

# KCAP300

## RF Capacitance Level Switch

With KSHIELD™ sensing probes for solids, powder & granular detection  
K-TEK Products



### Features

- KSHIELD™ sensing probes and single setpoint electronics that provide immunity to buildup
- Integral and remote electronics
- Easy set up via external magnet or pushbuttons
- Housing with glass viewing cover
- Wide variety of sensing probes to (450°F / 800 psig)
- Single point detection
- Single touch initialization
- Element sensitivity down to 0.5 pF

### Options

- 316L SS enclosure
- External “alarm” indicating lamp
- Tip extended extensions to 60 in / 1524 mm
- Pipe extensions to 240 in / 6096 mm
- Industry standard bulk solids mounting plate
- Process connections: 3/4”NPT, 1 1/4”NPT, and custom flanges

### Applications

- Bulk Solids Applications
- High or low level alarm
  - Plugged chute detection
  - Fly ash hopper level
  - Pellets, granules, powders,
  - Chips & flakes

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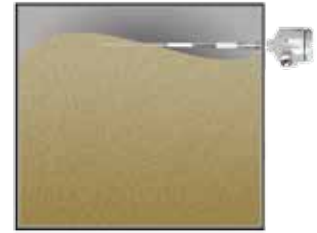


## SPECIFICATIONS

Environmental	
Housing Type	Explosion Proof, Powder Coated Cast Aluminum Standard
Electronics Temperature	-40° to 158°F / -40° to 70°C
Process Maximum	450°F @ 800 psig (232°C @ 55.2 bar)
Dielectric	1.4 or greater
Remote Mounting	Max. length of 200 ft. from sensing probe to the remote electronics
Approvals	 Factory Mutual Research Corp. Explosion Proof with Intrinsically Safe Sensor XP-IS / I, II, III / 1 / ABCDEFG T6
Electrical	
Input Power	95-130 VAC, 50-60Hz, 2 Watts; 180-260 VAC, 50-60Hz; 24 VDC +/- 5%
Relay Contact Rating	1x DPDT Resistive: 8 Amp, 250 VAC; 8 Amp, 30VDC. Inductive: 1/5 HP 125, 250 VAC.
Sensitivity	With an initial load of 30 pF, an increase of 0.5pF can be detected
Static Protection	Peak Surge Current: 800 Amps Clamp Voltage: 75 Volts
Cable Entry	2x 3/4" NPT (Single Compartment Housing) 1x 3/4" NPT (Dual Compartment Housing)



Bulk Solids

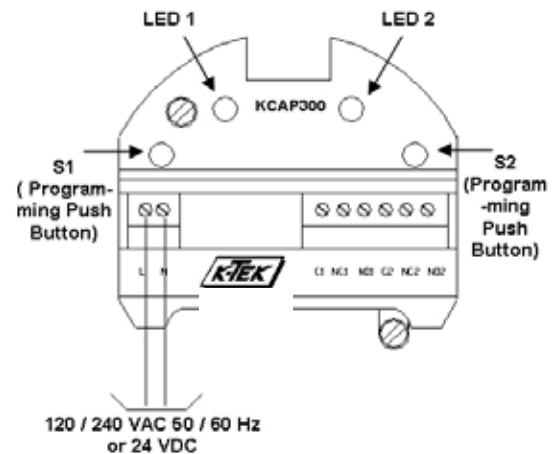


Powders and Granulars

## ORDERING INFORMATION

KCAP300.a.b.c.d.e.f.g.h.i.j.k	
a	Operating Power
1	24 VDC
2	120 VAC
3	240 VAC
b	Housing
A1W	Single Compartment Powder Coated Aluminum Housing with Glass Viewing Cover
A2W	Dual Compartment Powder Coated Aluminum Housing with Glass Viewing Cover
S2W	Dual Compartment Stainless Steel Housing with Glass Viewing Cover
c	Process Connection
0750	3/4" NPT (standard)
1250	1 1/4" NPT (bushing will be supplied)
FL	Flange Shipped Loose
WP	Welded Process Connection
d	Process Connection Material
S6	316L Stainless Steel
CST	Carbon Steel (only available with FL)
e	Process Connection Size / Rating / Type
X	None
XXXX	Specify from Flange Chart SLG-0001-1

## ELECTRICAL CONNECTION DIAGRAM



f Probe Type (KSHIELD™ 3-Element Probe) Reference KCAP™ Probe Selection Guide (SLG-0006-1, Table 1A)			
	Type	Insertion Length	Wetted Parts
A	Standard <sup>1</sup>	20.25" (514.35mm)	[316SS + TFE: 450°F (232°C) @ 800 psig (55.2 bar)]
S	Stub	14.25" (361.95mm)	[316SS + TFE: 450°F (232°C) @ 800 psig (55.2 bar)]
B	Bent <sup>2</sup>	Bent as Specified	[316SS + TFE: 450°F (232°C) @ 800 psig (55.2 bar)]
G	Standard General Purpose Only <sup>3</sup>	14" (355mm)	[316SS + Ryton: 300°F (149°C) @ 20 psig (1.38 bar)]

Notes: 1. Extended insertion lengths are only available with the Standard (A) probe type. Reference Options (f) section below.  
2. Consult Factory.  
3. No agency approvals.  
\* 316SS extended inactive sheath

g Approvals	
X	<b>None</b>
FMX	Factory Mutual Research Corp. Explosion Proof with Intrinsically Safe Sensor



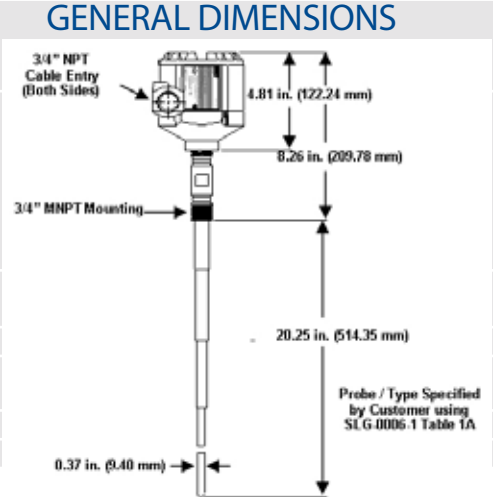
h Remote / Mounting	
X	<b>None</b>
R	Remote Mount. Specify Length in Feet or Meters (Max. 200 Feet)

i Pipe / Rigid Tip Extension	
X	<b>None</b>
RT	Rigid Tip Extension (Vertical Installations Only)
PE	Pipe Extension (Vertical Installation Only)

j Indication Lamp	
X	<b>None</b>
L2	120 VAC - External "Alarm Only" Indicating Lamp (general purpose only - NOT approved by FM)
L3	240 VAC - External "Alarm Only" Indicating Lamp (general purpose only - NOT approved by FM)

k Insertion Length	
SL	Standard length as specified in "d" above. Bare, stainless probes can be shortened in the field. Subject to probe sensitivity.
L	Custom length from face of coupler in inches or millimeters. Custom lengths (tip and pipe extensions) are only available with the Standard probe type model. Customer should specify type of extension flexible, rigid, or pipe) in section "f" above. Reference the KCAP Probe Selection Guide (SLG-0006-1) for maximum lengths.
	*Insertion Length should be provided separately from the model code

Available Accessories:	
MP	304SS "bulk solids" mounting plate with 3/4" NPT half coupling (for paddle switch replacement)
M20	M20 Connection
M20-SS	M20 316SS Female Electrical Connection



Services will follow the model code with // and will not be included on the device tag

Factory Services	
COC	Certificate of Compliance
MTR	Material Test Report
FUT	Functional Test
ABD	Certified as Built Drawings
HYD	Hydrostatic Examination
NAC	NACE Hardness Certificate
CRN	Canadian Registration Number

Vendor Services	
RAD	100% Radiographic Examination
DYE	100% Liquid Dye Penetrant Exam
PMI	Positive Material Identification Without Carbon Content
PMC	Positive Material Identification With Carbon Content

**Probe Length (inches/centimeters)**

# Contact us

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