

MPZ

10 TURN MOTORIZED POTENTIOMETER



KEY FEATURES:

- Speed Variator facility - i.e. Basic cycle time can be multiplied x10 times.
- Easy Interface for motor driven pot & electronic controller with safe isolation- makes it User-friendly
- Manual counter- knob to vary the potentiometer.
- Motor Over-Run Burn Out protection - cuts supply to the motor at the limits.
- Intermediate limit setting possible in between the max & min pot position.
- Available in standard Wall mount & Panel mount models.
- AC / DC & Chopped DC models available.
- Available with Swiss motor gearbox or Italian motor gear box.
- Dimensions: Wall Mount type: 145(H)x 95(W)x 200(D).. Mntg details: 115x 100 (Dia:8)
Panel Mount: 96x 96x 200(D)... Panel cut-out: 92x 92 DIN.

The BBTT - MPZ, is a versatile electro-mechanical unit, which is made up of a motor driven potentiometer, interfaced with an electronic controller and function circuit.

The unit is highly compact & user friendly, manufactured in technical collaboration with MICRONOR AG., Switzerland.

A potentiometer is a device which can be used to represent different continuous physical phenomenon in terms of its electrical equivalence, it is a 10 Turn variable resistor. The positional repeatability of the pots can help in developing closed loop control for processes as well as machines.

The MPZ electronic controller provides locking limiting to the motor driven pot at the maximum and minimum limits. Friction coupling arrangement protects the motor when the pot is manually varied by the user. The remote programming of the set point value is possible by the means of the RAISE & LOWER commands. The relays provided in the electronic controller can be utilized for getting positional feedback of the machine shaft for control.

OPERATION:

RAISE Operation :

> Connect the + 24 Vdc supply to the RAISE pin (pin # 3) . By doing this the pot will rotate in clockwise direction & thus increase the resistance of the user pot.

LOWER Operation :

> Connect the + 24 Vdc supply to the LOWER pin (pin # 4) . By doing this the pot will rotate in anti clockwise direction & thus decrease the resistance of the user pot.

SPEED VARIATOR Operation :

> The cycle time of the MPZ can be varied by this pot - located on the front of the electronic controller box. Cycle time is inversely proportional to the speed of the motor gearbox. As the pot is rotated in clockwise direction the cycle time of the MPZ decreases and vice versa.

TECHNICAL DETAILS:

Supply Voltages	24VDC, 24V~, 110V~, 230V~ (50Hz) / Std model: 24VDC.
Resistance Values	500e, 1K, 2K, 5K, 10K, 50K & 100K.
Tolerance (Pot)	+5%.
Linearity (Pot)	+0.25%.
Basic Cycle Time (W/o variator)	10 secs, 20 secs, 30 secs, & 1min.
Relay Contact rating	4A/ 230V~; 1.5A/24VDC - 1 Changeover contact.

APPLICATIONS:

- > AVR & Governor movement of DG sets.
- > For remote set point control via push button of a process from control panel.
- > Indicating & annunciating the position of remote moving , rotating parts of the control panel.
- > Control of electrical valve actuators.
- > For feedback control of analog variation in physical phenomenon.
- > Converting value of mechanical rotations into electrical equivalence.

WHILE ORDERING

Mention the following details :

- 1) Pot value needed . (Whether " Tandem operation ")
- 2) Operating voltage.
- 3) Cycle time needed.

** Also if any specific requirements needed, do inform us !!!



RAJDEEP

BBTT

Mfg & Mktg by :

M/s Raj Deep Automation Pvt. Ltd..

Survey#: 143, Sinhaghad Road, 3rd & 4th Floor, Vadagaon Dhayari Pune # 411 041 . (INDIA)

Tel # : +91- (020) 4493755 / Fax #: +91-20-4393756

Mumbai #: Tel #: (022) 3864105, 3828092. Fax #: 3893252.

Delhi #: (011) 6421556 / Bangalore #: (080) 3389837 / C'tore #: (0422) 493886.

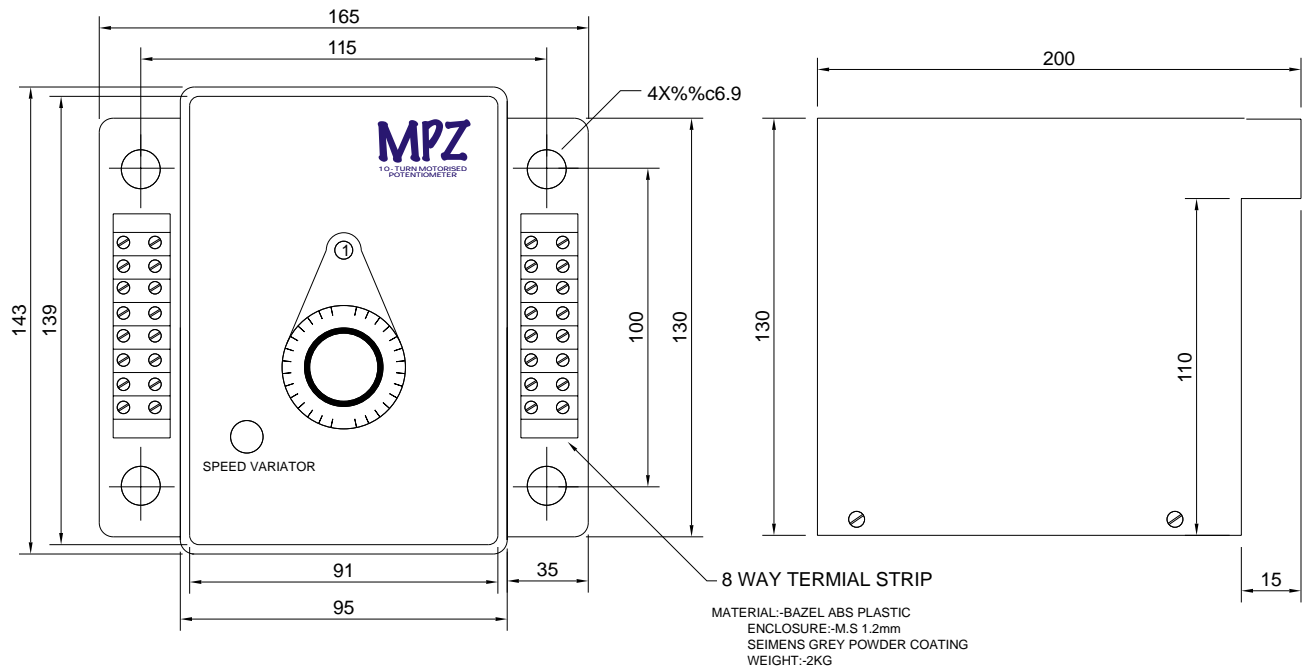
Email: shrenik@pn2.vsnl.net.in OR rajdeep@bom5.vsnl.net.in.

Visit us: www.rajdeepindia.com

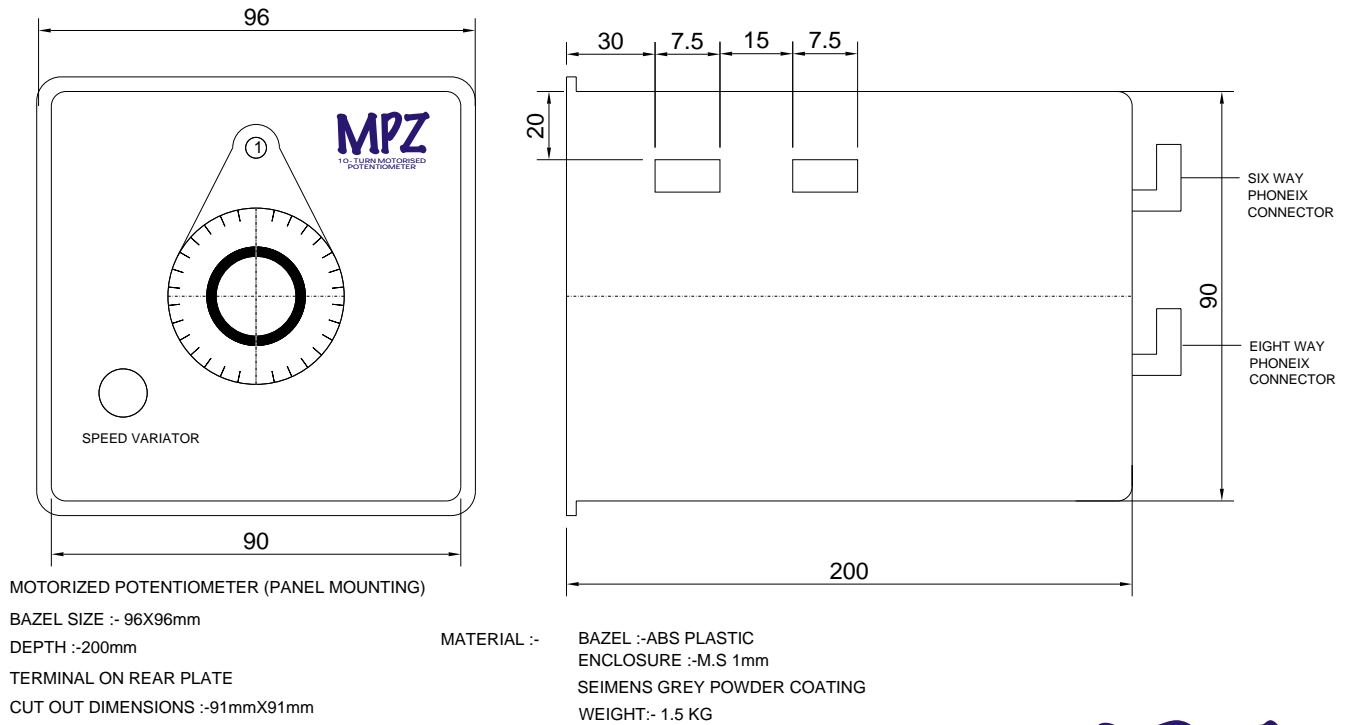
.* Continuous product development , can lead to change in specs.*

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DIMENSIONAL DETAILS FOR WALL MOUNTING MPZ UNIT



DIMENSIONAL DETAILS FOR PANEL MOUNT TYPE MPZ UNIT



MPZ CONNECTION DETAILS:

Cn1 CONNECTOR WIRING DETAILS.

Pin#	Signal	Color
01	24Vdc	White
02	Raise	Gray
03	Lower	Violet
04	Max	Blue
05	Variable	Green
06	Min	Yellow
07	No1	Orange
08	COM1	Red
09	No2	Brown
10	COM2	Black

This is the INTERNAL connection scheme inside the MPZ. This is factory-connected & the user never needs to tamper these connections, unless instructed / informed by us

1	+24	1	NO1
2	Gnd	2	COM1
3	RAISE	3	NC1
4	LOWER	4	NO2
5	R_MIN	5	COM2
6	R_VAR	6	NC2
7	R_MAX	7	XXX
8	NC xxxx	8	XXX
"A"		"B"	

This is the standard connection scheme FOR THE USER on the of all 24VDC Supply Wall-Mounted MPZ units.
"A" is the connection on the LHS of the unit & "B" is the connection on the RHS of the unit.

NO	CM	NC	NO	CM	NC
Raise Output			Lower Output		

This is standard connection scheme FOR THE USER on all the 24VDC Supply Panel Mounted MPZ units.
Both these connectors are located at the back of the unit one below the other.

+V	Gnd	R	L	Max	Var	Min	24V ⁺
24Vdc		Command		Pot Output		To R&L	

These above-mentioned connections are STANDARD connection schemes, however other than these there are some other variations in the connections schemes also, but those are specialized for OEM models only to suit the specific OEM account.