

# TC-608P PRINCIPLES

Tension Controller – Feedback System TC-608P Control Panel

NIKA®

The controller sets the material put-in and roll-up and the tension value required according to the actual production conditions. 608H adjusts the output command after comparing the settings with the value detected and returned by the Load Cell in order to change the braking force or the roll-up torque, automatically setting the actual tension to the preset tension, a high-precision tension control system.

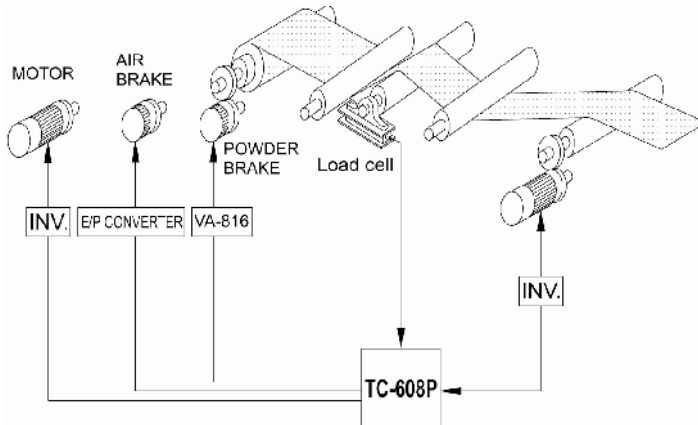


## Features:

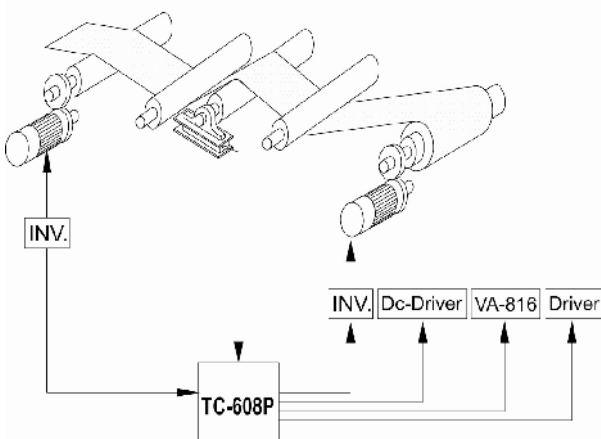
- high precision, high reliability
- tension value may be set at: kg / N / LB by the user
- digital design, unchanged characteristic
- humanistic design, easy to operate
- may be directly connected to LOAD CELL for input; Digitized zeroing and rate adjustment features for ease of operation.
- output command multi-functional display including preset and actual tension values
- possess the features of accelerating and decelerating master speed and augmentative delayed time output
- parameter power outage memory function
- able to initiate augmentative function, able to compensate static friction arising from initiating machine
- tension reduction function at shutdown eliminates excessive tension

## Working Diagram

### ● Put-in



### ● Roll-up



POWER SUPPLY	AC 220V ± 10% 50/60 HZ
COMSUMPTION	15 W MAX.
ANALOG TENSION INPUT	AD 14 BIT
MAIN SPEED INPUT	AD 8 BIT
CONTROL TERMINAL OUTPUT	DA 12 BIT
ALRAM OUT PUT	RELAY, 250 VAC, 1A
OPERATING TEMPERATURE	0-60 CELSIUS
STORAGE TEMPERATURE	-20-70 CELSIUS
HUMIDIFY	0-95% RH
WEIGHT	1 KGS

# 1040 LOAD CELL

NIKA®

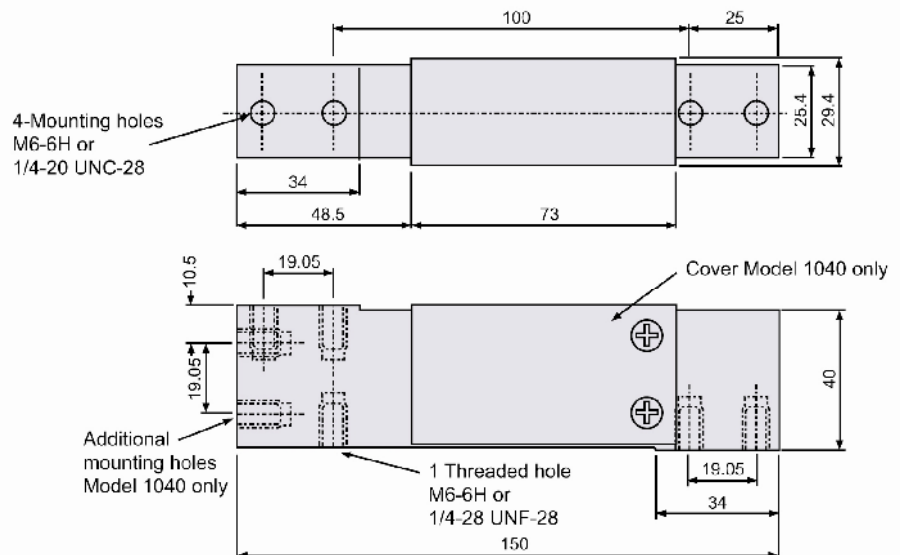
GRADE	E	F	G**	C3***	UNITS
Rated Capacities	5, 7, 10, 15, 20, 30, 50, 75, 100.				kg
Rated Output	2.0±10%				mv/v
Total Error*	0.030	0.020	0.0200	0.0200	±% of Applied Load
Zero Return after 30 mins	0.050	0.025	0.0170	0.0170	±% of Applied Load
Temperature Effect : On Output	0.0030	0.0014	0.0010	0.0010	±% of Applied Load /°C
: On Zero	0.0100	0.0060	0.0040	0.0023	±% of Rated Load Output /°C
Eccentric Loading	0.0074	0.0074	0.0049	0.0049	±% of Applied Load/cm
Zero Balance	10.0				±% of Rated Output
Temperature range : Operating	-30 to + 70				°C
: Compensated	-10 to + 40				°C
Safe Overload	150				% of Rated Capacity
Ultimate Overload	300				% of Rated Capacity
Excitation : Recommended	10				Volts AC or DC
: Maximum	15				Volts AC or DC
Input Impedance	415±15				Ohms
Output Impedance	350±3				Ohms
Insulation Impedance	1040: >5000				MegaOhms
Deflection of Rated Capacity	< 0.4				mm
Weight :	1040 : 0.35				kg
Construction	1040 : Anodised aluminum				
Environmental Protection	1040 : IP54 (IP67 Optional)				
Cable	1 Meter Standard (0.5m 1041), 6 Wire, PVC, Single Floating Screen				

\*Total Error – According to OIML R60

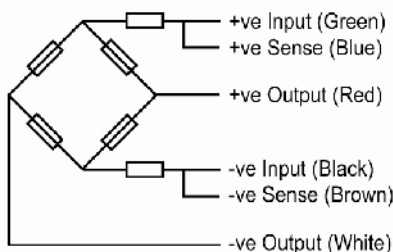
\*\*85% utilization.

\*\*\*Consult factory for utilization factors.

Outline Dimensions All Capacities in mm



## Wiring Schematic Diagram (1040 balanced bridge configuration)



### Features:

The controller of Magnetic Powder Brake/Clutch applies stable electricity to the magnetic coil in Brake/Clutch. When electricity passes through the magnetic coil, it will engender magnetic force to gather magnetic powder for transmitting torque. Under continual movement, torque will be transmitted accordingly. By controlling the flow of electric current, Brake/Clutch is controlled accurately to move or to stop the rolling process, in order to get the required tension control.

The design of Controller VA 816 series is based on direct ratio relationship between electricity and magnetic field.

Furthermore, we have improved the treatment of temperature and sensitivity, after the adjustment of electrical circuit, Magnetic Brake/Clutch can get excellent performance of torque control and output.

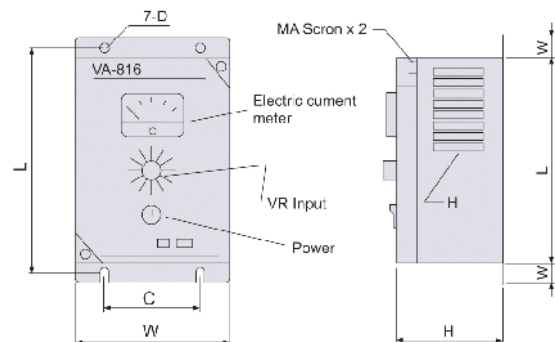
### Features:

- Output range: 1.3A~6A, full style.
- Auto feedback modification.
- Precision, lower zero-draft, stability output.
- High anti-interference casing.
- Compatible with various powder clutch or brake.



### Dimension / unit: mm

MODEL	L	W	H	C
VA 816-1300	200	138	95	65
VA816-3000/4500/6000	250	145	130	80



### Ordering Code

Model	Electricity output	Recommended model and potter/red torque of Mitsubishi Magnetic Powder Brake (Clutch)
VA 816-1300	DC 0~1.3A	ZKG.5-10D(Model: ZN/YN): 0.5-10Nm(5-100Kgfm)
		ZX.0.3-1.2YN.,3-12Nm(5-100Kgfm)
		ZKB.0.06-2.5(Model: AN, BN, XN, HBN, YN, WN., 0.6-25)Nm(0.06-2.5Kgfm)
VA 816-3000	DC 0~3.0A	ZKB.5-20(Model: BN, XN, HBN, WN): 50-200 Nm(5-20Kgfm)
		ZKB.5(Model: HC, CM, 8-909): 50Nm(5Kgfm)
		ZA.20-40Y,200-400Nm(20-40Kgfm)
VA 816-4500	DC 0~4.5A	ZKB-40 (Model: BN, XN, HBN, WN):400Nm(40Kgfm)
		ZKB-10-20 (Model: HC, CM, B-909): 100-200Nm(10-20Kgfm)
VA 816-6000	DC 0~6.0A	ZKB-40 (Model: CM, B-909): 400Nm(40Kgfm)

### Electrical Characteristics

Item	VA-816 1300	VA-816 3000/4500/6000
Power supply	AC 220V±10% 50/60Hz	
Accuracy	±0.15% F5	
Temperature	-40 -0.5	
Humidity	0-100% RH	
Storage temperature range	-55°C-125°C	
Output type	Fixed current	
Response time	0.2 sec.	
Input type	DC 0-10V	DC 0-10V DC 4-20Ma DC 0-5V



## ● Product features :

- Adoption PWM mode control output provides accurate of voltage.
- Electron style design with small size, lights weights, easy of installation.
- Has voltage control, current limit, current limit outdated trip, short circuit trip, error to tie point output, fuse break etc preservation and indicated.
- Source voltages can select 110VAC or 220VAC.
- Has close style and open style product can choice.
  - OPEN : Device in distributor inner, external VR setting or linking up signal.
  - CLOSE : Device in face or hang machine side, direct of panel operates.
- Tension meter show in voltage and can change HI (24VDC) or LOW (13VDC) control.
- The design of new mode which improves tradition design shortcoming, quality more equability addition merit promoted.

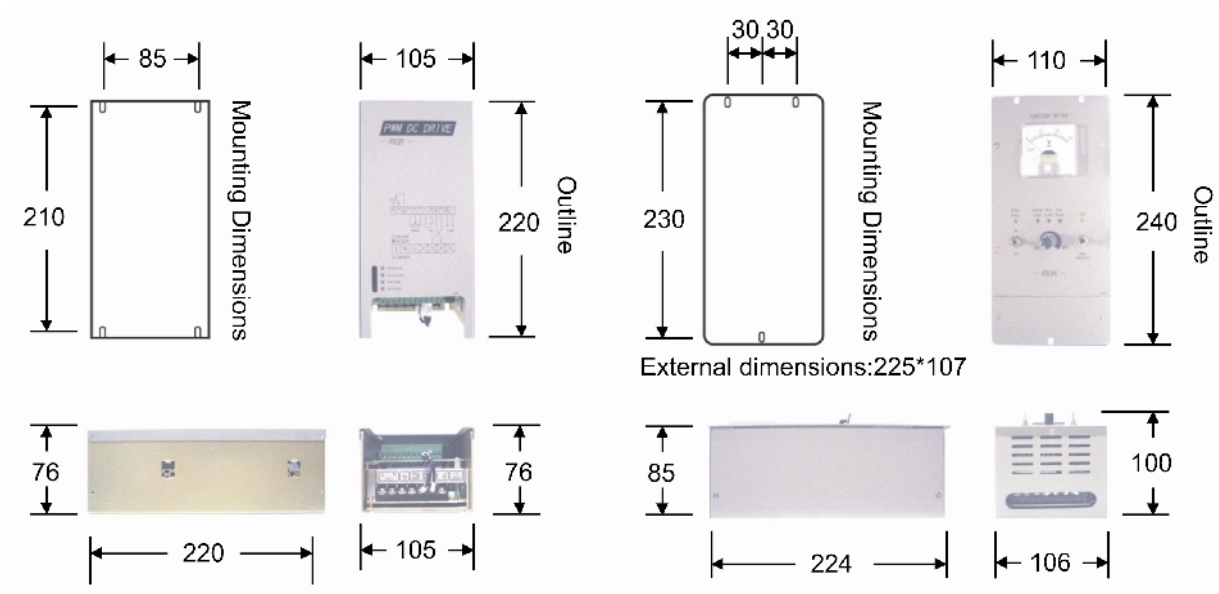


**CLOSE**

**OPEN**

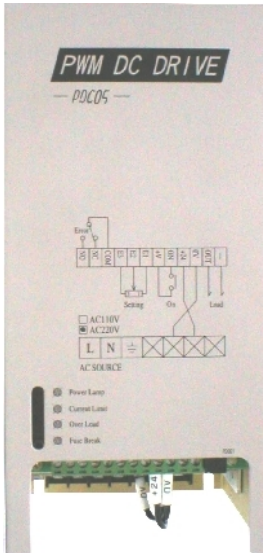
### OPEN

### CLOSE



Item	Open	Close
Series	WT-PDC05-□V04-0 □ = 1(110V)or2(220V)	WT-PDC05-□V04-0 □ = 1(110V)or2(220V)
Dimensions	220L*105W*76H Units:mm	240L*116W*100H Units:mm
Weights	1.2Kg	1.8Kg
Input	1 110V AC 1.9A 220V AC 0.8A	50/60Hz
Output	HI : 24V DC	LOW : 13V DC    MAX : 4A
Alarm rating contact	30V AC : 2A	125V AC : 0.6A

## OPEN TYPE



PL : Power Lamp  
 IL : Current Limit  
 OL: Over Load  
 FB : Fuse Break

PB1: RESET

## CLOSE TYPE



Power Lamp:  
 Current Limit  
 Over Load  
 Fuse Break  
 ON:

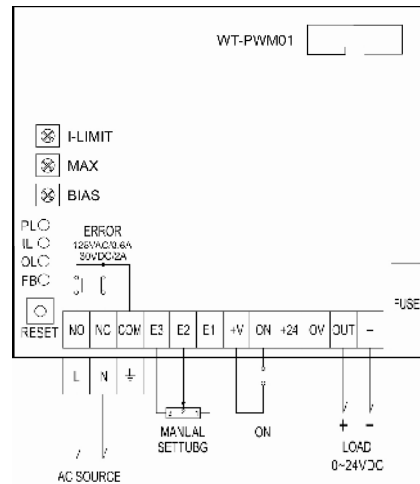
OFF(RESET):ON/OFF,OFF RESET

Manual setting

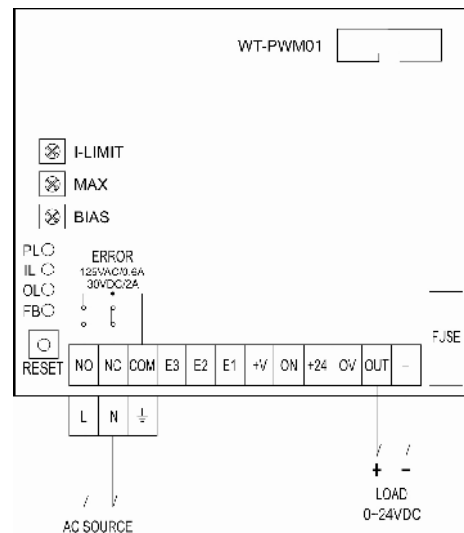
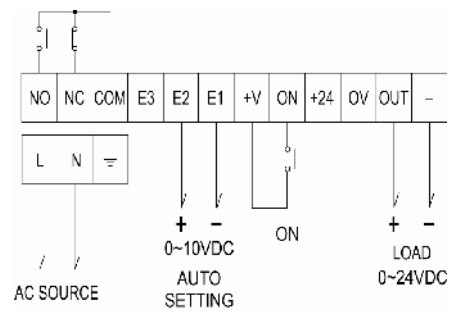
HI/LO select: HI 24 VDC  
 LO 13VDC

PL: Power Lamp  
 IL: Current Limit  
 OL: Over Load  
 FB: Fuse Break  
 PB1: RESET

## 1. MANUAL SETTING



## 2. AUTO SETTING

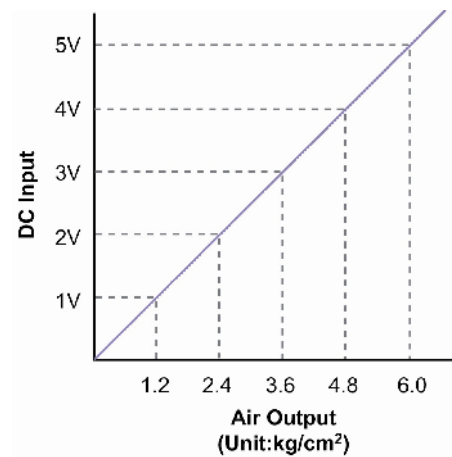


Transfer electric signal input to air pressure output 0-6 kg/cm<sup>2</sup>

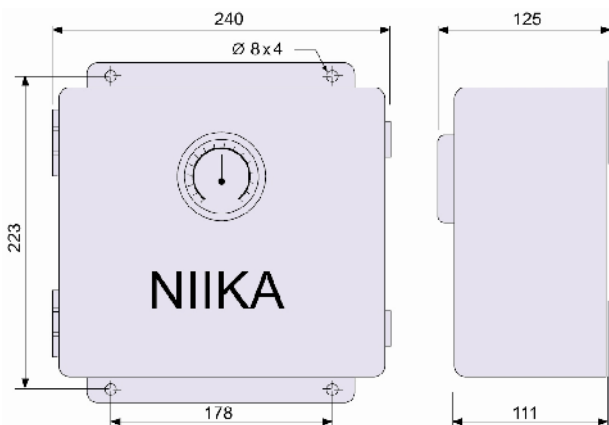


### Ordering Code

Model	DC Input	Input independence	Air output
EP-851	0-5 V	100	0-6 kg/cm <sup>2</sup>
EP-852	0-10 V	100	0-6 kg/cm <sup>2</sup>
EP-853	0-20 mA	250	0-6 kg/cm <sup>2</sup>
EP-854	0-100 mA	51	0-6 kg/cm <sup>2</sup>
EP-855	4-20 mA	250	0-6 kg/cm <sup>2</sup>



### Dimension



### Electrical Characteristics

Power supply	AC 220V ± 10% 50/60 Hz
Input signal	DC Voltage or electric current input
Accuracy	± 1.5%
Sensitive adjustment	0.01-0.1 kg/cm <sup>2</sup>
Protection	IP43
Air Input	6-8 kg/cm <sup>2</sup> clean air
Weight	4.2 kg
Connector	1/4" Soft lube