version)
- NEUTRAL LOSS (only N version)
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: SUPPLY VOLTAGE MONITORING

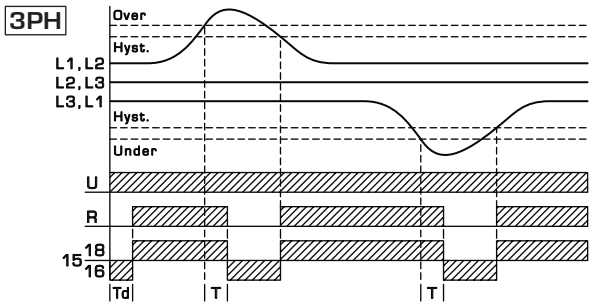
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

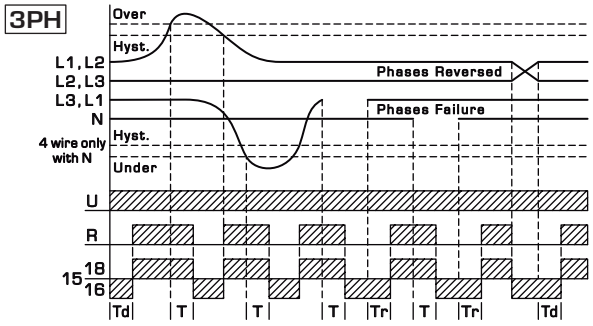
INPUT	UNIT	MVTGBD1	MVTGBD1S	MVTGBD1N
Supply voltage AC ±10%	V~	400 3~	400 3~	400 3N~
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Trip Levels	Under Over	75 - 95% of **U** 105 - 125% of **U**		
Power consumption (max. AC)	VA	16		
Supply indication (**U**)	-	Green LED		
OUTPUT RELAY				
Rating	-	8A - 250V~/24V⎓		
Max switching power	VA	2000		
Max switching voltage	V~	400		
Min switching load	-	10mA 12V⎓		
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops		
Changeover contacts	-	AgNi0.15		
Output Indication (**R**)	-	Red LED		
GENERAL				
Hysteresis (factory set)	%	+/- 2 of trip level		
Response Time	ms	100		
Time Range (**T**)	s	0.2 - 10		
Delay from Failure (**Tr**)	ms	100		
Power on delay (**Td**)	ms	100		
Working temperature	°C	-20 /+50		
Storage temperature	°C	-30/+70		
Electrical Insulation	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m	2000		
Weight	g	65		
Dimensions	mm	98 x 17.5 x 64		

FUNCTIONS - MVTGBD1



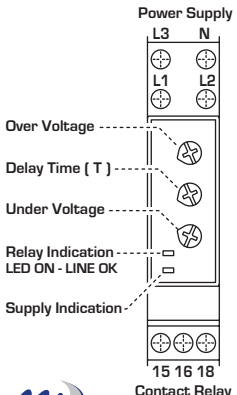
When Line is OK the R led and Relay are ON
(Without Phase Sequence)

FUNCTIONS - MVTGBD1S/N

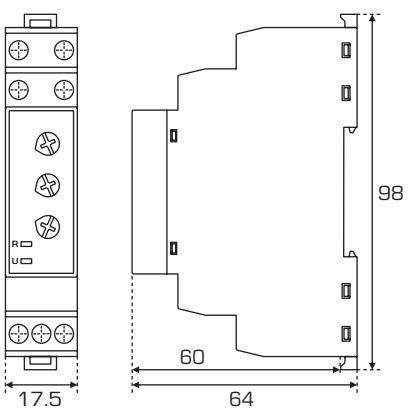


When Line and Phases are OK the R led and Relay are ON

DESCRIPTION

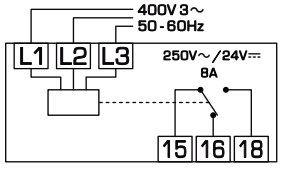


DIMENSIONS (mm)

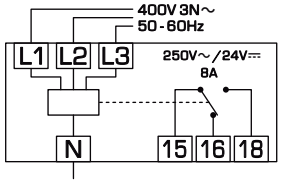


WIRING DIAGRAM

MVTGBD1
MVTGBD1S
Without N



MVTGBD1N
With N



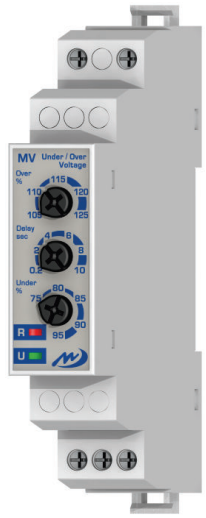
Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

MV MVMFBD1/-16 Under/Over Voltage Relay

- MEASURES PHASE TO PHASE VOLTAGE
- UNDER AND OVER VOLTAGE TRIP LEVEL SETTING
- UNDER AND OVER VOLTAGE TIME DELAY SETTING
- PHASE LOSS CONTROL
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0

* AVAILABLE ALSO IN 3 x 230V~ - COD: MVTFBD1

■ TYPICAL APPLICATION: SUPPLY VOLTAGE MONITORING



RoHS 2 COMPLIANT

CE

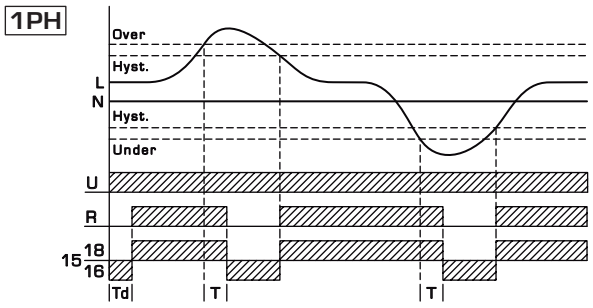
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

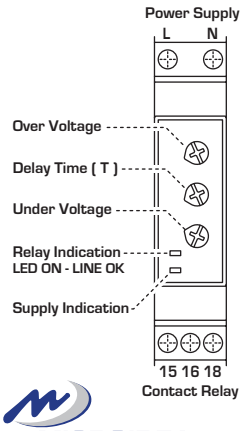
INPUT	UNIT	MVMFBD1	MVMFBD1-16
Supply voltage AC ±10%	V~	230	
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Trip Levels	Under Over	75 - 95% of **U** 105 - 125% of **U**	
Power consumption (max. AC)	VA	13	
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	8A - 250V~/24V⎓	16A - 250V~/24V⎓
Max switching power	VA	2000	4000
Max switching voltage	V~	400	440
Min switching load	-	10mA 12V⎓	40mA 24V⎓
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	20 x 10^6 ops 30 x 10^3 ops
Changeover contacts	-	AgNi0.15	Ag-alloy
Output Indication (**R**)	-	Red LED	
GENERAL			
Hysteresis (factory set)	%	± 2 of trip level	
Response Time	ms	100	
Time Range (**T**)	s	0.2 - 10	
Power on delay (**Td**)	ms	100	
Working temperature	°C	-20 /+50	
Storage temperature	°C	-30/+70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	65	
Dimensions	mm	98 x 17.5 x 64	

FUNCTIONS

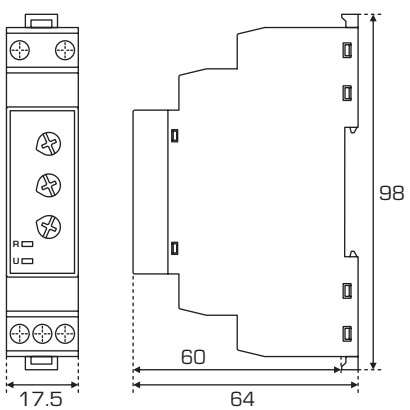


When Line is OK The R led and Relay are ON

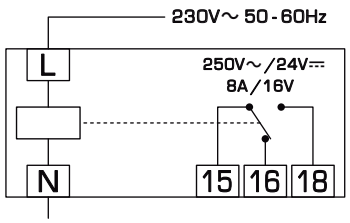
DESCRIPTION



DIMENSIONS (mm)



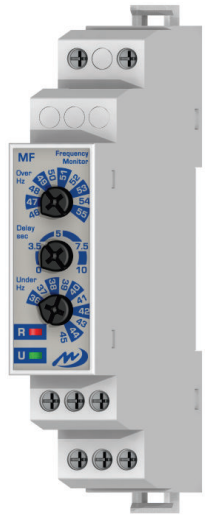
WIRING DIAGRAM



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MF MFMFBD1 / MFMFBD2 Frequency Monitor

- UNDER AND OVER FREQUENCY LEVEL SETTING
- UNDER AND OVER FREQUENCY TIME DELAY SETTING
- OUTPUT 1 or 2 RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ TYPICAL APPLICATION: GENSET SYSTEMS

EU Directives - CE Marking:

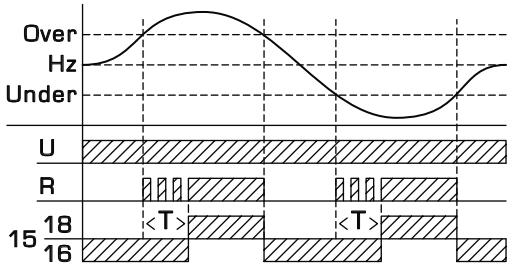
> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

	UNIT	MFMFBD1	MFMFBD2
INPUT			
Supply voltage AC ±10%	V~	100 - 240	
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Frequency selectable	Hz	36 - 45 / 46 - 55	
Power consumption (max. AC)	VA	12	
Supply indication (**U**)	-	Green LED	
OUTPUT RELAY			
Rating	-	1 x 8A SPDT 250V~/24V⎓	2 x 8A SPDT 250V~/24V⎓
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. / Electr.	30 x 10^3 ops / 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Delay Time (**T**)	s	0 - 10	
Setting Accuracy	%	2	
Repeat Accuracy	%	0.5 constant conditions	
Hysteresis	Hz	±1	
Temperature dependancy	%/°C	< 0.1	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30/+70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	55	
Dimensions	mm	98 x 17.5 x 64	

NEW MODEL

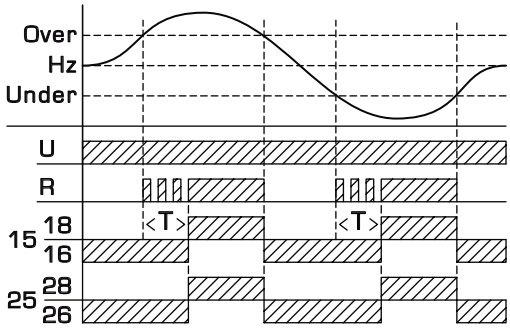
FUNCTIONS 1 RELAY



When Frequency is OK the R led and Relay are OFF

When Frequency is wrong the R led and Relay are ON

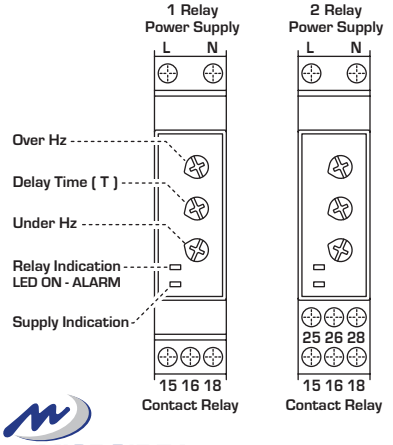
FUNCTIONS 2 RELAY



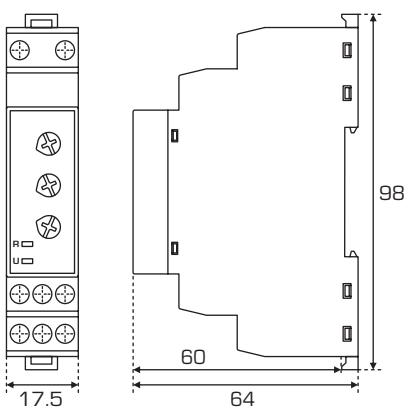
When Frequency is OK the R led and Relay are OFF

When Frequency is wrong the R led and Relay are ON

DESCRIPTION

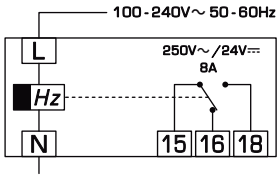


DIMENSIONS (mm)

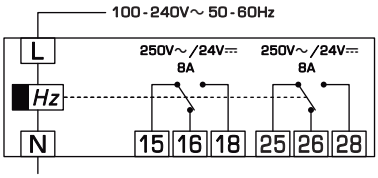


WIRING DIAGRAM

MFMFBD1



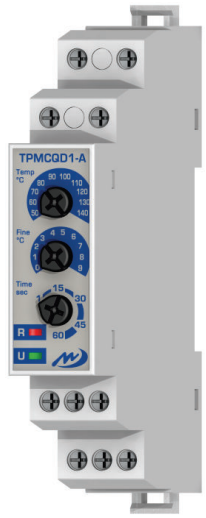
MFMFBD2



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

TP TPMCQD1-A PT100 - Temperature Relay

- TEMPERATURE PROTECTION RELAY WITH PT100 SENSOR
- EXTERNAL LATCHING SELECTABLE
- SENSOR TEST CONNECTION
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: TEMPERATURE MONITOR

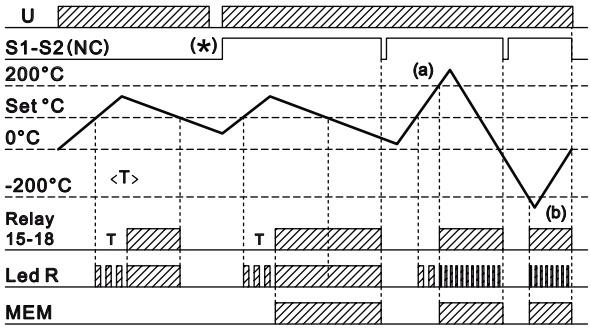
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

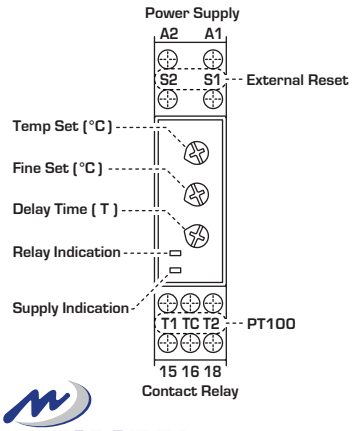
	UNIT	TPMCQD1-A
INPUT		
Supply voltage DC ±10%	V⎓	22 - 39
Supply voltage AC ±10%	V~	19 - 28
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)
Power consumption (max. AC)	VA	1.3
Supply indication (**U**)	-	Green LED
MEASURING CIRCUIT		
Type of sensor	-	PT100
Temperature Levels	°C	50 - 149
Precision	°C	± 2
OUTPUT RELAY		
Rating	-	8A - 250V~/24V⎓
Max switching power	VA	2000
Max switching voltage	V~	400
Min switching load	-	10mA 12V⎓
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops
Changeover contacts	-	AgNi0.15
Output Indication (**R**)	-	Red LED
GENERAL		
Delay Time (**T**)	s	1 - 60
Working temperature	°C	-20 / +50
Storage temperature	°C	-30/+70
Electrical Insulation (supply/probe)	kV	3
Electrical Insulation (supply/relay)	kV	4
Overvoltage Category	-	III
Protection degree	IP	20
Pollution degree	-	2
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)
Altitude up to	m	2000
Weight	g	70
Dimensions	mm	98 x 17.5 x 64

FUNCTIONS

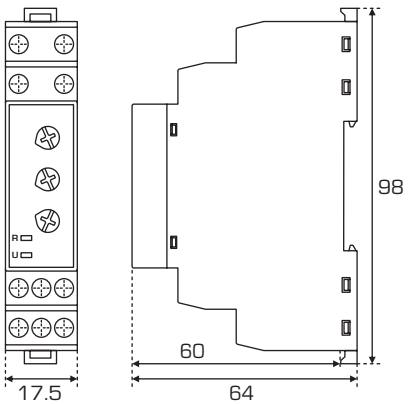


(*) - To activate the "MEM", the device needs to be restarted
(a) - Short Circuit (b) - Open Circuit

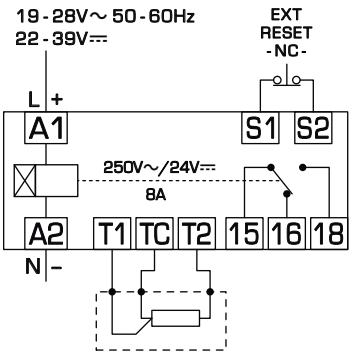
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

TP TPMCII1 / TPMIII1 PTC - Motor Protection Relay

- PROTECTION RELAY FOR MOTOR WITH PTC SENSOR
  - Type of PTC sensor according to DIN 44081
- MANUAL OR AUTOMATIC RESET
- MEMORY AND FAILURE SET
- SENSOR TEST
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- COMPACT SIZE - 1 MODULE - 17.5mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: MOTOR OVERLOAD

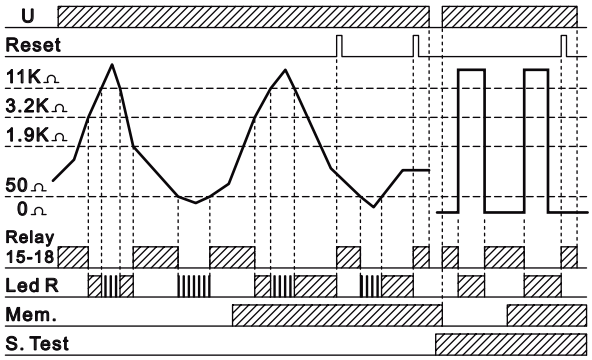
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

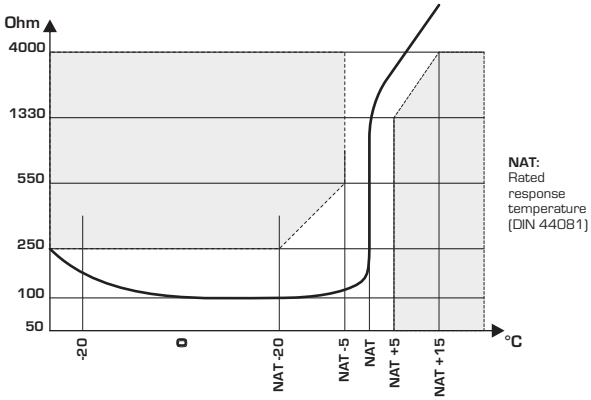
TECHNICAL DATA

	UNIT	TPMCII1	TPMIII1
INPUT			
Supply voltage DC ±10%	V⎓	24	-
Supply voltage AC ±10%	V~	24	90 - 264
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Power consumption (max. AC)	VA	0.9	3.7
Supply indication (**U**)	-	Green LED	
MEASURING CIRCUIT			
Total PTC resistance R1+R2+RN	KΩ	< 1.5	
Trip resistance	KΩ	3.2 ±10%	
Reset resistance	KΩ	1.9 ±10%	
Voltage at T1 - T2	VAC	< 2.5	
OUTPUT RELAY			
Rating	-	8A - 250V~/24V⎓	
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
Output Indication (**R**)	-	Red LED	
GENERAL			
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30/+70	
Electrical Insulation (supply/probe)	kV	3	
Electrical Insulation (supply/relay)	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	55	
Dimensions	mm	98 x 17.5 x 64	

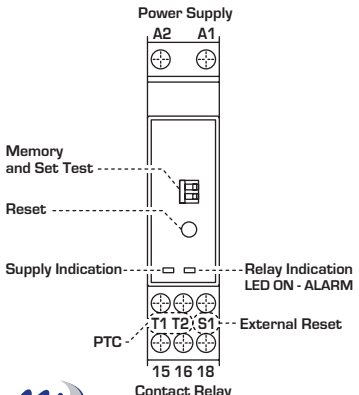
FUNCTIONS



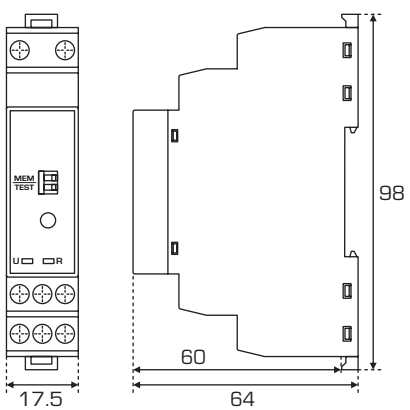
PTC RESISTIVE CURVE



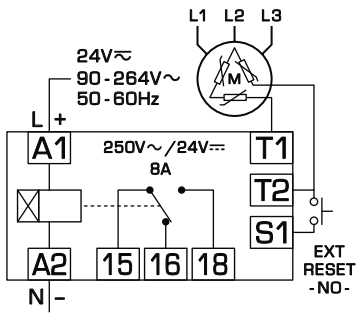
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM

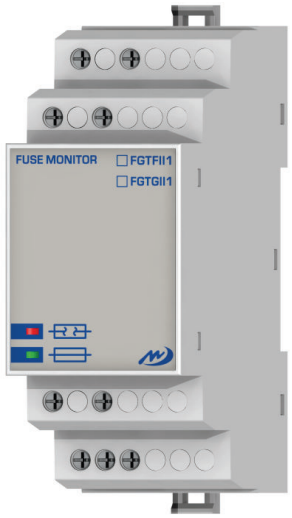


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FG FGTFII1 / FGTGII1 Fuse Monitor

- RECOGNIZE FUSE FAILURE IN THREE-PHASE OR MONO-PHASE MAINS
- CAN BE USED FOR ALL SIZES AND TYPES OF FUSES
- SIGNALS OPERATION EVEN IF LOADS ARE SWITCHED OFF
- AUTOMATIC RESET AFTER REPLACING THE FUSE
- WORKING PROPERLY EVEN IF:
  - ASYMMETRICAL MAINS
  - INDEPENDENCE OF PHASE SEQUENCE
  - MAINS WITH HARMONIC WAVES
  - MOTORS PROVIDING FEEDBACK
- INTERNAL RESISTANCE > 2000 Ω/V
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- SIZE 2 MODULES - 35mm - DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0

■ TYPICAL APPLICATION: FUSES MONITORING ON 3-PH MOTOR MAINS



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

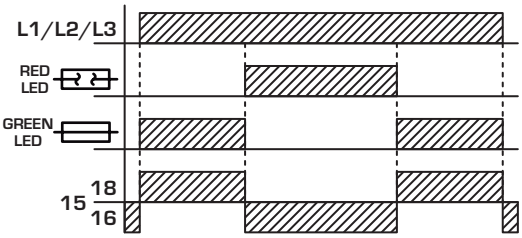
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

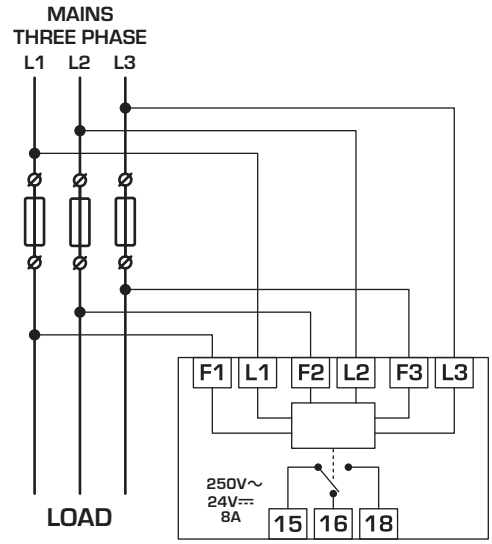
TECHNICAL DATA

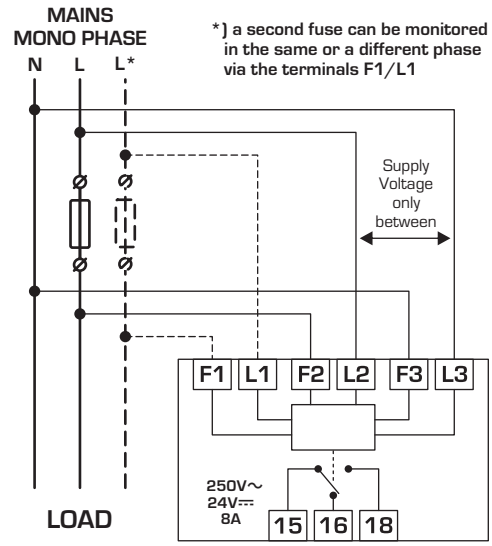
INPUT	UNIT	FGTFII1	FGTGII1
Supply voltage AC ±10%	V~	230	400
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)	
Power consumption (max. AC)	VA	3.6	1.5
OUTPUT RELAY			
Rating	-	8A - 250V~/24V⎓	
Max switching power	VA	2000	
Max switching voltage	V~	400	
Min switching load	-	10mA 12V⎓	
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops	
Changeover contacts	-	AgNi0.15	
STATUS INDICATION			
Fuse OK	-	Green LED - Relay ON	
Fuse FAIL	-	Red LED - Relay OFF	
GENERAL			
Internal resistance paths	Ω/V	> 2000	
Permissible feedback (Ue)	-	max. 90%	
Response/Release Time:			
- After Breaking Fuse	ms	< 30	
- After Restoring Fuse	ms	< 500	
Working temperature	°C	-20 / +50	
Storage temperature	°C	-30/+70	
Electrical Insulation	kV	4	
Overvoltage Category	-	III	
Protection degree	IP	20	
Pollution degree	-	2	
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)	
Altitude up to	m	2000	
Weight	g	175	
Dimensions	mm	98 x 35.7 x 64	

FUNCTIONS

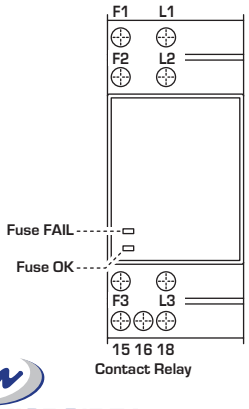


WIRING DIAGRAM

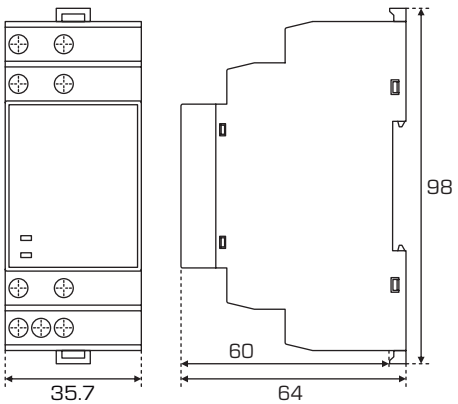




DESCRIPTION



DIMENSIONS (mm)



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.

TP TPM...YII1/RII1/GII1 PTC - Motor Protection Relay

- PROTECTION RELAY FOR MOTOR WITH PTC SENSOR
- AUTOMATIC RESET
- TEST BUTTON FOR VERIFY
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- SIZE 2 MODULES - 35mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: MOTOR OVERLOAD

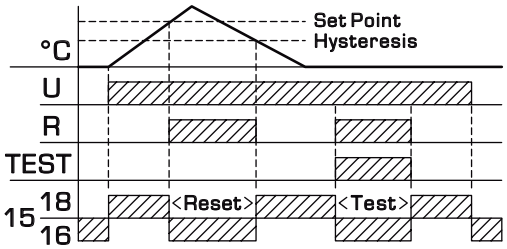
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

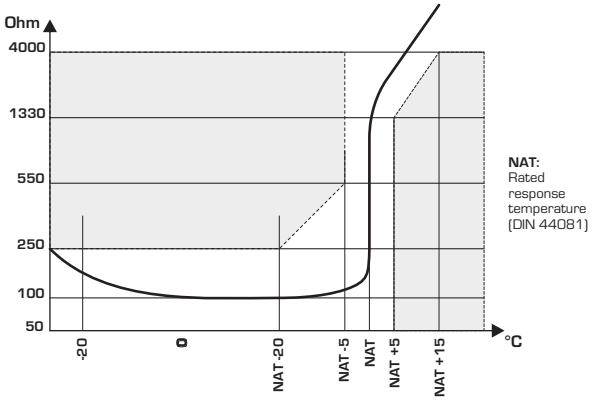
	UNIT	TPMYII1	TPMRII1	TPMGII1
INPUT				
Supply voltage AC ±10%	V~	12/24	110/230	400
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)		
Power consumption (max. AC)	VA	0.5	3.2	5.6
Supply indication (**U**)	-	Green LED		
MEASURING CIRCUIT				
Type of PTC sensor	-	According to DIN 44081		
Total PTC resistance R1+R2+RN	KΩ	< 1.5		
Trip resistance	KΩ	2.7 - 3.1		
Reset resistance	KΩ	1.65 ±10%		
Voltage at T1 - T2	VAC	< 2.5		
OUTPUT RELAY				
Rating	-	8A - 250V~/24V⎓		
Max switching power	-	2000VA		
Max switching voltage	-	400V~		
Min switching load	-	10mA 12V⎓		
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops		
Changeover contacts	-	AgNi0.15		
Output Indication (**R**)	-	Red LED		
GENERAL				
Working temperature	°C	-20 /+50		
Storage temperature	°C	-30/+70		
Electrical Insulation (supply/probe)	kV	3		
Electrical Insulation (supply/relay)	kV	4		
Overvoltage Category	-	III		
Protection degree	IP	20		
Pollution degree	-	2		
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)		
Altitude up to	m			
Weight	g	170		
Dimensions	mm	94 x 35 x 58		

FUNCTIONS

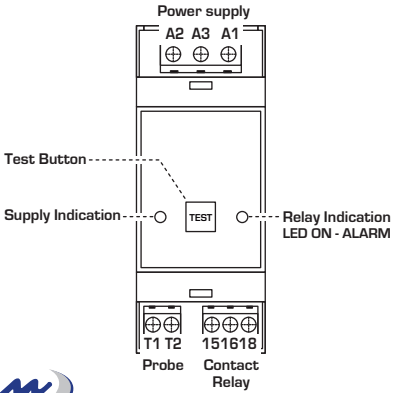


When Status is OK the R led is OFF and Relay is ON
When Status is wrong the R led is ON and Relay is OFF

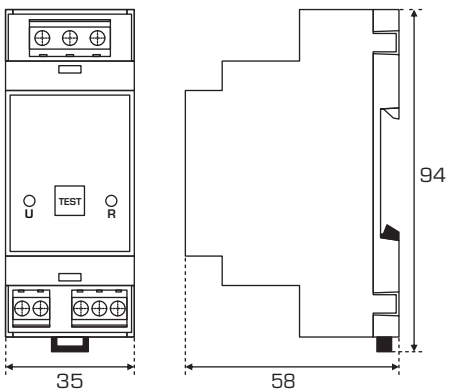
PTC RESISTIVE CURVE



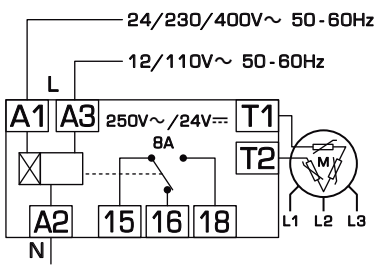
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM



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LR LRM...CII1/EII1/FII1/GII1 Liquid Level Control

- USABLE FOR ALL CONDUCTIVE LIQUID
- AUTOMATIC RESETTING
- FROM 2.5K TO 50K SENSITIVITY SETTING
- GALVANIC INSULATION SUPPLY AND PROBES
- OUTPUT RELAY 1 POLE CHANGEOVER CONTACT
- SIZE 2 MODULES - 35mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



■ TYPICAL APPLICATION: CONTROL AND MAINTENANCE OF MAX AND/OR MIN LEVEL OF CONDUCTIVE LIQUIDS - TAP WATER, SEAWATER, SEWAGE, COFFEE, ETC...

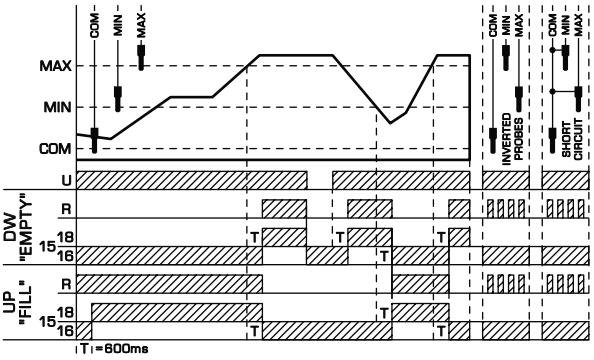
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

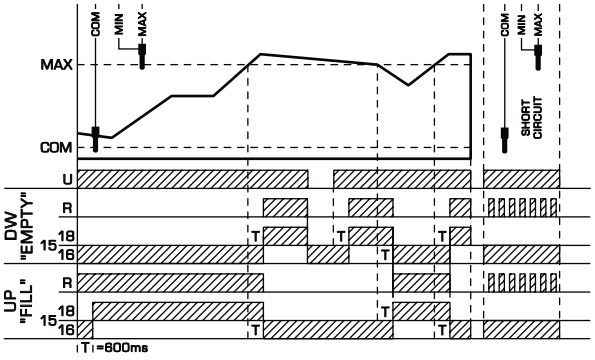
TECHNICAL DATA

INPUT	UNIT	LRMCII1	LRMEII1	LRMFII1	LRMGII1
Supply voltage AC ±10%	V~	24	115	230	400
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)			
Power consumption (max. AC)	VA	2.5	2.4	2.9	3.5
Supply indication (**U**)	-	Green LED			
OUTPUT RELAY					
Rating	-	8A - 250V~/24V⎓			
Max switching power	VA	2000			
Max switching voltage	V~	400			
Min switching load	-	10mA 12V⎓			
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops			
Changeover contacts	-	AgNi0.15			
Output Indication (**R**)	-	Red LED			
GENERAL					
Function Select	-	EMPTY (DW) or FILL (UP)			
Adjustable sensivity	Kohm	2.5 to 50			
Probe supply	VAC	8.5			
Isolation input probe	kV	3 (1.2 50us)			
Number of probe	n°	2 - 3			
Maximum cable length	mt	800			
Working temperature	°C	-20 / +50			
Storage temperature	°C	-30/+70			
Electrical Insulation	kV	4			
Overvoltage Category	-	III			
Protection degree	IP	20			
Pollution degree	-	2			
Climatic category according to (without condensation)	-	IEC 60068-1 (20/050/60) DIN 40040 (class D)			
Altitude up to	m	2000			
Weight	g	120			
Dimensions	mm	98 x 35.7 x 64			

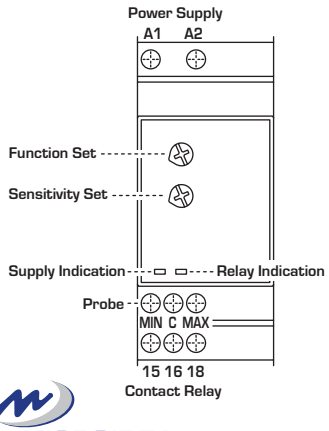
FUNCTIONS with 3 probe



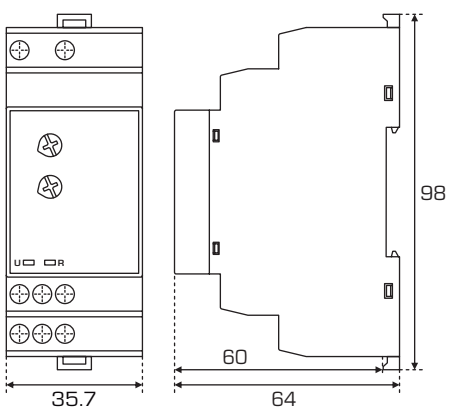
FUNCTIONS with 2 probe (short ciruite Min and Max probe)



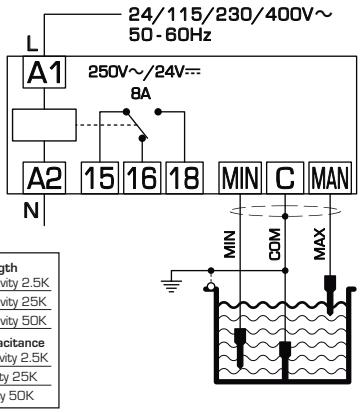
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM



CABLE TYPE

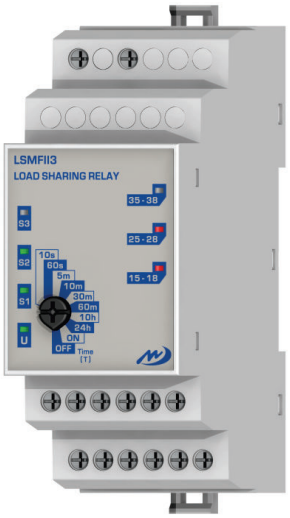
Max Cable Length	
800 m / sensitivity 2.5K	
150 m / sensitivity 25K	
100 m / sensitivity 50K	
Max Cable Capacitance	
150nF / sensitivity 2.5K	
35nF / sensitivity 25K	
20nF / sensitivity 50K	

Cable length is calculated using 600V 3 wire 0.75mm

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LS LSMFII3 Load Sharing Relay

- CONTROLS THE OPERATION OF UP TO 3 LOADS BY ALTERNATING EACH ONE
- SUITABLE FOR HYDROPHORE SEQUENCINGY SYSTEM
- INDEPENDENT LEDs FOR INPUT AND OUTPUT
- REQUIRES 3 EXTERNAL VOLT FREE CONTACTS (NO)
- TIME RANGE 10s - 24h
- OUTPUT 3 RELAY 1 POLE CONTACT (NO)
- SIZE 2 MODULES - 35mm
- DIN RAIL MOUNTING EN50.022
- SELF-EXTINGUISHED MATERIAL UL94 V0



AVAILABLE NEW MODEL NOW

RoHS 2 COMPLIANT

CE

■ **TYPICAL APPLICATION:** PUMPS WORK IN SEQUENCE AND WITH EQUAL TIME PERIODS, SHARING TIME OF WORKING LOADS.

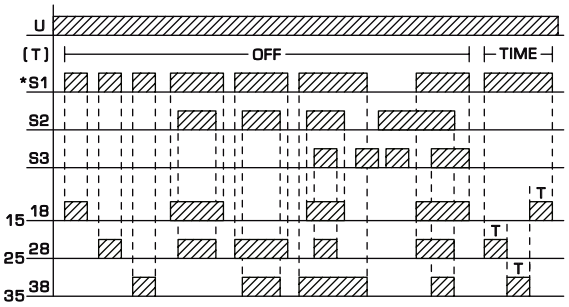
EU Directives - CE Marking:

> 2014/30/UE - EMC
> 2014/35/UE - LVD

TECHNICAL DATA

	UNIT	LSMFII3
INPUT		
Supply voltage AC ±10%	V~	230
Nominal Frequency	Hz	50 - 60 (range: 47 - 63)
Power consumption (max. AC)	VA	3.2
Supply indication (**U**)	-	Green LED
Switch indication (**S1/S2/S3**)		Green LED
OUTPUT RELAY (x3)		
Rating	-	5A - 250V~/24V⎓
Max switching power	VA	2000
Max switching voltage	V~	400
Min switching load	-	10mA 12V⎓
Contact life	Mech. Electr.	30 x 10^3 ops 100 x 10^3 ops
Changeover contacts	-	AgNi0.15
Output Indication (**15-18/25-28/35-38**)	-	Red LED
GENERAL		
Time Range rotary switch (**T**)	-	10s - 24h
Time Deviation	%	2
Repeat Accuracy	%	0.2 Set value
Rise time	ms	50
Working temperature	°C	-20 / +50
Storage temperature	°C	-30 / +70
Electrical Insulation (supply/switch)	kV	3
Electrical Insulation (supply/relay)	kV	4
Electrical Insulation (relay/switch)	kV	3
Overvoltage Category	-	III
Protection degree	IP	20
Pollution degree	-	2
Altitude up to	m	2000
Weight	g	210
Dimensions	mm	98 x 35.7 x 64

FUNCTIONS

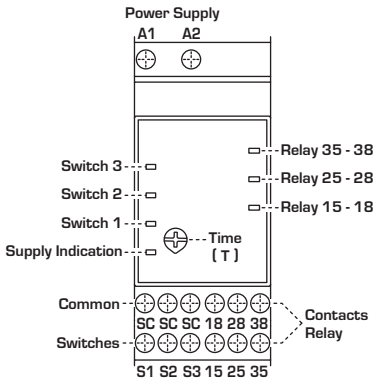


Use the selection ON only to test the functionality of all Relay contacts.

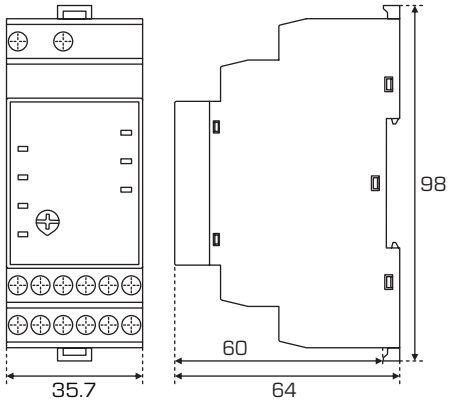
*During the delay time function the S1 LED blinking.

NOTE:
Whenever you change the Time (T), you must restart the device.

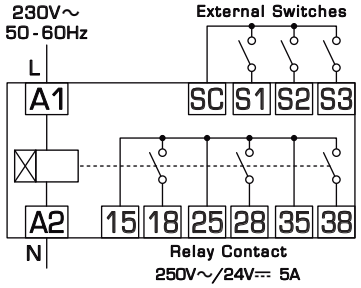
DESCRIPTION



DIMENSIONS (mm)



WIRING DIAGRAM



Microidea reserves the right to bring modifications to this documentation and the products described without some obligation of reporting.