Tags for snap-action switches may rise in 2013

Digi-Key Corporation

Buyers will not see the dramatic price hikes they saw in 2011 for snap-action switches, but they should be prepared for increases in the 2-4 percent range in 2013, primarily driven by raw materials and labor costs.

On the bright side, supply will not be an issue next year. Lead times are short, ranging from 10 days to 10 weeks.

Raw materials costs are the key reason for the price hikes. Some switch manufacturers like C&K Components implemented price increases over the past three years to keep up with rising materials costs. "Gold has been the real killer, and silver as well, although pricing has steadied a little bit," said Kyle Peterson, worldwide product line manager for C&K Components in Phoenix, Ariz.

Peterson said C&K Components increased prices across the board for all product lines, including snap-action switches, by 3-4 percent in 2012 and expects further price hikes next year.

"We can't get away from the constant rise in labor costs in China and in other parts of the world. Year-on-year China labor costs have grown 17 or 22 percent and then you have to include the effect of precious metals prices going up," noted Peterson. "We're working to maintain market pricing and trying not to increase too much, but we have to keep pace with the costs we're being burdened with."

"We're trying to maintain pricing, but commodity pricing and currency are two things that we're struggling with," agreed Robert Seubert, product marketing specialist, Omron Electronic Components LLC, in Scarborough, Ontario, Canada.

However, Seubert believes that the economy will not be as strong in 2013, which means commodity pricing will be stable or fall slightly, resulting in stable prices for

switches.

"The question is how hard is it going to be to maintain price and maintain demand against our competitors and competitive technologies as our costs increase?" said Dan Herzog, senior global product manager for snap-action switches, Honeywell Sensing and Control. Honeywell Sensing & Controls expects modest price hikes in the 2 to 4 percent range, according to Dan Herzog, Honeywell's senior global product manager for snap-action switches in Freeport, Ill.

He said that two of the biggest challenges are sizing its production to meet real demand for snap-action switches, which may be losing share to newer technologies, and pricing of raw materials, primarily gold and silver. "The question is how hard is it going to be to maintain price and maintain demand against our competitors and competitive technologies as our costs increase?" Herzog said.

Snap-action switch manufacturers agree that a key driver behind the price hikes is their use of gold and silver. "I don't think anything has been proven to be as reliable as gold and silver," said Peterson. "Silver is one of the best conductors of power and gold is highly reliable for low-level logic switching, it doesn't tarnish over time, and atmospheric conditions don't affect it."

C&K Components is consolidating all of its manufacturing in China, as well as materials purchases for some plastics, across several lines as ways to reduce costs. Peterson said the factory consolidation will allow the company to be more vertically integrated and to use more automation.

Although raw materials and labor costs continue to challenge snap-action switch manufacturers, they do not face any supply chain issues heading into 2013.

Some switch manufacturers encountered tight supply situations as a result of the Thailand floods in 2011, but those issues have been resolved. Leadtimes for some snap-action switches stretched out to 16 to 20 weeks at the beginning of 2012, but have since returned to normal 8 to 10 week leadtimes.

For example, C&K's leadtimes average about 8 to 10 weeks, Omron's leadtimes are around 8 weeks, and Honeywell's deliveries range from 10 days to 50 days, depending on the part.

One thing snap-action switch manufacturers have done to ensure there is enough supply to meet demand and to quickly respond to sample requests is to partner with distributors. "We've done a good job of positioning stock in the channel and making sure samples are available at product launch," said Peterson.

Herzog said many of its larger distributors keep a lot of stock, and buyers can check distributor inventories at Honeywell's website. The component manufacturer developed this tool in response to some industry supply chain challenges.

Sealed and smaller switches

"We're starting to see more customers designing in sealed switches for applications where they used a standard switch in the past in order to get better reliability out of their product," said Robert Seubert, product marketing specialist, Omron Electronic Components. Manufacturers say demand is increasing for sealed snap-action switches. Many snap-action switches are used in harsh environments and require high life for applications such as industrial equipment, power tools, HVAC, medical devices, vending machines, sump pumps, and transportation such as off-road vehicles, golf carts, and agricultural equipment.

More often these customers are looking for sealed options so they do not have to worry about building an enclosure to seal the switch, which adds more cost, according to Peterson.

C&K Components recently expanded its family of IP-rated sealed switches to include two economical subminiature snap-action switches. The TFS series switches meet IP-67 ratings for sealing and provide an operating life up to 100,000 cycles.

Omron developed its D2FD sealed, dust-proof ultra-subminiature switches as a way to reduce costs for customers who do not need a fully sealed switch.

"We see a lot of growth in sealed switches because of better reliability," said Seubert. "We're starting to see more customers designing in sealed switches in applications where they used a standard switch in the past, in order to get better reliability out of their product."

Honeywell introduced its watertight line, consisting of the V15W miniature (0.1, 5 and 10 amps), ZW subminiature (0.1 and 5 amps) and ZD ultra-miniature (0.1 and 3 amps) snap-action switches. "Customers are looking to seal and simplify their designs. They don't want to build a clamshell case with rubber gaskets," said Herzog.

Miniaturization is another way to help reduce costs. For example, Omron is developing more slide-type subminiature snap-action switches, such as the D2QW, that use less material.

Honeywell also is developing smaller switches, but with high current ranges. For example, the company recently expanded the current range of its subminiature switch from an industry standard of 10 amps to up to 16 amps with the launch of the ZM switch.

"Typically if customers wanted to go to higher currents, they needed a bigger switch with beefier contacts. They would have to move up to the miniature V switch with a maximum current of 25 amps," said Herzog. The ZM switch can help reduce costs and save space.

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