

Series PBTK100

Pillow Block Type Load Cell (Vertical force 50kN ~ 100kN)



The PBTK100 series, used in metal processing lines and other hostile industrial applications, accurately and reliably measure strip tension, and are designed to mount directly under the roll bearing pillow blocks.

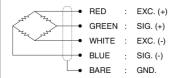
- Overload capability of 450% of rated capacity without zero shift.
- Excellent linearity form zero through the entire measuring range.
- Electroless nickel plated for corrosion resistance and fully sealded to IP67
- Full temperature compensation.

ORDERING INFORMATION PBTK100 - 50kN

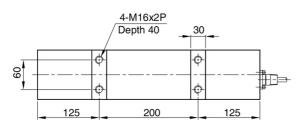
TYPE CAPACITY 50kN(5.098tf)

70kN(7.138tf) 100kN(10.20tf)

WIRING INFORMATION

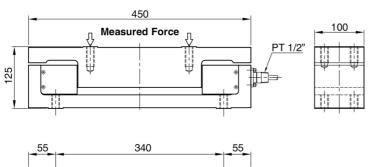


PBTK100 - 50,70,100kN

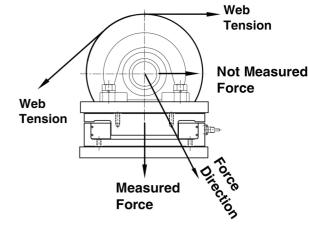


SPECIFICATIONS

TYPEPBTK100Rated capacity (R.C.) $50, 70, 100kN$ Rated output(R.O.) $1.0mV/V \pm 0.25\%$ Non-linearity $\leq 0.2\%$ R.O.Hysteresis $\leq 0.2\%$ R.O.Non-repeatability $\leq 0.1\%$ R.O.Creep error $\leq 0.1\%$ in 20min.Zero balance $\leq 1\%$ R.O.Compensated temperature range $-10 \sim 70^{\circ}C$ Operating temperature range $-20 \sim 80^{\circ}C$ Temp. effect on rated output $\leq 0.03\%$ LOAD/ $10^{\circ}C$ Terminal input resistance $700 \text{ Ohms} \pm 3.5 \text{ Ohms}$ Terminal output resistance (Min.) $2000 \text{ MOhms at 50V DC}$		
$\begin{array}{lll} \text{Rated output(R.O.)} & 1.0\text{mV/V} \pm 0.25\% \\ \text{Non-linearity} & \leq 0.2\% \text{ R.O.} \\ \text{Hysteresis} & \leq 0.2\% \text{ R.O.} \\ \text{Non-repeatability} & \leq 0.1\% \text{ R.O.} \\ \text{Creep error} & \leq 0.1\% \text{ in 20min.} \\ \text{Zero balance} & \leq 1\% \text{ R.O.} \\ \text{Compensated temperature range} & -10 \sim 70^{\circ}\text{C} \\ \text{Operating temperature range} & -20 \sim 80^{\circ}\text{C} \\ \text{Temp. effect on rated output} & \leq 0.03\% \text{ LOAD/}10^{\circ}\text{C} \\ \text{Terminal input resistance} & 700 \text{ Ohms} \pm 3.5 \text{ Ohms} \\ \text{Terminal output resistance} & 700 \text{ Ohms} \pm 5 \text{ Ohms} \\ \text{Insulation resistance (Min.)} & 2000 \text{ MOhms at 50V DC} \\ \end{array}$	TYPE	PBTK100
$\begin{array}{lll} \mbox{Non-linearity} & \leq 0.2\% \ R.O. \\ \mbox{Hysteresis} & \leq 0.2\% \ R.O. \\ \mbox{Non-repeatability} & \leq 0.1\% \ R.O. \\ \mbox{Creep error} & \leq 0.1\% \ in \ 20 \mbox{min}. \\ \mbox{Zero balance} & \leq 1\% \ R.O. \\ \mbox{Compensated temperature range} & -10 \sim 70^{\circ}\mbox{C} \\ \mbox{Operating temperature range} & -20 \sim 80^{\circ}\mbox{C} \\ \mbox{Temp. effect on rated output} & \leq 0.03\% \ LOAD/10^{\circ}\mbox{C} \\ \mbox{Terminal input resistance} & 700 \ Ohms \pm 3.5 \ Ohms \\ \mbox{Terminal output resistance} & 700 \ Ohms \pm 5 \ Ohms \\ \mbox{Insulation resistance} & (Min.) & 2000 \ MOhms \ at \ 50V \ DC \\ \end{tabular}$	Rated capacity (R.C.)	50, 70, 100kN
$ \begin{array}{lll} \mbox{Hysteresis} & \leq 0.2\% \ R.O. \\ \mbox{Non-repeatability} & \leq 0.1\% \ R.O. \\ \mbox{Creep error} & \leq 0.1\% \ in \ 20 \mbox{min.} \\ \mbox{Zero balance} & \leq 1\% \ R.O. \\ \mbox{Compensated temperature range} & -10 \sim 70^{\circ} \mbox{C} \\ \mbox{Operating temperature range} & -20 \sim 80^{\circ} \mbox{C} \\ \mbox{Temp. effect on rated output} & \leq 0.03\% \ LOAD/10^{\circ} \mbox{C} \\ \mbox{Terminal input resistance} & 700 \ Ohms \pm 3.5 \ Ohms \\ \mbox{Terminal output resistance} & 700 \ Ohms \pm 5 \ Ohms \\ \mbox{Insulation resistance} & (Min.) & 2000 \ MOhms \ at \ 50V \ DC \\ \end{tabular} $	Rated output(R.O.)	1.0mV/V ± 0.25%
$\begin{array}{lll} \mbox{Non-repeatability} & \leq 0.1\% \ \mbox{R.O.} \\ \mbox{Creep error} & \leq 0.1\% \ \mbox{in 20min.} \\ \mbox{Zero balance} & \leq 1\% \ \mbox{R.O.} \\ \mbox{Compensated temperature range} & -10 \sim 70^{\circ}\mbox{C} \\ \mbox{Operating temperature range} & -20 \sim 80^{\circ}\mbox{C} \\ \mbox{Temp. effect on rated output} & \leq 0.03\% \ \mbox{LOAD/}10^{\circ}\mbox{C} \\ \mbox{Temp. effect on zero balance} & \leq 0.03\% \ \mbox{R.O./}10^{\circ}\mbox{C} \\ \mbox{Terminal input resistance} & 700 \ \mbox{Ohms} \pm 3.5 \ \mbox{Ohms} \\ \mbox{Terminal output resistance} & 700 \ \mbox{Ohms} \pm 5 \ \mbox{Ohms} \\ \mbox{Insulation resistance} & (Min.) & 2000 \ \mbox{MOhms at 50V DC} \\ \label{eq:decomposition} \end{array}$	Non-linearity	≤0.2% R.O.
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Hysteresis	≤0.2% R.O.
Zero balance≤ 1% R.O.Compensated temperature range-10 ~ 70°COperating temperature range-20 ~ 80°CTemp. effect on rated output≤ 0.03% LOAD/10°CTemp. effect on zero balance≤ 0.03% R.O./10°CTerminal input resistance700 Ohms \pm 3.5 OhmsTerminal output resistance700 Ohms \pm 5 OhmsInsulation resistance (Min.)2000 MOhms at 50V DC	Non-repeatability	≤0.1% R.O.
Compensated temperature range $-10 \sim 70^{\circ}\text{C}$ Operating temperature range $-20 \sim 80^{\circ}\text{C}$ Temp. effect on rated output $\leq 0.03\% \text{ LOAD/}10^{\circ}\text{C}$ Temp. effect on zero balance $\leq 0.03\% \text{ R.O./}10^{\circ}\text{C}$ Terminal input resistance $700 \text{ Ohms} \pm 3.5 \text{ Ohms}$ Terminal output resistance $700 \text{ Ohms} \pm 5 \text{ Ohms}$ Insulation resistance (Min.) 2000 MOhms at 50 VDC	Creep error	≤0.1% in 20min.
Operating temperature range -20 ~ 80°C Temp. effect on rated output ≤0.03% LOAD/10°C Temp. effect on zero balance ≤0.03% R.O./10°C Terminal input resistance 700 Ohms ± 3.5 Ohms Terminal output resistance 700 Ohms ± 5 Ohms Insulation resistance (Min.) 2000 MOhms at 50V DC	Zero balance	≤1% R.O.
Temp. effect on rated output $\leq 0.03\%$ LOAD/10°CTemp. effect on zero balance $\leq 0.03\%$ R.O./10°CTerminal input resistance700 Ohms ± 3.5 OhmsTerminal output resistance700 Ohms ± 5 OhmsInsulation resistance (Min.)2000 MOhms at 50V DC	Compensated temperature range	-10 ~ 70°C
Temp. effect on zero balance ≤ 0.03% R.O./10°C Terminal input resistance 700 Ohms ± 3.5 Ohms Terminal output resistance 700 Ohms ± 5 Ohms Insulation resistance (Min.) 2000 MOhms at 50V DC	Operating temperature range	-20 ~ 80°C
Terminal input resistance 700 Ohms ± 3.5 Ohms Terminal output resistance 700 Ohms ± 5 Ohms Insulation resistance (Min.) 2000 MOhms at 50V DC	Temp. effect on rated output	≤0.03% LOAD/10°C
Terminal output resistance 700 Ohms ± 5 Ohms Insulation resistance (Min.) 2000 MOhms at 50V DC	Temp. effect on zero balance	≤0.03% R.O./10°C
Insulation resistance (Min.) 2000 MOhms at 50V DC	Terminal input resistance	700 Ohms ± 3.5 Ohms
, ,	Terminal output resistance	700 Ohms ± 5 Ohms
	Insulation resistance (Min.)	2000 MOhms at 50V DC
Excitation voltage 10V(Recommended), 15V(Max.)	Excitation voltage	10V(Recommended), 15V(Max.)
Electrial connection Ø9mmx6m(22AWG x 4Core Shielded	Electrial connection	Ø9mmx6m(22AWG x 4Core Shielded)
Protection class meets IP 67	Protection class	meets IP 67
Safe overload 450% R.C	Safe overload	450% R.C
Ultimate overload 800% R.C	Ultimate overload	800% R.C







* Specifications are subject to change without notice