



KBT[®]
Europe

CONVEYOR BELT SAFETY
TILT SWITCHES

Dynascales.com

Powered by Weighing & Inspection

Tilt Switch Probes And Control Unit



Tilt Switch Probes And Control Unit

DESCRIPTION

Tilt Switch Probes are electro-mechanical tilt sensors designed for sensing bulk materials presence or absence at the location of installation. Typical applications include high and low level detection and detection of plugged conditions in chutes. Also used for detecting the conditions of bulk material on conveyor belts.

KBT Tilt Switches are made from two materials for different applications: The SS series with stainless steel body and the CB series which are made of iron casting to meet heavy working conditions. Depending on the applications, can be supplied with a dedicated control unit or can be directly integrated in existing control system.

KBT Tilt Switches have two different output options.

- Standard NC tilt switches which can be used as stand-alone or be paired with our control units, can detect tilted and vertical positions.
- Electronic output switches can only be used by pairing with a control unit and have the ability to detect status for tilted, vertical, fault and short circuit status. With the added advantage of having a fault relay, you can detect problems earlier with electronic models and prevent loss and downtime.

Ask us about the compatibility of KBT Tilt Switches with your existing control units.

Features

- Robust and resistant
- Simple Installation
- Wide range of customization options
- Mercury and non-mercury options
- NC or electronic output options
- Control units to monitor your applications
- Delay options to prevent false alarms
- IP67 protection class
- Probe extensions are available for application needs
- Cable protection options reduce the risk of a failure



Tilt Switch Probes

CB-39 Series - Heavy Duty Cast Iron Probe

Model	Tilt Angle	Mercury	Non-Mercury	Output
CB-39	35°	x		NC when vertical. Opens at angle.
CB-39A	20°	x		NC when vertical. Opens at angle.
CB-39NM	20°		x	NC when vertical. Opens at angle.
CB-39E	35°	x		Electronic. Must be used with Control Units.
CB-39AE	20°	x		Electronic. Must be used with control Units.
CB-39NME	20°		x	Electronic. Must be used with Control Units.

SS-43 Series - Stainless Steel Probe

Model	Tilt Angle	Mercury	Non-Mercury	Output
SS-43	35°	x		NC when vertical. Opens at angle.
SS-43A	20°	x		NC when vertical. Opens at angle.
SS-43NM	20°		x	NC when vertical. Opens at angle.
SS-43E	35°	x		Electronic. Must be used with Control Units.
SS-43AE	20°	x		Electronic. Must be used with Control Units.
SS-43NME	20°		x	Electronic. Must be used with Control Units.

Technical Specifications

Enclosure	CB-39 Series: Nickel plated ductile iron casting SS-43 Series: Stainless steel
Mounting	Hanger and two S-hooks (included with probe)
Temperature Rating	M: -35°C, +50°C, NM: -40°C, +50°C
Protection Class	IP67
Certifications	CE, EAC, optional cULus
Hazardous Area	Optional ATEX Zone 21/22
Contact Capacity	CB-39 and SS-43 Series: 120 VAC - 12.5 A CB-39A and SS-43A Series: 120 VAC - 1.5 A CB-39NM and SS-43NM Series: 60 V - 0.25 A

Probe Options

Electronic Output Options

X: ATEX Zone 20/21 certified for hazardous locations. (Suffix to model name, eg. CB-39NMX)

Other Options

- HT: High Temperature, -40 °C - 180 °C (only for non-mercury)
- C1: Cable Protection, braided steel conduit.
- C2: Cable Protection, interlocked hose conduit



C1: Braided Steel Co



C2: Interlocked Hose Cond

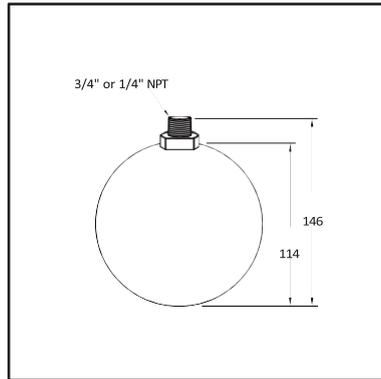


HT: High Temperature, -40 °C - 180 °C

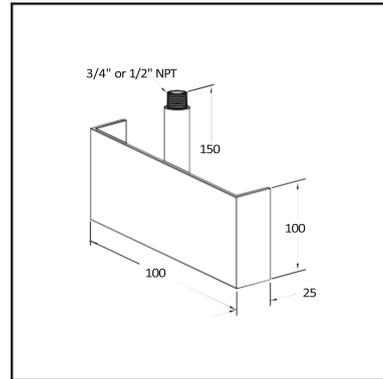
Probe Extension Options

- BF**: Ball Float. 4" by standard, custom dimensions are available. Useful with low-density material.
- EP**: Extension Plate. Useful for flow detection applications.
- WP**: Wear Plate. Used to lengthen the probe or to protect the probe body.
- CP**: Cross Paddle. Used for flowing material.

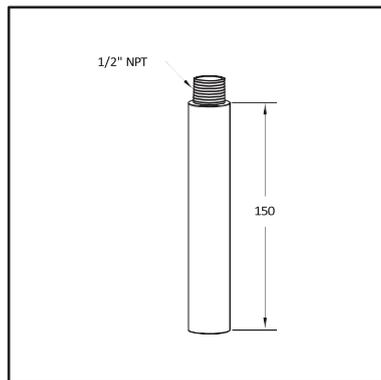
Application Examples



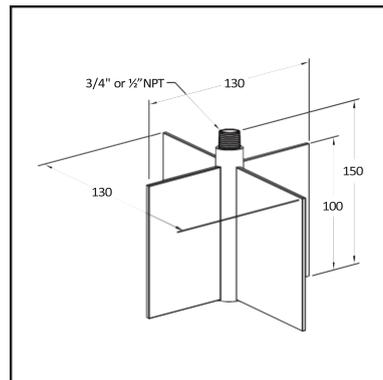
Ball Float



Extension Plate



Wear Probe

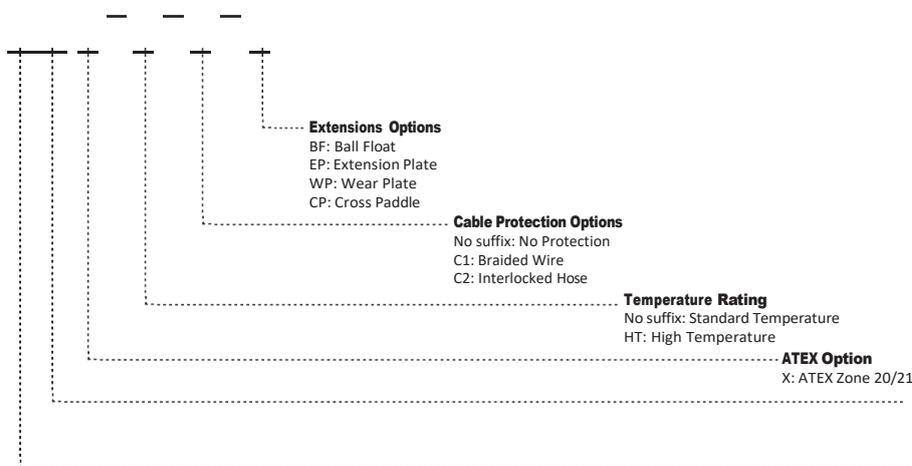


Cross Paddle

Custom dimensions for all extensions are available upon request.

Model Codification

CB-39
or
SS-43

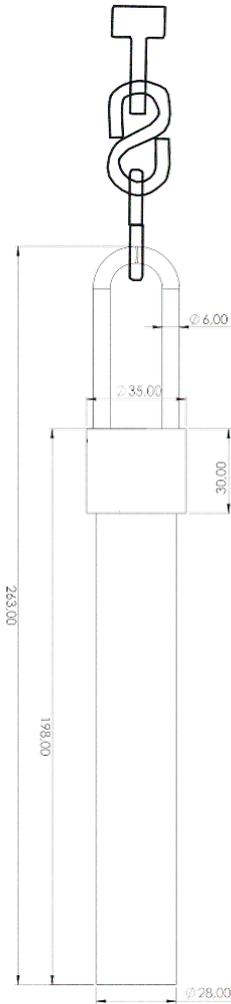


Coding Examples

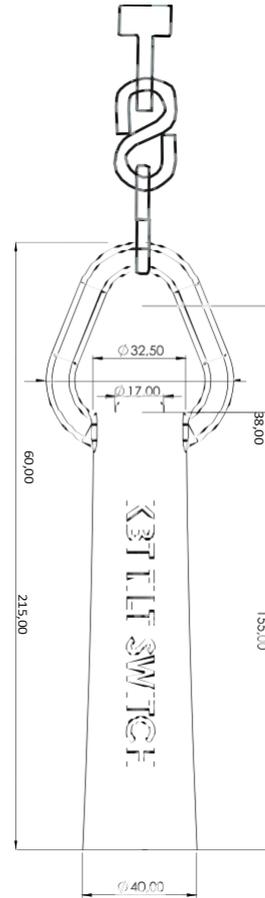
CB-39
SS-43NMX-HT-C2-EP
CB-39A-C1

Contact Types
No suffix: Mercury, 35°
A: Mercury, 20°
NM: Non-mercury, 20°

Technical Drawing

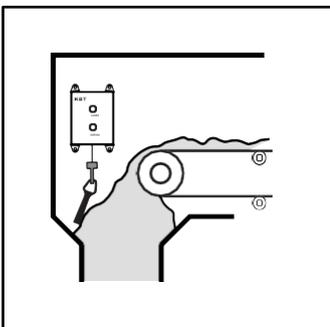


SS-43

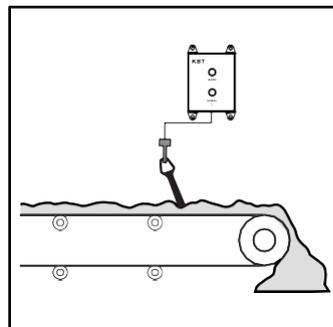


CB-39

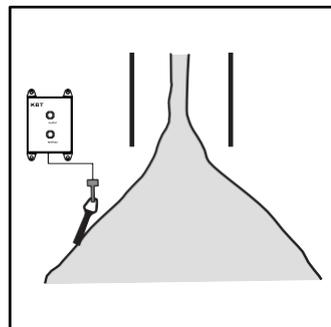
Application Examples



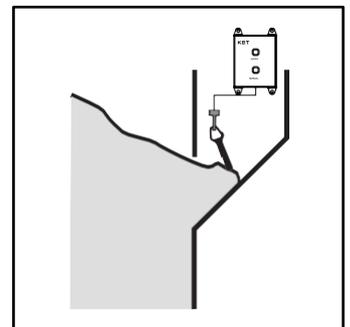
Plugged Chute



Flow Indicator



High Level



Low Level

Tilt Switch Control Units

Control Units

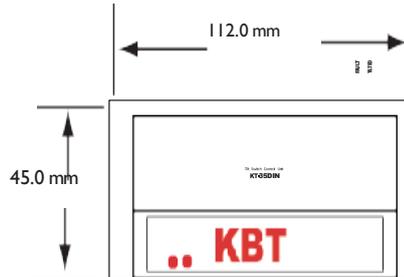
Model	Type	Enclosure	Alarm Contact	Fault contact
KT-30F	Field mount	Metal	1 SPDT	1 NO, short circuit indicator. Only when use with electronic output models.
KT-30FS	Field mount	Stainless Steel	1 SPDT	1 NO, short circuit indicator. Only when use with electronic output models.
KT-32F	Field mount	Thermoplastic	1 SPDT	1 NO, short circuit indicator. Only when use with electronic output models.
KT-35DIN	DIN Mountt	Thermoplastic	1 NO	1 NO, short circuit indicator. Only when use with electronic output models.



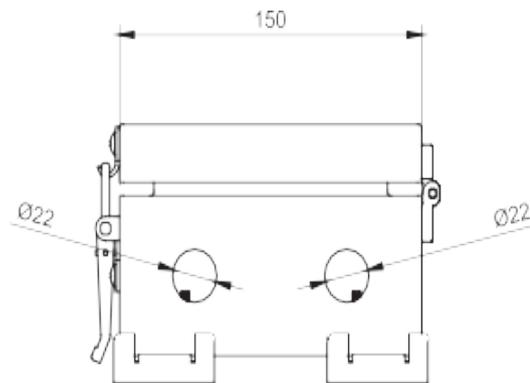
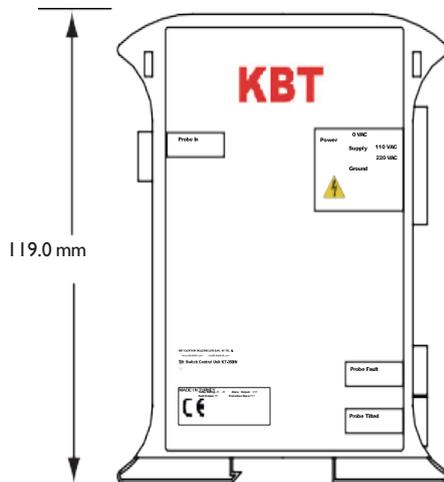
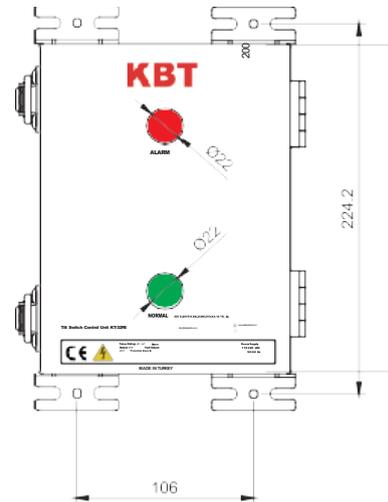
Technical Specifications

Enclosure	KT-30F KT-30FS KT-32F KT-35DIN	Metal Stainless steel Thermoplastic
Mounting	KT-30F KT-30FS KT-32F KT-35DIN	Screwed into its place via brackets supplied. DIN Mount
Temperature Rating	All models	-40°C, 50°C
Input	All models	110/220 VAC, 50/60 Hz
Alarm Contact	KT-30F KT-30FS KT-32F KT-35DIN	1 SPDT – 110/230 VAC 6 A – 30 VDC 6 A 1 NO - 110/220 VAC 2 A - 24 VDC 3 A
Fault Contact	KT-30F KT-32FS KT-32FS KT-35DIN	1 SPDT - 110/220 VAC 2 A - 24 VDC 2 A 1 NO - 110/220 VAC 2 A - 24 VDC 2 A
Delay	All models	1, 2, 4 or 6 seconds.
Protection Class	KT-30F KT-30FE KT-32F KT-35DIN	IP66 IP20
Certifications	All models	CE

KT-35DIN Mounting Dimensions



KT-30F / KT-30FS / KT-32F / KT-32F Mounting Dimensions



KBT Europe. Official EU sales distribution of the KBT products.

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Please visit our website for detailed information.

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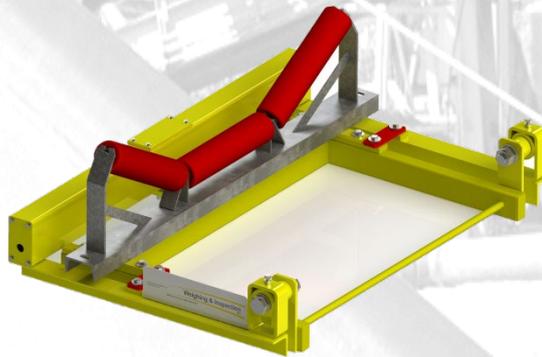
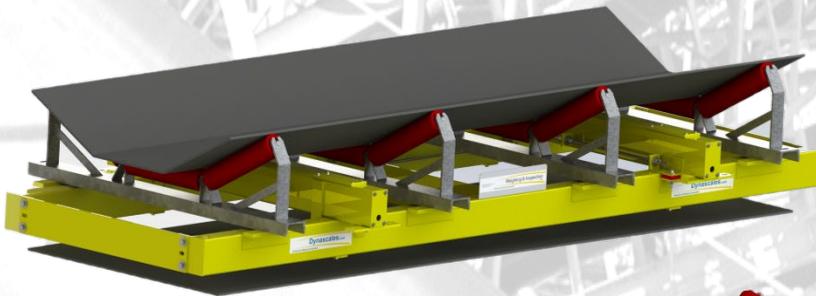


OTHERS DYNASCALES PRODUCTS :

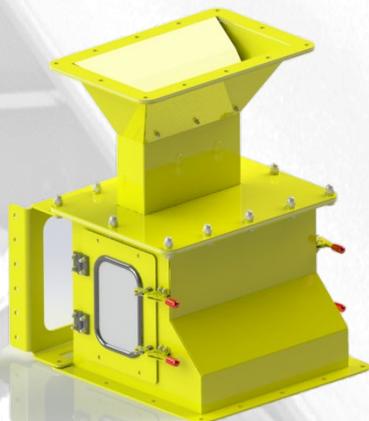
SAFETY SWITCHES



BELT WEIGHERS



BULK SOLID FLOW WEIGHING



SCREW WEIGHING

