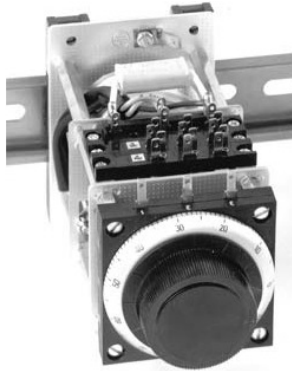


1 Turn-Motorized potentiometer 1 Gang-Motorpotentiometer

Serie MPR

DIN Rail End Mount



- | | |
|--|--------------------------------|
| • Feindrahtpotentiometer
Wire-wound potentiometer | R1...R2 (5W) |
| • Widerstandswerte
Resistance | 100R...100K (Ω) |
| • Endlagenkontakte einstellbar
Adjustable limit switches | 2 |
| • Nutzkontakte (frei programmierbar)
Program channels (free setting) | 1...4 |
| • Rückwand- Schnellbefestigung
Quick rail base mounting | 35 DIN 46277 / EN 50022 |

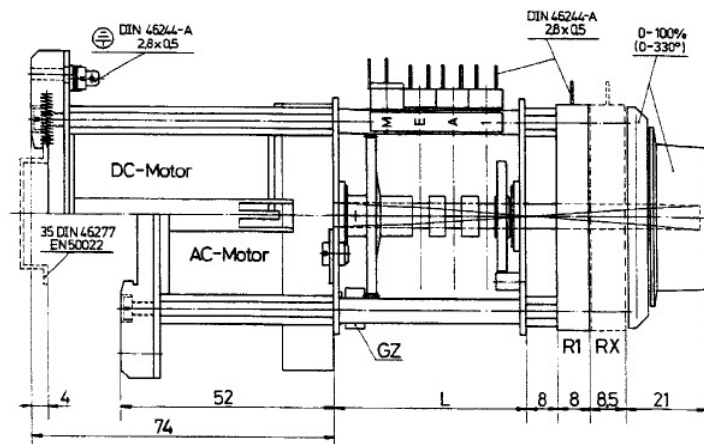
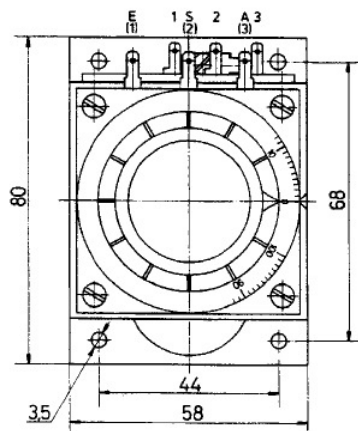
Application:

- Motorized potentiometers are basically the best in the field of control and regulation technics
- The possibility to mount several potentiometers on the same shaft allows also a remote display of the position of the potentiometer
- Supplementary cams can be used to give limit signals depending on the position of the potentiometer
- Supplementary cams can also be used to offset a residual resistance of the potentiometer at the zero point
- One supplementary cam can be used as zero point interlocking

Design:

- High precision wire-wound potentiometer with high resolution and linearity
- Potentiometer directly driven by the cam shaft
- Two adjustable limit switches controlling the rotation angle of the potentiometer
- Solid mechanical Stopps preventing damage to potentiometers
- Available with AC or DC motors
- Friction clutch protecting the unit when manually operated
- The modular design allows quick delivery practically without delay, voltage resistance and cycle time according to your requirements

Outline drawing



1-Turn Motorpotentiometer for DIN-Rail Mounting

MPP SERIES



Microswitch



Type: KS25B4
 Function: change over
 Connection: cable shoe 2.8x0.55mm
 Contact material: silver plated

Cam



Type: NK4201.180°
 Function: double cam
 Adjustment range: 6 – 180° (free programmable)
 Material: Grilon T300

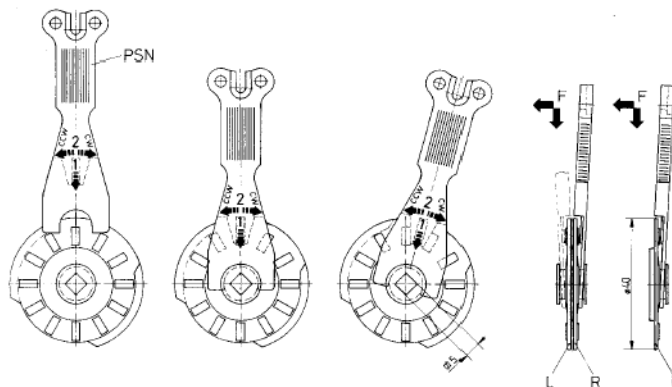
Potentiometer



Type: DPC
 Resistant: See order code
 Power: 5W
 Turning angle: 330°

Adjusting guideline of NK cams

To adjust the NK cam use PSN programming Key which is included in the shipment. Put them to the NK cam and turn until you get the right switching point of your switch.



MPP SERIES

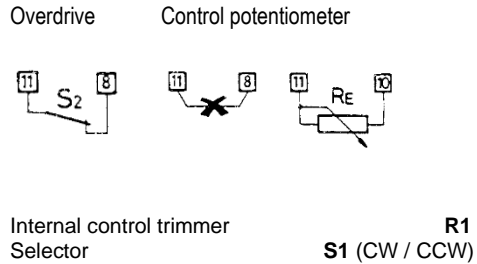
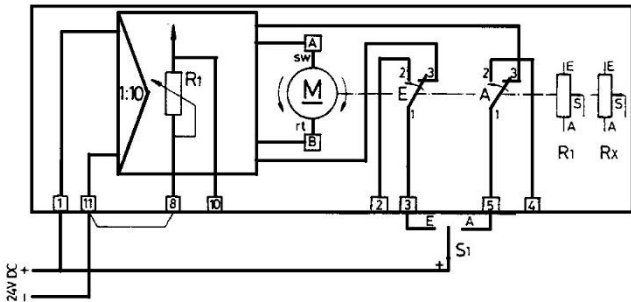


Stop and control units

The stop and control units can be optionally adapted to this motor potentiometer. On the one hand, they can be used to quickly stop the engine for more precise control as well as to vary the speed or start-up time.

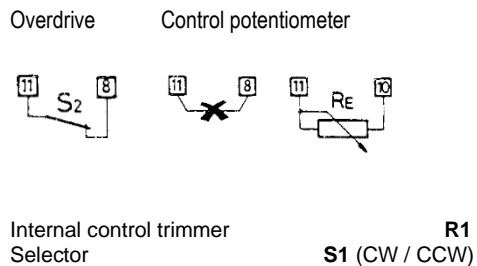
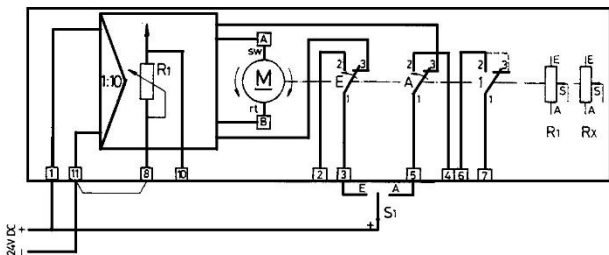
PRSG.2 Control Print Stop and Switch E and A

- Stop and speed control unit
- Speed control unit: 1:1 to 1:8 (+/-10%)
- Number of end positions: 2 limit switches
- Number of useful contacts: none
- Flow time: 20ms
- No-load current: 30mA
- Supply voltage: 24VDC
- Connection: Terminal block (max. 1.5mm²)



PRSG.3 Regulator Print Stop and Switches E and A + 1

- Stop and speed control unit
- Speed control unit: 1:1 to 1:8 (+/-10%)
- Number of end positions: 2 limit switches
- Number of useful contacts: 1 user contact (adjustable)
- Flow time: 20ms
- No-load current: 30mA
- Supply voltage: 24VDC
- Connection: Terminal block (max. 1.5mm²)

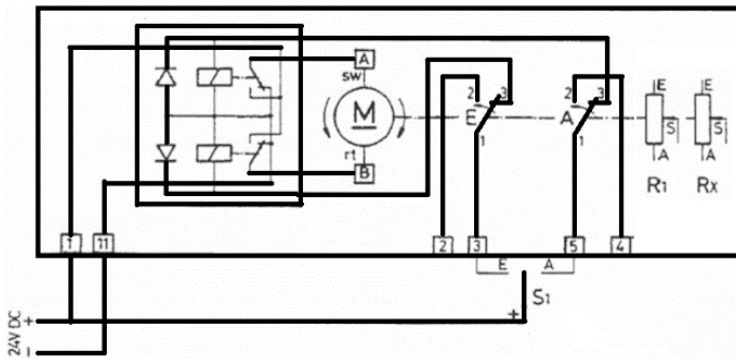


MPP SERIES



PSG.2 Stop Unit for DC Motors - Two Switches

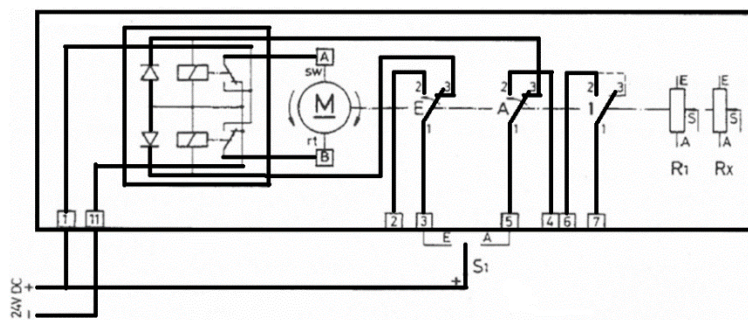
Stop unit
 Number of end positions: 2 limit switches
 Number of useful contacts: none
 Flow time: 20ms
 No-load current: 30mA
 Supply voltage: 24VDC
 Connection: Terminal block (max. 1.5mm²)



Selector **S1** (CW / CCW)

PSG.3 Stop Unit for DC Motors - Three Switches

Stop unit
 Number of end positions: 2 limit switches
 Number of useful contacts: 1 user contact (adjustable)
 Flow time: 20ms
 No-load current: 30mA
 Supply voltage: 24VDC
 Connection: Terminal block (max. 1.5mm²)



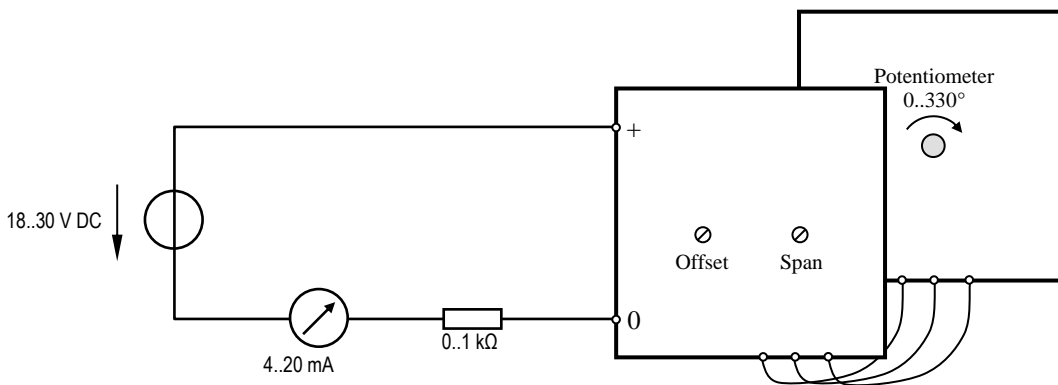
Selector **S1** (CW / CCW)

MPP SERIES



MR265 4-20mA Power Interface 2 Conductor Engineering

Connection type	2- Conductor technology
Supply voltage:	18...30 V DC (specifications apply to 24V)
Power consumption:	4...20 mA
Max. Output Power:	400 mW
Max. Load:	1 k Ω
Output:	4...20 mA
Linearity:	$\pm 0.5 \%$
Temperature coefficient:	100 ppm/K
Temperature range:	0...70°C

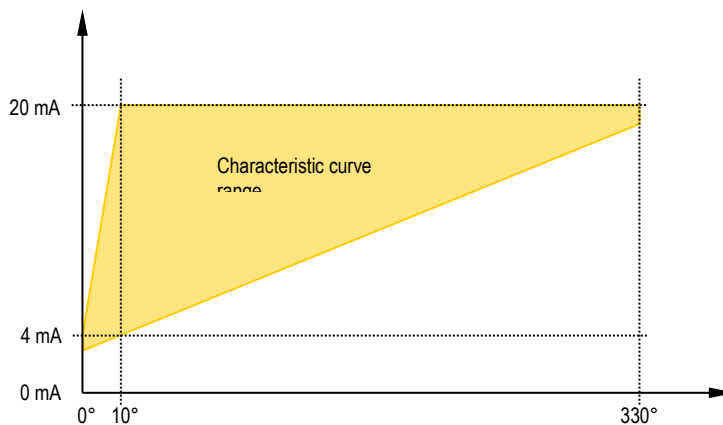


Settings

The shaft of the potentiometer can be rotated a maximum of 330°. The output characteristic of 4..20 mA can be set as follows.

Min. Offset:	0°
Max. Offset:	10°
Min. steepness:	48.5 $\mu\text{A}/^\circ$
Max. steepness:	1.6 $\text{mA}/^\circ$

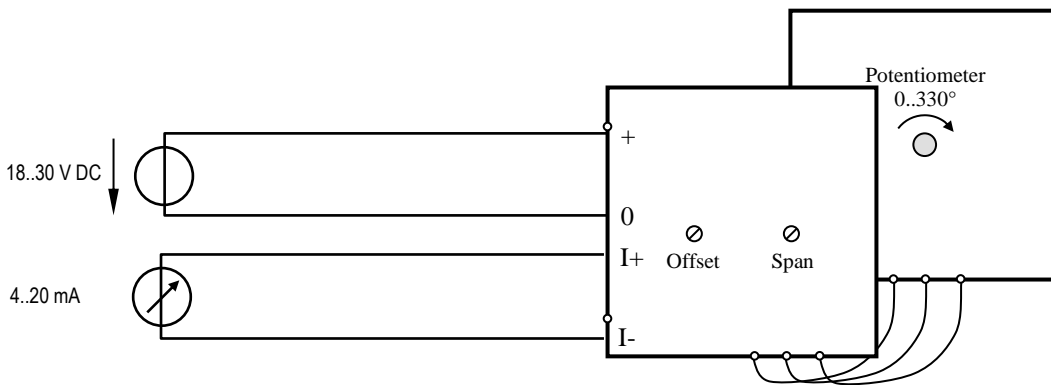
Based on these values, the characteristic curve range is displayed, in which the line of the characteristic curve can be freely placed.



MPP SERIES

MR265 4-20mA Power Interface 4 Wires, GND Power Supply, 2 Sensor Lines

Connection type	4- Conductor technology
Supply voltage:	18...30 V DC (specifications apply to 24V)
Power consumption:	4...20 mA
Max. Output Power:	400 mW
Max. Load:	1 kΩ
Output:	4...20 mA
Linearity:	± 0.5 %
Temperature coefficient:	100 ppm/K
Temperature range:	0...70°C

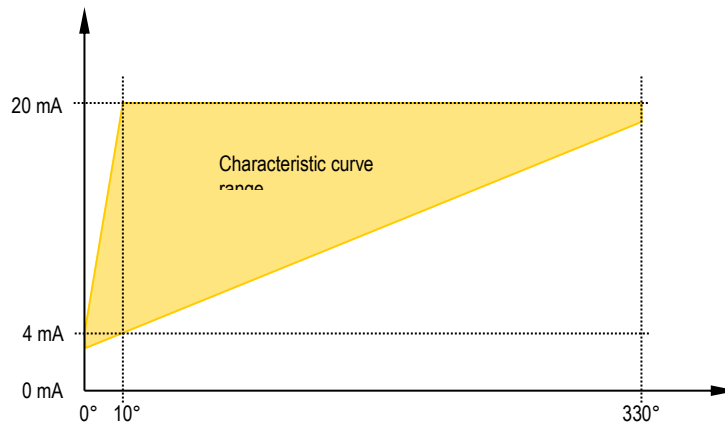


Settings

The shaft of the potentiometer can be rotated a maximum of 330°. The output characteristic of 4..20 mA can be set as follows.

Min. Offset:	0°
Max. Offset:	10°
Min. steepness:	48.5 μA/°
Max. steepness:	1.6 mA/°

Based on these values, the characteristic curve range is displayed, in which the line of the characteristic curve can be freely placed.



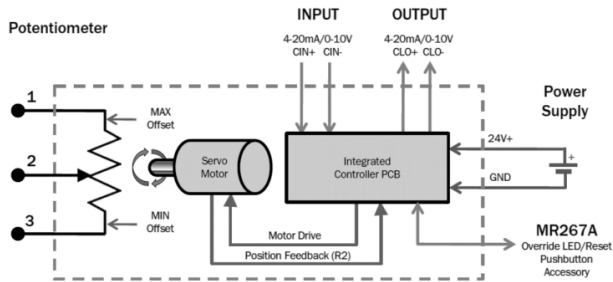
10-Turn Motorpotentiometer for backward mounting

MPP SERIES

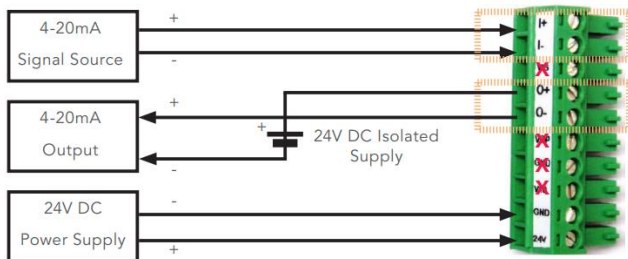


MR267 4-20mA Current Input for Drive Isolated

Supply voltage:	20...26 V DC (specifications apply to 24V)
Power consumption	max. 500mA
Input signal:	4-20mA
Output:	4-20mA
Entrance isolation	1kV
Position accuracy:	0.25% typical
Ramp-up time:	10 seconds to 120 seconds
Minimum Setting:	0% to 25%
Maximum setting:	52% to 100%



Connection diagram:



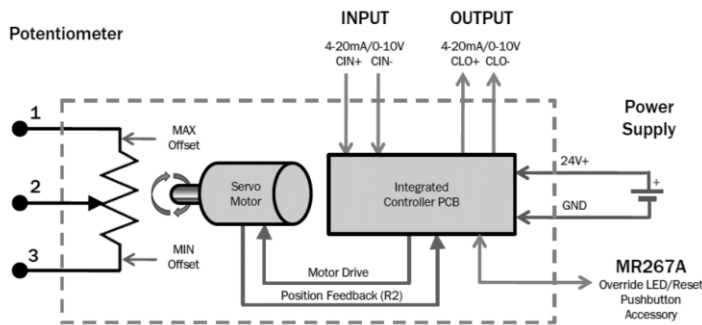
10-Turn Motorpotentiometer for backward mounting

MPP SERIES

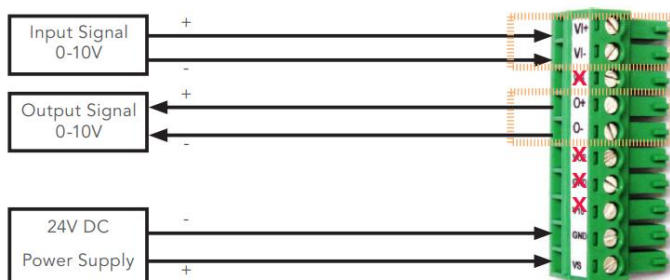


MR267 0-10V Voltage Interface for Control Isolated

Supply voltage:	20...26 V DC (specifications apply to 24V)
Power consumption	max. 500mA
Input signal:	0-10V
Output:	0-10V
Entrance isolation	1kV
Position accuracy:	0.25% typical
Ramp-up time:	10 seconds to 120 seconds
Minimum Setting:	0% to 25%
Maximum setting:	52% to 100%



Connection diagram:



1-Turn Motorpotentiometer for DIN-Rail Mounting

MPR SERIES



SAP Order code

MPR

908 x. x x. x x x

901 MPP

SIZE	
1	Size 1 - 0 switches
2	Size 2 - 2 switches (KS25B4), 39mm length, end switches adjustable (NK4101/20°), 0 user contact free programmable (NK4201), no program key (PSN) not necessary
3	Size 3 - 3 switches (KS25B4), 47mm length, 2 end switches adjustable (NK4101/20°), 1 user contact free programmable (NK4201), 1 program key (PSN)
4	Size 4 - 4 switches (KS25B4), 55mm length, 2 end switches adjustable (NK4101/20°), 2 user contact free programmable (NK4201), 1 program key (PSN)
5	Size 5 - 5 switches (KS25B4), 63mm length, 2 end switches adjustable (NK4101/20°), 3 user contact free programmable (NK4201), 1 program key (PSN)
6	Size 6 - 6 switches (KS25B4), 71mm length, 2 end switches adjustable (NK4101/20°), 4 user contact free programmable (NK4201), 1 program key (PSN)
CYCLE TIME	
1	10 sec
2	15 sec
3	20 sec
4	30 sec
5	45 sec
6	60 sec
7	75 sec
8	90 sec
9	180 sec
MOTOR POWER (AC/DC) 50Hz	
1	C-Motor AC 24V CW
2	C-Motor AC 48V CW / CCW
3	C-Motor AC 110V CW / CCW
4	C-Motor AC 220V CW / CCW
5	G1-Motor DC 24V (+- 0.1) CW / CCW
6	G2-Motor DC 12V (+- 0.1) CW / CCW
60Hz Frequency on request	
RESISTANCE POTENTIOMETER 1 DPC	
0	None
1	500Ohm
2	1kOhm
3	2kOhm
4	5kOhm
5	10kOhm
6	2.5kOhm
7	20kOhm
8	100kOhm
RESISTANCE POTENTIOMETER 2 DPC	
0	None
1	500Ohm
2	1kOhm
3	2kOhm
4	5kOhm
5	10kOhm
6	2.5kOhm
7	20kOhm
8	100kOhm
STOP AND CONTROL UNIT FOR DC-MOTORS	
0	None
1	PRSG.2 Control unit Stop and Switch E and A
2	PSG.2 stopper unit for DC Motors - two switches
3	PRSG.3 Control unit Stop and Switch E and A + 1
4	PSG.3 stopper unit for DC Motors - three switches
5	MR265 4-20mA Sensor output 2 wire
6	MR265 4-20mA Current interface 4 wire, GND Power and two Sensor
7	MR267 4-20mA Current interface input module isolated
8	MR267 0-10V Voltage Interface input module isolated

1 Turn-Motorized potentiometer 1 Gang-Motorpotentiometer

Serie MPR - MPP- MPF

Order key

MPP41
MPR41
MPF41

02 1 G1 1 0 0

incl. 1 Potentiometer, each further costs additionally in accordance with price list accessories
max. 3 Potentiometer

Size / Dimension (mm) / Number of switches:

2 -->Size 39 mm -->Dimension (L)	02 = 2 Switches 2 Adjustable limit switches (NK4101/20%) + 0 Program channels free setting (NK4201)
3 -->Size 47 mm -->Dimension (L)	03 = 3 Switches 2 Adjustable limit switches (NK4101/20%) + 1 Program channels free setting (NK4201) 1 Program key (PSN)
6 -->Size 71 mm -->Dimension (L)	06 = 6 Switches 2 Adjustable limit switches (NK4101/20%) + 4 Program channels free setting (NK4201) 1 Program key (PSN)

Cycle times (sec.):

1 = 10s 2 = 15s 3 = 20s 4 = 30s 5 = 45s
6 = 60s 7 = 75s 8 = 90s 9 = 120s 10 = 180s

Synchronous motor: Power supply (AC / DC) Frequency 50Hz (60Hz)

	CW	CCW	
C1 = 24	/ 24V		AC
C2 = 48	/ 48...	50V	AC
C3 = 110	/ 110...	120V	AC C3 Motor no longer available, Recommend G1 or G2.
C4 = 220	/ 220...	240V	AC
G1 = 24	/ 24V	± 0.1	DC
G2 = 12	/ 12V	± 0.1	DC

Wire-wound potentiometer: Resistance R1

1 = 100Ω 2 = 200Ω 3 = 500Ω 4 = 1KΩ 5 = 2KΩ
6 = 5KΩ 7 = 10KΩ 8 = 2.5KΩ 9 = 20KΩ 10 = 100KΩ

Wire-wound potentiometer: Resistance R2 (0 = None)

1 = 100Ω 2 = 200Ω 3 = 500Ω 4 = 1KΩ 5 = 2KΩ
6 = 5KΩ 7 = 10KΩ 8 = 2.5KΩ 9 = 20KΩ 10 = 100KΩ

Controller Option

0 = -
1 = PRSG.2
2 = PSG.2
3 = PRSG.3
4 = PSG.3

Example: MPP4102-1-G1-1-0-0

MPP series, A/E (Start/Stop) Limit Switches, T=10s, R1=100 Ohms, No R2, No Controller