

Rotary Paddle Switch K-TEK Products



Introduction

This operating instruction manual provides the following information:

- Installation instructions—see page 4
- Operation —see page 8

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DEVICE SPECIFICATIONS:

Operating Temperature:	-40 to 170°F / -40 to 76°C		
Operating Pressure:	0 to 140 psi / 9.5 bar		
Operating Power:	4 Watts @ either 120Vac or 240Vac		
Switch Rating:	AC Rating: 20 Amp Resistive, 1 HP@120VAC, 2 HP@250VAC DC Rating: ½ Amp@125VDC, 1/4Amp@250VDC Lamp Load Rating: 10 Amp@125VAC		
Motor Speed:	1 RPM @ 60 Hz		
Device Ratings:	FM and CSA:	XP, CL I, DIV 1, GP CD DIP, CL II, DIV 1, GP EFG, CL III T6 @ 76°C (170°F)	
	ATEX:	II 2 GD EEx d IIC T6 (T 76°C) D 03ATEX133019	

INSTRUMENT MARKING DETAILS

A) INSTRUMENT VOLTAGE:
EITHER BOX MARKED PER MOTOR VOLTAGE

B) POWER PACK DESIGNATION:
EITHER BOX MARKED PER POWER PACK DESIGNATION BASED ON VOLTAGE (2A OR 3A)

C) CONFIGURATION DETAILS:
MARKED EITHER /MP2 OR /MP4 FOR MOUNTING FLANGE TYPE
MARKED EITHER /CS OR /CF FOR SHAFT TYPE
MARKED EITHER /P1,2,3, OR 4 FOR PADDLE TYPE

D) SERIAL NUMBER DESIGNATION:
SERIAL NUMBER IS DEFINED BY THE JOB NUMBER.
JOB NUMBER FORMAT IS AS FOLLOWS:

YYMM-NNNN WHERE
YY = LAST TWO DIGITS OF YEAR
MM = NUMBER OF MONTH
NNNN = SEQUENTIAL NUMBER

PRARIEVILLE, LOUISIANA, 70769 USA

120 VAC 240 VAC

POWER: 4 WATTS

MODEL NO: KP /2 /2A /3 /3A


CONFIGURATION: /MP2 /MP4 /CS /CF

/P1 /P2 /P3 /P4


SERIAL NO:

CONDUIT SEALS OR STOPPING BOX REQUIRED
CAUTION: DO NOT OPEN IN PRESENCE OF EXPLOSIVE ATMOSPHERE OR WHEN ENERGIZED
ATTENTION: NE PAS OUVRIR EN PRESENCE D'ATMOSPHERE EXPLOSIF OU SI L'APPAREIL EST EN SERVICE

II 2 GD EEx d IIC T6 (T 70°C) Ⓢ 03ATEX133019

CE  0539 MADE IN USA IP65
0036 TAG0045

OR




APPROVED

CL I, Zn 1 & 2, AEx d IIB
T6 @ 76°C (170°F)
NEMA 4

- XP, CL I, DIV1, GP CD
- DIP, CLII, DIV1, GP EFG, CLIII
- T6 @ 76°C (170°F)

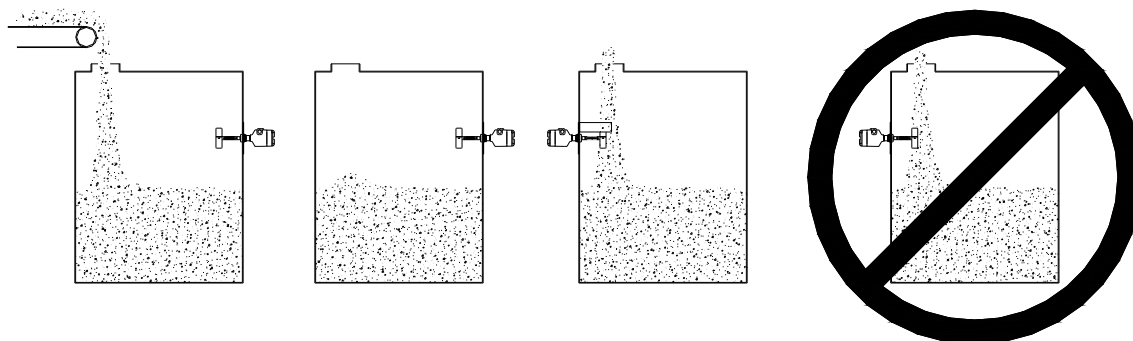
MADE IN USA
TAG0044


Ex d IIB
T6 @ 76°C (170°F)
TYPE 4

I. INSTALLATION

A. Location

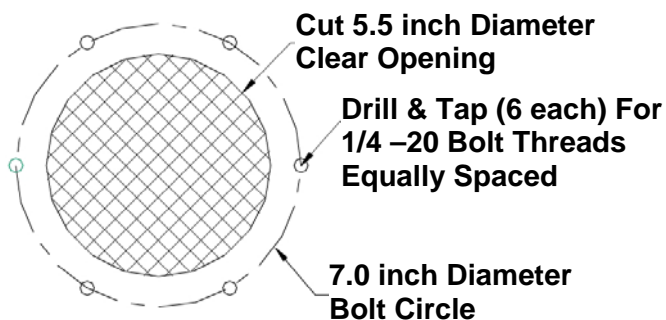
The location or placement of the paddle switch must first be determined. The location should be selected such that the product to be monitored is allowed to freely flow both into and away from the rotating paddle. However, the paddle should not be placed directly under the free-falling path of the product. Shaft misalignment or paddle vane damage could occur as a result of direct impact or loading from the product. If the location of the paddle must be very close to the free falling path of product, then the use of protective baffles is recommended.



B. Surface Preparation

The mounting surface must be prepared for paddle switch installation. The switch can be installed in two ways. The first method (standard) is to utilize a circular mounting flange that is shipped with the unit. To use the flange, the mounting bolt pattern of the flange must be transferred to the installation location on the bin wall and then drilled and tapped for 1/4-20 bolts. Centered, within the bolt circle, a 5-1/2" diameter opening must be cut out of the bin wall to allow for clear passage of the paddle. See below an illustration of the required surface preparation.

The other option for mounting the paddle switch is to use only the threaded portion of the lower head assembly. To do this, the mounting flange is discarded and a 1-1/4" female NPT threaded section shall be provided. Ensure bin wall thickness is a minimum (1/4"), then tap for the 1-1/4" NPT threads (coupling is not required). If the bin wall is too thin to drill and tap, then a pipe coupling must be used. A hole large enough to accept the OD of the coupling must be drilled or cut into the wall and the coupling is then welded in place.

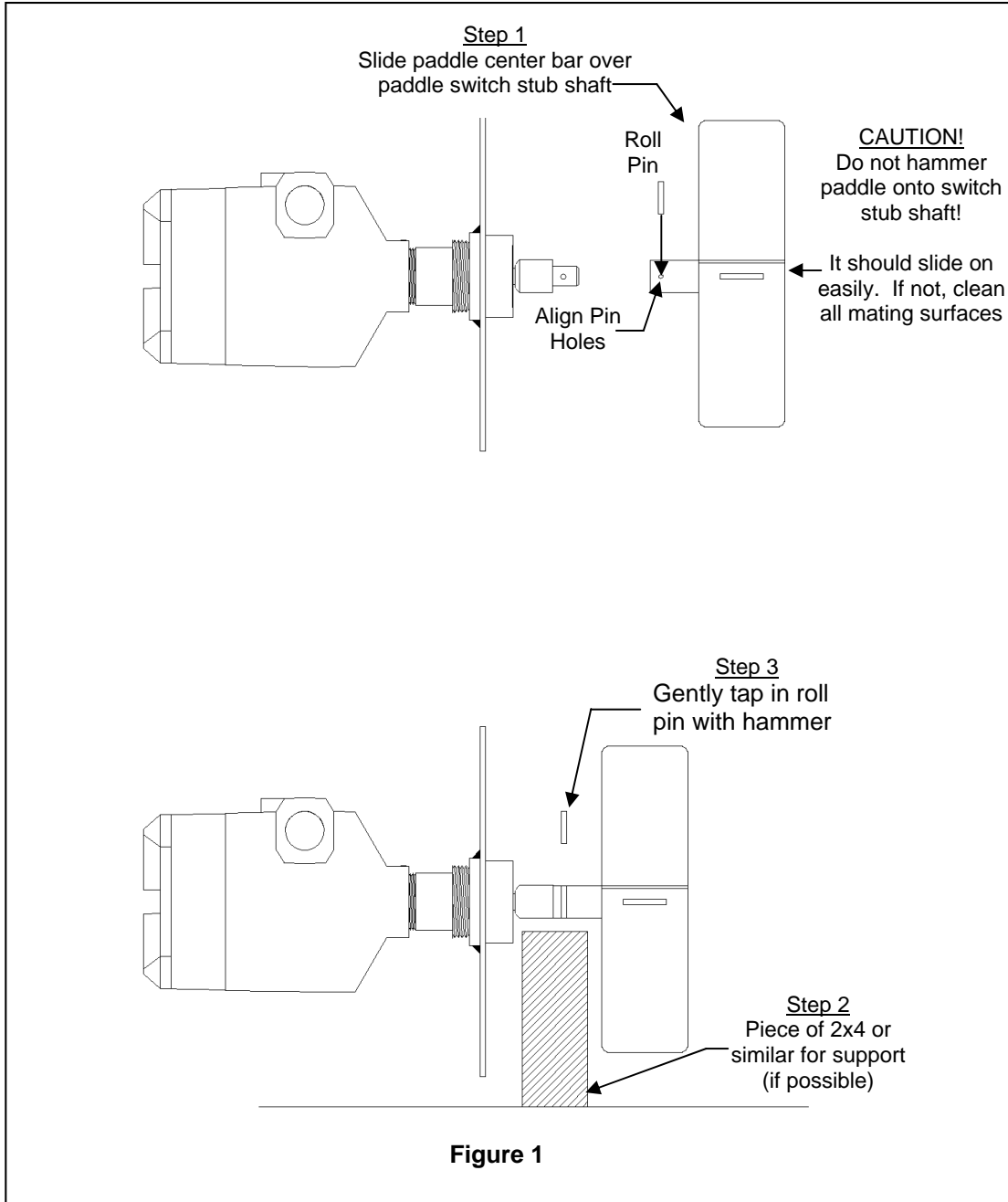


Note:

1. K-TEK's mounting plate has identical dimensions to most of our competitors.
2. Replacement of competitors' mounting plate is not required!

C. Paddle Assembly Instructions

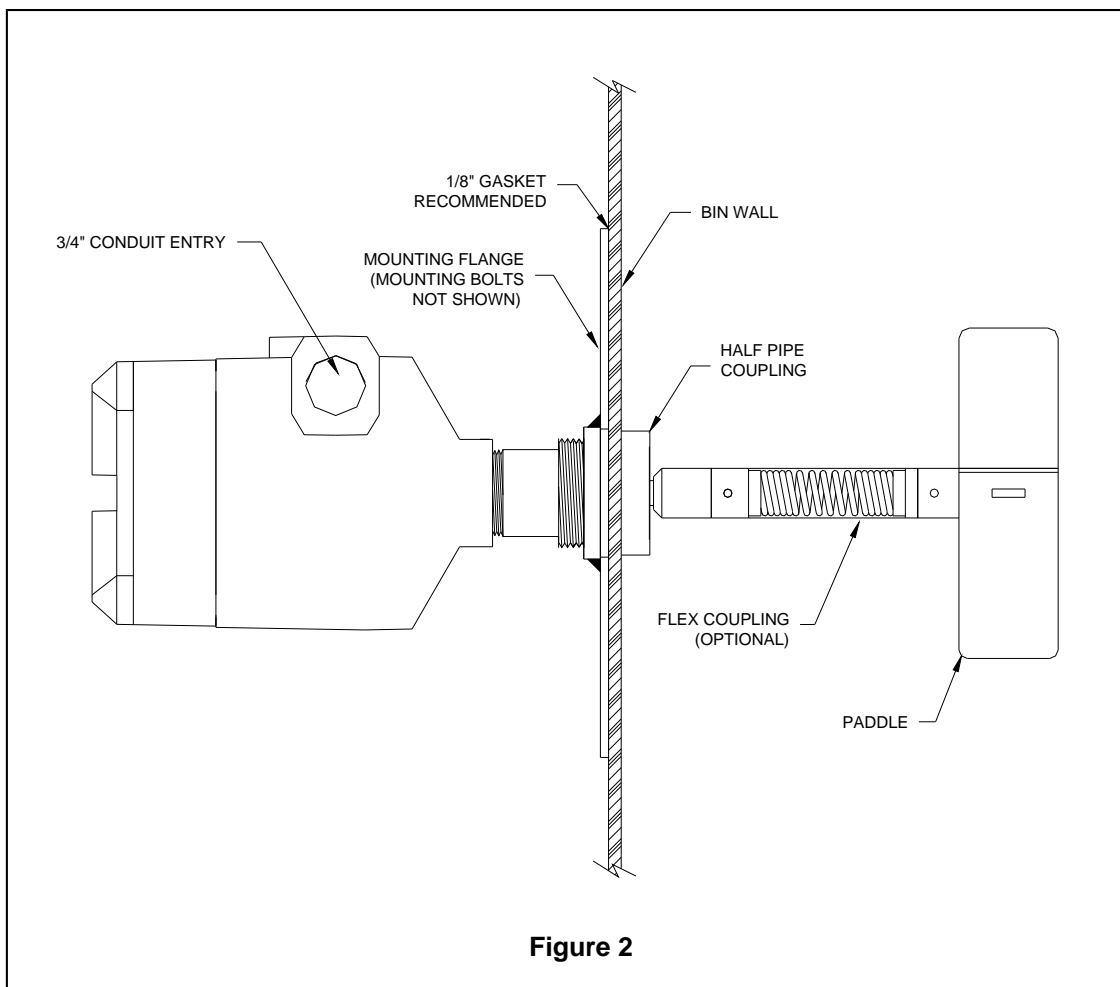
The paddle must be assembled per the steps delineated below in Figure 1 prior to unit operation.



Paddle Pin Removal: Use a 0.125" diameter center punch or a 0.125" wide flat screwdriver to drive the paddle pin out of the paddle shaft for paddle removal.

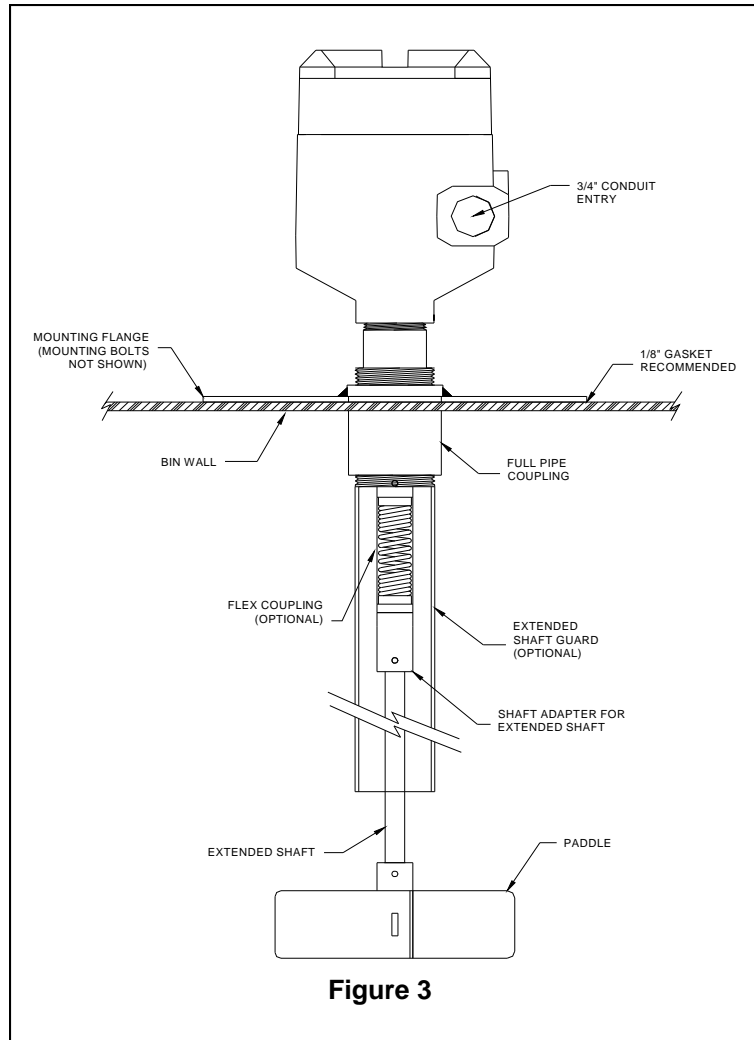
D. Side Bin Wall Mounting

1. If flange-mounting plate is used, fully assemble the paddle switch by connecting the paddle to the power shaft and secure with a 1/8" roll pin.
2. Insert the paddle end of the assembly through the 5-1/2" clear opening and align the flange mounting bolt holes such that the conduit entries on the enclosure are located either on top or the right hand side when looking at the outside bin wall. **Note:** The use of a 1/8" gasket is recommended between the mounting flange and bin wall to reduce vibration transmission.
3. Screw in the six mounting bolts and tighten. The final assembly should be installed as per **Figure 2**.
4. If a half pipe-coupling fitting is to be used, the paddle must be removed prior to insertion and assembled after the paddle housing is secured to the bin wall. **Note:** Special care should be taken to ensure that the paddle assembly is tightened into the pipe coupling by wrench tightening at the machined flats (1-1/8") below the bottom of the housing only. **DO NOT** tighten the housing into the coupling by turning the housing itself.



E. Top Bin Wall Mounting

1. If flange mounting plate is used, fully assemble the paddle switch by connecting the paddle to the power shaft and secure with a 1/8" roll pin.
2. For level applications where an extended shaft is used, assemble the flexible coupling, the shaft adapter, and the extended shaft as shown in **Figure 3** and secure with 1/8" roll pins. Slide the shaft guard pipe (optional) over the lower end of the extended shaft up to the bottom of the mounting flange and screw into the full pipe coupling lower end. (Note: For extended shafts longer than 12", a shaft guard is recommended in both low or high level applications where the product density is greater than 15lbs/ft³. The guard may need to be braced when over 2ft / 0.7m.)
3. Connect the paddle to the end of the shaft and secure with a 1/8" roll pin.
4. Insert the full assembly through the 5-1/2" clear opening and align the flange mounting bolt holes such that the conduit entries are oriented to suit the field conduit runs.
5. Screw in the six mounting bolts and tighten.
6. If a full pipe coupling fitting is to be used instead of the mounting flange then the lower shaft assembly must be assembled from the inside of the bin after the paddle housing is secured to the bin wall.
Note: Special care should be taken to ensure that the paddle assembly is tightened into the pipe coupling by wrench tightening at the machined flats (1-1/8") below the bottom of the housing only. **DO NOT** tighten the housing into the coupling by turning the housing itself.
7. If the extended shaft length exceeds five feet and a pipe shaft guard is used, the pipe guard should be braced at six-foot intervals with field installed straps or plates.



F. Wiring Connections

1. Once the paddle switch assembly is secured in its final position, unscrew the cover to the housing for wiring access.
2. Run conduit and wires per local and NEC electrical codes to the housing for motor power and switch control wiring. **Note: Conduit seals are not required.**
3. After pulling wires through the conduit entries and inside of the housing, terminate the power wiring to the motor terminal block as shown in **Figure 5**.
4. **NOTE: Do not shorten, re-route, or modify the motor power terminal leads in any way. The motor power leads are factory installed to prescribed specifications. Any deviations from those specifications could impair the mechanical movement of the motor bracket resulting in a failed device.**
5. The instrument is grounded by attaching a 14AWG ground wire to the switch ground screw located on the rear of the switch bracket as shown in **Figure 4**.
6. The ground wire should be terminated by a forked terminal connector for easier installation.
7. The ground screw is loosened a couple of turns until the fork of the terminal connector can be slid between the bracket and under the screw head.
8. While holding the ground terminal connector in place, the ground screw is tightened.



NOTE: FAILURE TO PROPERLY GROUND THE PADDLE SWITCH MAY RESULT IN A HAZARDOUS SITUATION WHERE PERSONAL INJURY OR DEATH MAY RESULT FROM ELECTRICAL SHOCK.

9. To make wiring connections to the switches, loosen the left-most switch mounting screw per **Figure 4** a few turns and hinge up the switch bracket assembly for access to the switch terminals.

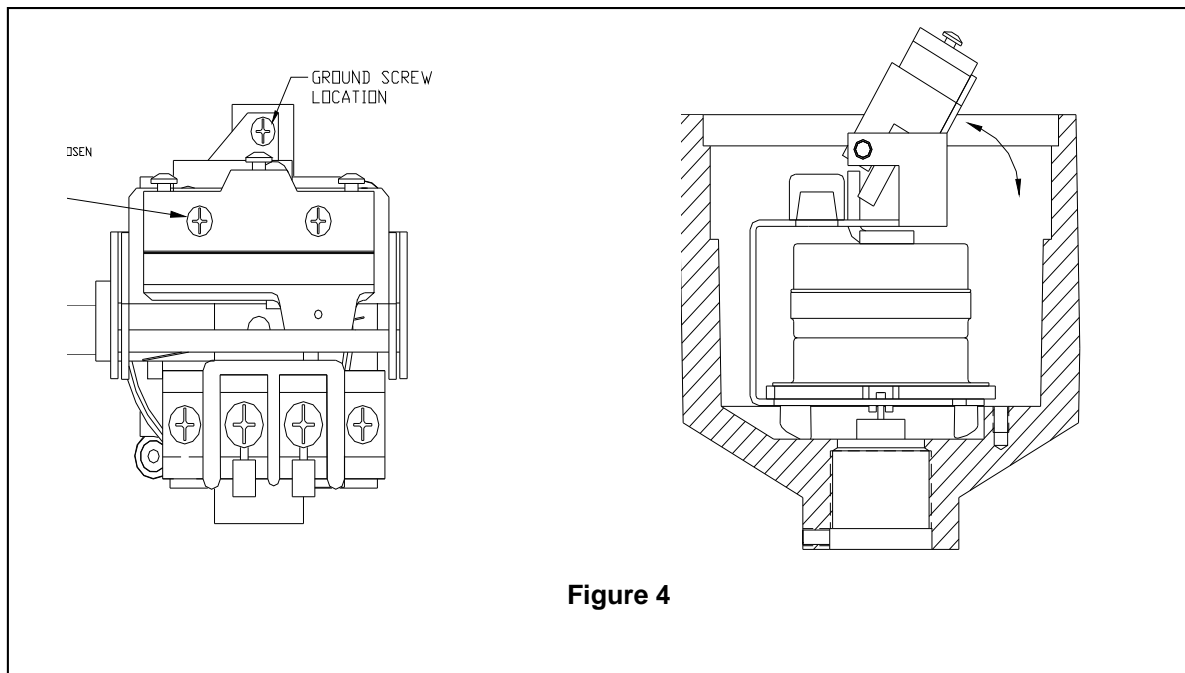
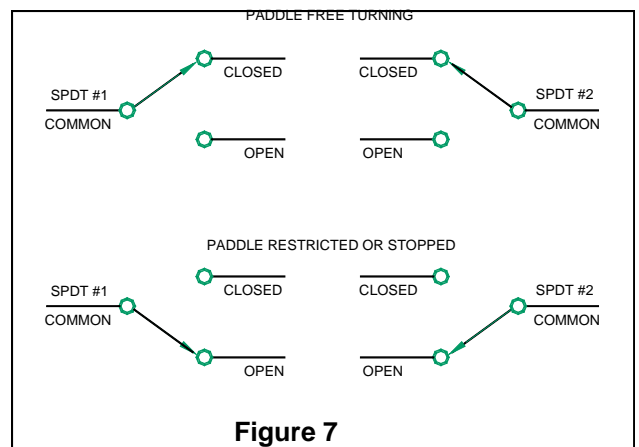
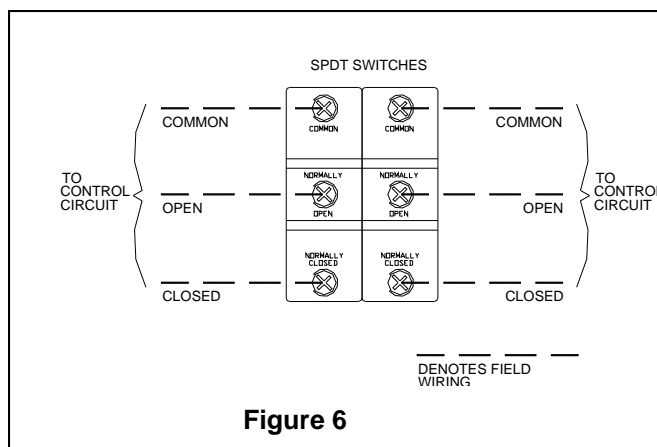
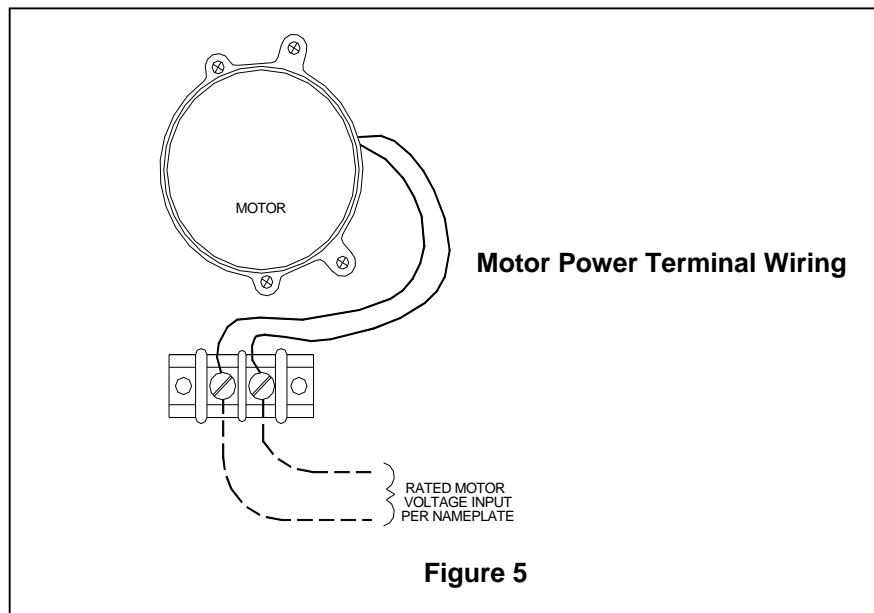


Figure 4

10. After pulling wires through the conduit entries and inside of the housing, terminate the switch control wiring to the switch terminals as shown in **Figure 6** and **Figure 7**.
11. Hinge the switch bracket to its lower state and re-tighten the mounting screw until secure.



12. **Figure 8** indicates the recommended field wiring paths inside the housing to ensure proper switch operation and to eliminate crimped wires when the cover is screwed in place. All efforts should be taken to run the field wiring as shown here.
13. After all wiring terminations are made, screw the cover back on and tighten.

Recommended Field Wiring Routing

NOTES

INTERNAL WIRING PATHS SHOULD BE RUN AS SHOWN

FAILURE TO DO SO CAN RESULT IN RESTRICTED SWITCH ACTUATION

DO NOT RUN WIRING WITH EXTRA LENGTHS

DO NOT "STUFF" EXTRA WIRING AGAINST SWITCH ASSEMBLY

MANUALLY EXERCISE MOTOR BRACKET ROTATION TO ENSURE FREE, UNRESTRICTED MOTION AFTER WIRING CONNECTIONS HAVE BEEN MADE

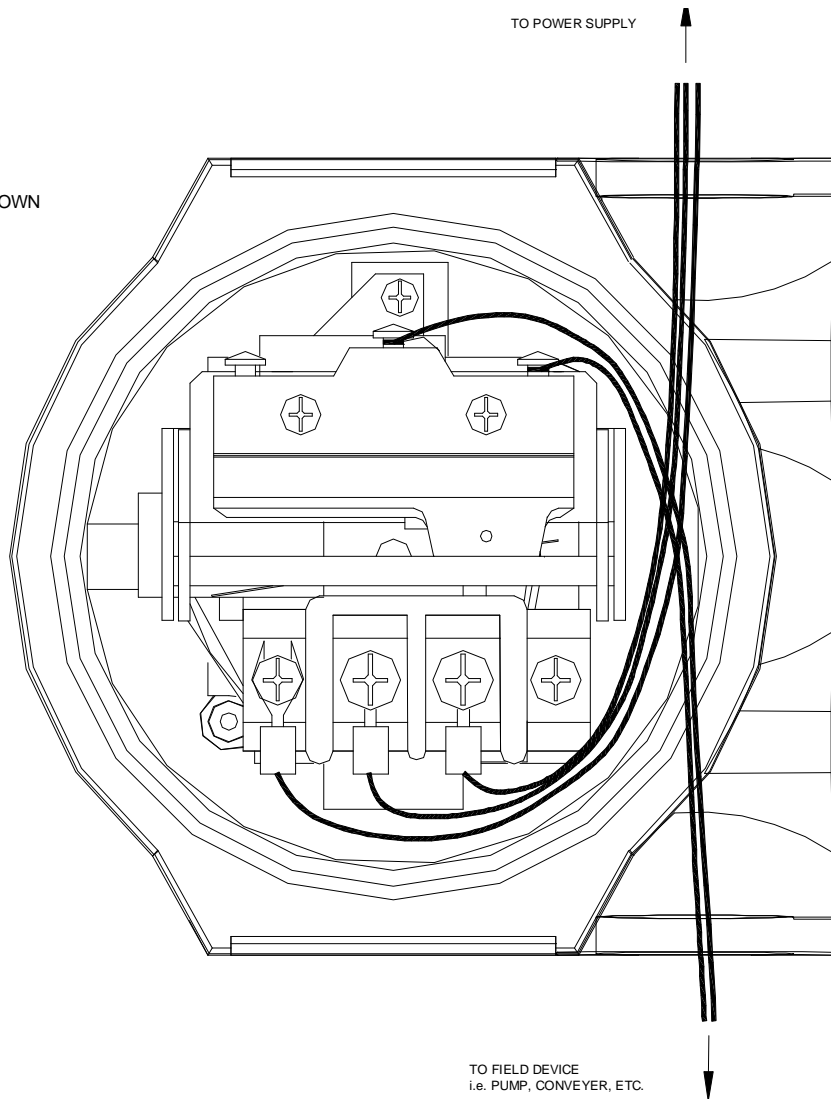


Figure 8

II. OPERATION

A. Principle of Operation

Once the paddle switch is energized, the paddle will rotate at a speed of 1 RPM continuously. During free rotation of the paddle, the switch is in a normally open state. As a result, voltage will flow between the common and normally closed terminals of the switch(es) as shown in figure 6. When the product level reaches the paddle in a high level setup, the drag force of the product against the paddle vanes will restrict the paddle rotation. When the paddle drag exceeds the switch spring force, the motor will counter rotate around the shaft. This counter rotation of the motor coupled to the motor bracket will actuate the levers of the switches resulting in switch closure. During restricted rotation of the paddle, the switch changes to a closed state. As a result, voltage will now flow between the common and normally open contact. As the product level drops and the drag force on the paddle vanes is removed, the shaft will return to its normal rotating state, allowing the motor and motor bracket to return to its neutral position while opening the switch contacts. **Note:** The hysteresis type motor is indefinitely stalled during complete paddle stoppage but remains energized. This will not result in damage to the motor and is normal operation for the switch assembly.

When set up for a low-level application, the presence of product around the paddle is the norm. As a result, the motor is in a normally stalled state resulting in continuous switch closure. Once product drops below the low-level state, the paddle rotation becomes unimpeded and the switches are opened. Once the level returns to the normal state, the paddle is again stalled and the switches close.

B. Maintenance Requirements

The operation of the paddle switch is simple and it should operate without problems for an indefinite amount of time. Routine maintenance requirements of the switch are minimal. Periodic checks of the shaft alignment and free rotation within the housing should be performed. The interior of the housing should be checked periodically to ensure there is no dust or product ingress into the motor mechanism or switches. If product ingress is noted in harsh environments such as concrete applications, the lower lip seal may have experienced prolonged wear.

Inspection of the motor operation should be performed semi-annually. If the motor operation appears to be erratic or simply no longer works, a replacement motor should be obtained. Finally, the open-closure of the lever switches should be checked annually to ensure normal operation. Replacement switches are available in the event of a switch failure. Section III lists ordering numbers for replacement parts.

Part Number	Description
KPMOT120	120VAC, 50/60 Hz, Internal Assembly, includes: motor, 2 SPDT switches and bracket
KPMOT240	240VAC, 50/60 Hz, Internal Assembly, includes: motor, 2 SPDT switches and bracket
KP/P1	1-1/2" x 5" 4-Blade Replacement Paddle (25-65 lbs/ft ³ 400-1040 kg/m ³)
KP/P2	2" x 7" 4-Blade Replacement Paddle (10-25 lbs/ft ³ 160-400 kg/m ³)
KP/P3	1" x 3" Single-Blade Replacement Paddle (>65 lbs/ft ³ 1040 kg/m ³)
KP/P4	10" Diameter Insertable Replacement Curved Blade (>25 lbs/ft ³ 400 kg/m ³)
KP/CF	Replacement Flexible Shaft Coupling
KP/CS	Replacement Solid Shaft Coupling
KP/MP2	Replacement Side-Bin Mounting Plate with half coupling with Rubber Gasket
KP/MP4	Replacement Top-Bin Mounting Plate with full coupling with Rubber Gasket
MEC2335	1/8" Rubber Gasket for Mounting Plate
ELESWTLM-20-A	20 AMP SPDT Micro Switch
KPL2	120 VAC - Indicating Lamp (General Purpose Only)
KPL3	240 VAC - Indicating Lamp (General Purpose Only)

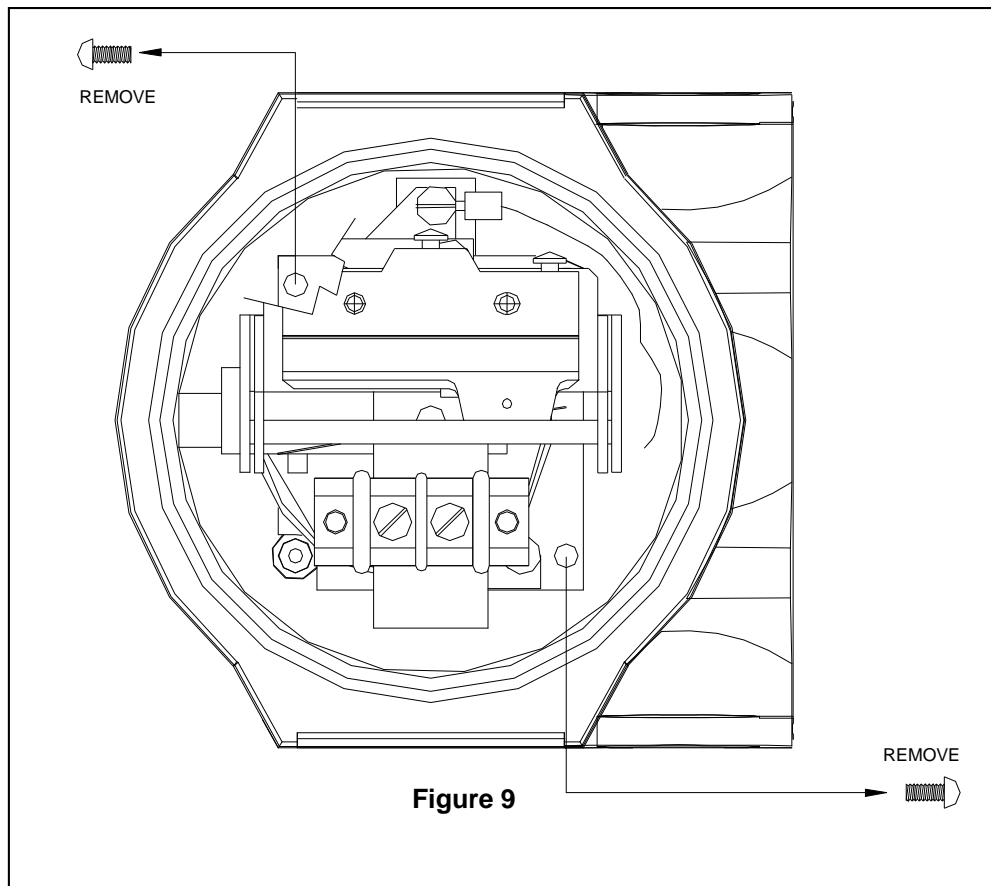
IV. INTERNAL ASSEMBLY REPLACEMENT

Tools Required:

- Flat head screw starter
- Flat head screw driver
- Towel or rag for clean-up

A. Old Internal Assembly Removal

1. The internal assembly has been designed to minimize the number of steps required for replacement. The assembly will come as a motor and bracket sub-assembly that simply replaces the old motor, bracket and switches.
2. Before removing the cover to the housing, disconnect all power supplies to the paddle switch; i.e. open power supply breakers, switches, etc.
3. Unscrew the housing cover to expose the interior switch assembly.
4. With power disconnected, disconnect all field wiring from both the power terminal strip and to the switch contact terminals. Disconnect the field ground wire connection.
5. Remove the unit from service and perform the remaining steps in a clean work area or bench setting. It is strongly recommended not to attempt repairs on the unit while it is in an installed state.
6. Using a flat head screw driver, small to medium head size, unscrew and remove the two 4-40 threaded mounting screws that secure the bracket assembly to the base of the instrument housing as shown in **Figure 9**. Retain the screws for re-installation.
7. Lift out the switch assembly from the housing.



B. New Internal Assembly Installation

1. Orient both the finished assembly with respect to the housing and the main power shaft inside the bottom of the housing in a horizontal line as shown in **Figure 10**.

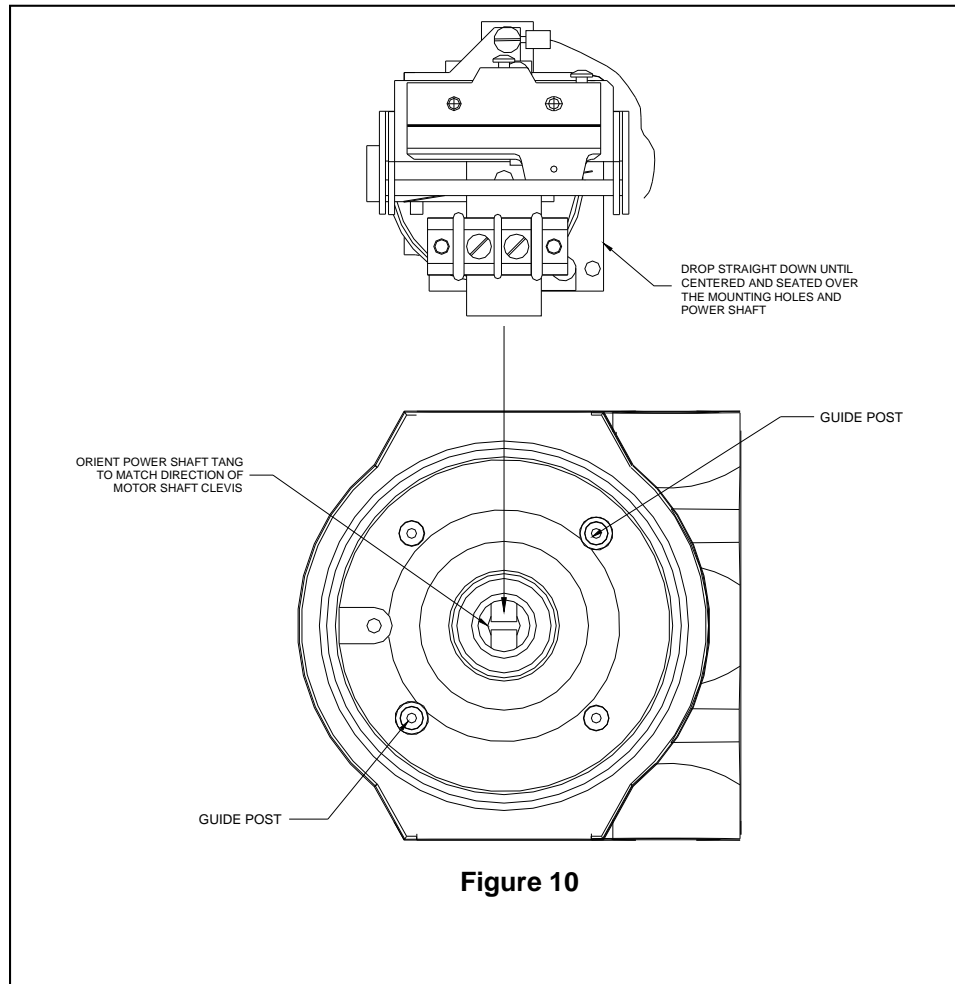


Figure 10

2. Orient the shaft clevis on the bottom of the motor to match that of the main power shaft.
3. While pressing the motor bracket arm against the lever switches, place the two #4-40 mounting screws in the bottom bracket mounting holes, threads pointing down. Using a flat head screw starter, install the screws.
4. Drop in the assembly directly over the main power shaft using the lower bracket guide posts as centering guides. Lightly maneuver the switch assembly until the motor clevis is mated with the main shaft tang. When this occurs, the assembly should sit flush on the bottom housing mounting holes and posts. The assembly should be stable in a flat position with respect to the housing. A physical check can be performed to confirm proper shaft coupling. While holding the assembly secure about the housing, exercise the paddle shaft to observe the rotational motion getting translated to the assembly. If the motor bracket does not rotate smoothly about the switch bracket when the shaft is manually turned, then the coupling is incorrect. Remove the assembly from the housing and reposition until it is properly coupled. **Note: DO NOT TIGHTEN THE LOWER MOUNTING SCREWS IF THE SHAFT IS NOT PROPERLY COUPLED. THE ASSEMBLY WILL BE DAMAGED AND WILL NOT OPERATE AS DESIGNED.**

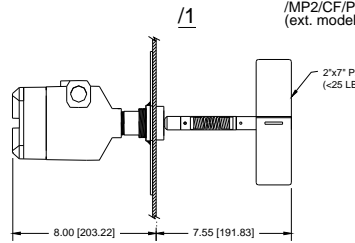
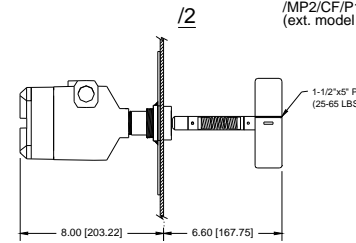
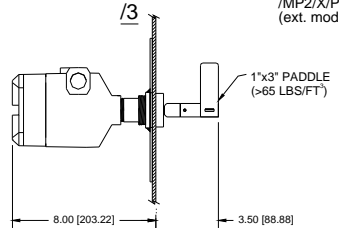
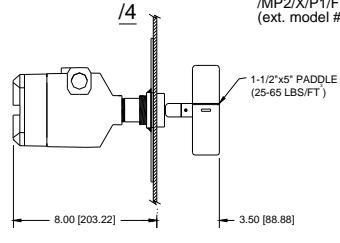
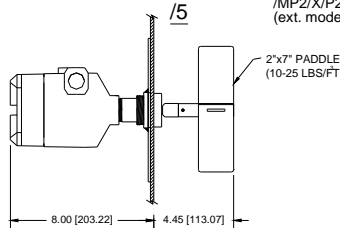
5. Using a flat head screw driver, insert and screw tightly the two bottom mounting screws that secure the assembly to the housing.
6. Manually rotate the paddle gently to confirm a proper coupling to the switch assembly. If the lever arm on the motor bracket moves against the lever switches when the paddle is rotated and returns to its normal position when the paddle motion is removed, then the wiring connections can be made. If not, repeat steps 4-6.
7. Terminate the power wiring to the main power terminal block and connect the ground wire to the grounding screw.
8. Re-install the paddle switch to its intended final location. Re-connect the wiring connections to the switches as required (See Figures 5-8).
9. Screw on the cover until fully tightened. The device can then be powered and brought back into service.

V. STANDARD CONFIGURATIONS

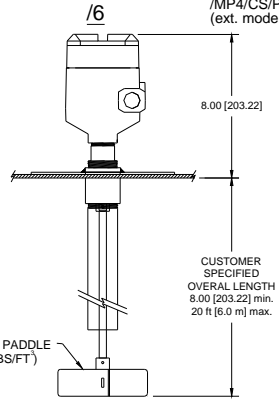
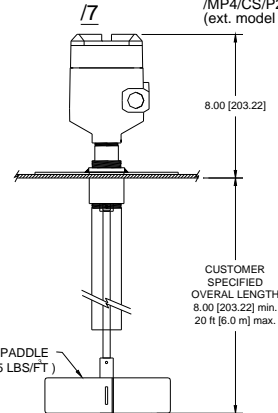
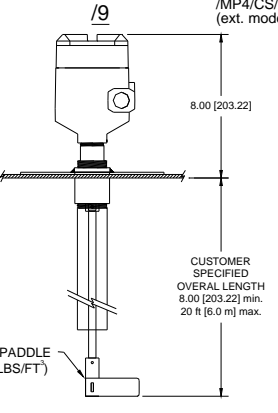
ORDERING INFORMATION (Refer to KP product data sheet, KP-0202-1 for complete ordering information):

1. Select the power & switch arrangement from table below. (Example: KP/2A)
2. Select the application configuration from the standard choices shown below. (example /1)
3. Combine the two selections to determine the abbreviated model order number. (example KP/2A/1)
4. For FM and CSA Explosion Proof units add /FM to model number. (Example: KP/2A/1/FM)
5. For ATEX approved unit add /CE to model number. (Example: KP/2A/1/CE)
6. For optional indicator light (general purpose only), add /L2 (120VAC) or /L3 (240VAC). (Example: KP/2A/1/CE/L2)

SIDE-BIN MOUNTING CONFIGURATIONS FOR HIGH, INTERMEDIATE, AND LOW LEVEL INDICATION

<p>POWER & SWITCH ARRANGEMENTS</p> <p>RP/2A 120VAC, DUAL SWITCH RP/3A 240VAC, DUAL SWITCH</p> <p>50/60 Hz, 4 WATT MOTORS STANDARD ARRANGEMENTS ARE FM / CSA APPROVED FOR CE APPROVED UNITS, ADD /CE TO MODEL NUMBER</p> <p>DIMENSIONS SHOWN: in.[mm]</p>	<p>/1</p> <p>/MP2/CF/P2/FM (ext. model #)</p>  <p>2"x7" PADDLE (<25 LBS/FT)</p> <p>SIDE BIN MOUNT, FLEX SHAFT COUPLING, 2"x7" 4-BLADE PADDLE</p> <p>FOR MOST APPLICATIONS WITH TEMPERATURES BELOW 160°F (71°C). USE WITH MATERIALS WEIGHING 10-25 lbs./cu.ft.</p>	<p>/2</p> <p>/MP2/CF/P1/FM (ext. model #)</p>  <p>1-1/2"x5" PADDLE (25-65 LBS/FT)</p> <p>SIDE BIN MOUNT, FLEX SHAFT COUPLING, 1-1/2"x5" 4-BLADE PADDLE</p> <p>FOR MOST APPLICATIONS WITH TEMPERATURES BELOW 160°F (71°C). USE WITH MATERIALS WEIGHING 25 - 65 lbs./cu.ft.</p>
<p>/3</p> <p>/MP2/X/P3/FM (ext. model #)</p>  <p>1"x3" PADDLE (>65 LBS/FT)</p> <p>SIDE BIN MOUNT 1"x3" SINGLE BLADE PADDLE</p> <p>FOR HEAVY APPLICATIONS SUCH AS SAND, GRAVEL, ETC. WEIGHING > 65 lbs./cu.ft.</p>	<p>/4</p> <p>/MP2/X/P1/FM (ext. model #)</p>  <p>1-1/2"x5" PADDLE (25-65 LBS/FT)</p> <p>SIDE BIN MOUNT 1-1/2"x5" 4-BLADE PADDLE</p> <p>MOST COMMONLY USED WHERE SHORT SHAFT IS PREFERRED. USE WITH MATERIALS WEIGHING 25-65 lbs./cu.ft.</p>	<p>/5</p> <p>/MP2/X/P2/FM (ext. model #)</p>  <p>2"x7" PADDLE (10-25 LBS/FT)</p> <p>SIDE BIN MOUNT 2"x7" 4-BLADE PADDLE</p> <p>MOST COMMONLY USED WHERE SHORT SHAFT IS PREFERRED. USE WITH MATERIALS WEIGHING 10-25 lbs./cu.ft.</p>

TOP-BIN MOUNTING CONFIGURATIONS PREFERRED METHOD FOR HIGH LEVEL INDICATION

<p>/6</p> <p>/MP4/CS/P1/FM (ext. model #)</p>  <p>1-1/2"x5" PADDLE (25-65 LBS/FT)</p> <p>TOP BIN MOUNT, SOLID SHAFT COUPLING, 1-1/2"x5" 4-BLADE PADDLE (25-65 lbs./cu.ft)</p> <p>COMMONLY USED TOP MOUNT CONFIGURATION W/ FULL COUPLING TO RECEIVE EXTENDED GUARD</p>	<p>/7</p> <p>/MP4/CS/P2/FM (ext. model #)</p>  <p>2"x7" PADDLE (10-25 LBS/FT)</p> <p>TOP BIN MOUNT, SOLID SHAFT COUPLING, 2"x7" 4-BLADE PADDLE (10-25 lbs./cu.ft.)</p> <p>COMMONLY USED TOP MOUNT CONFIGURATION W/ FULL COUPLING TO RECEIVE EXTENDED GUARD</p>	<p>/9</p> <p>/MP4/CS/P3/FM (ext. model #)</p>  <p>1"x3" PADDLE (>65 LBS/FT)</p> <p>TOP BIN MOUNT, SOLID SHAFT COUPLING, 1"x3" 4-BLADE PADDLE (>65 lbs./cu.ft.)</p> <p>COMMONLY USED TOP MOUNT CONFIGURATION W/ FULL COUPLING TO RECEIVE EXTENDED GUARD</p>
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VI. WARRANTY STATEMENT

5 YEAR WARRANTY FOR:

KM26 Magnetic Liquid Level Gauges, Buoyancy Level Switches (LS20, MS50, MS10 & MS8), Magnetic Level Switches (MS30, MS21, MS40, MS41, PS35 & PS45), EC External Chambers and ST95 Seal Pots.

3 YEAR WARRANTY FOR:

KCAP300 & KCAP 400 capacitance switches.

2 YEAR WARRANTY FOR:

AT100 and AT200 series transmitters; VF20 and VF30 vibrating fork switches; RLT100 and RLT200 reed switch level transmitters; TX, TS, TQ, IX and IM thermal dispersion switches; IR10 and PP10 External Relays; MT2000 radar level transmitters; KP paddle switches; A02, A75 & A77 RF capacitance level switches and A38 RF capacitance level transmitters.

1 YEAR WARRANTY FOR:

KM50 gauging device; AT500 and AT600 series transmitters; LaserM and SureShot series laser transmitters; LPM 100 and 200 series digital indicators; DPM100 digital indicators; APM100 analog indicators; KVIEW series digital indicators and controllers; SF50 and SF60 vibrating fork switches, KB Electro-Mechanical Continuous Measuring Devices, KSONIK ultrasonic level switches, transmitters & transducers.

SPECIAL WARRANTY CONSIDERATIONS:

K-TEK does not honor OEM warranties for items not manufactured by K-TEK (i.e. Palm Pilots). These claims should be handled directly with the OEM.

K-TEK will repair or replace, at K-TEK's election, defective items which are returned to K-TEK by the original purchaser within the period specified above from the **shipment date** of the item and which is found, upon examination by K-TEK, to its satisfaction, to contain defects in materials or workmanship which arose only under normal use and service and which were not the result of either alterations, misuse, abuse, improper or inadequate adjustments, applications or servicing of the product. **K-TEK's warranty does not include onsite repair or services.** Field service rates can be supplied on request.

If a product is believed to be defective, the original purchaser shall notify K-TEK and request a Returned Material Authorization before returning the material to K-TEK, with transportation **prepaid** by the purchaser. (Request door to door delivery via New Orleans International Airport located in Louisiana, USA.) The product, with repaired or replaced parts, shall be returned to the purchaser at any point in the world with transportation prepaid by K-TEK for best-way transportation only. K-TEK is not responsible for expedited shipping charges. If the product is shipped to K-TEK freight collect, then it will be returned to the customer freight collect.

If inspection by K-TEK does not disclose any defects in material or workmanship, K-TEK's normal charges for repair and shipment shall apply (minimum 250.00 USD).

The materials of construction for all K-TEK products are clearly specified and it is the responsibility of the purchaser to determine the compatibility of the materials for the application.

THE FOREGOING WARRANTY IS K-TEK'S SOLE WARRANTY AND ALL OTHER WARRANTIES EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED AND NEGATED TO THE MAXIMUM EXTENT PERMITTED BY LAW. NO PERSON OR REPRESENTATIVE IS AUTHORIZED TO EXTEND ANY OTHER WARRANTY OR CREATE FOR K-TEK ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF K-TEK'S PRODUCTS. THE REMEDIES SET FORTH IN THIS WARRANTY ARE EXCLUSIVE OF ALL OTHER REMEDIES AGAINST K-TEK. K-TEK SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR SPECIAL DAMAGES OF ANY KIND. K-TEK'S SOLE OBLIGATION SHALL BE TO REPAIR OR REPLACE PARTS (FOUND TO BE DEFECTIVE IN MATERIALS OR WORKMANSHIP) WHICH ARE RETURNED BY THE PURCHASER TO K-TEK.



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