

Generations compared

Preset Counters

The German scholar Wilhelm von Humboldt once said “Only those who know the past have a future.” We at IEE magazine would like to subscribe to this wisdom in our brief historical review “Then and Now”, as we look back at automation technology as it was 20 years ago.



The first impression of the preset counter – plain and simple, but functional too.

In the year 1991 IEE published a press release from the Kübler company regarding its series 326/327 preset counters. The counters were ideally suited to applications for control, positioning and for monitoring limit values. Werner Birk, Product Manager for Counters at Kübler, explains the special features of the preset counter:

“At that time the device was developed along with the 48x48 preset counter model 326. The reason for the larger 327 was that there was no room in the smaller 48x48 for the integrated interface. The production quantities of the 96x48 back then were not particularly large, so the device was withdrawn from the market in 2001 without launching a similar-sized replacement. Towards the end we were only supplying around 50 units a year. The big numbers were always for the smaller more compact 48x48 mm version, as it is this format that has a much greater demand in the European market.”

Everything integrated in the processor

There are big differences between the counters of today and those from back then. In this regard Herr Birk declares: “The greatest step forward – alongside pricing of course – is that formerly it was considerably more time-consuming and costly to develop a fast microprocessor-controlled counter, where everything is integrated in the processor. In those days, in order to achieve the high count frequencies, a hardware counter was implemented, which had to be read out and processed by the processor itself. Nowadays everything is integrated in the processor, including the display drivers, which previously had been placed externally.

But it is not only the processor that is one of the differences to back then, as the Product Manager goes on to explain: “The old counter also had a transformer power supply with fixed ranges. Today this has been replaced by a universal switch-mode power supply that can handle from 90 up to 260 VAC.” The counters have also moved on when it comes to user-friendliness. “Further benefits include menu-driven programming, running help texts and an improved keypad that makes operation and programming that much faster and more efficient,” explains Herr Birk.

Expanded range of functions

The counters have also moved forward when it comes to their functions: “Certain additional features have been integrated in all three application areas – pulse counting, frequency measurement and timing. The new 560 will soon also be available with an interface, but now with latest Modbus connection and a CRLF protocol, which means it can be connected directly to a printer or to a large display. Thanks to the new 14 segment LED display the counter is legible from a much greater distance and the help texts can be displayed in a much better way.”

Of course, in the end, one of the differences also lies in the price, as Herr Birk concludes: “If the old counter was equipped with the current list of features then it would cost well in excess of 500 Euro. However the new counter today costs only around 170 Euro .”



At first glance the viewer sees the differences between the 327 counter from the 90s and the 560 of today. But it is not just the design and display that have changed – above all, it is what is inside the counter that has moved on.

Preset Counters display Versatile Programming

The LCD preset counters of the series 326/327 can be used for piece counting, frequency measurement or time measurement; they are also ideal for control and positioning applications and for monitoring limit values. The 2-line 6-digit count display with sign shows the actual value in the upper line and the preset value in the lower line. Two preset values, one set value and a scaling factor from 0.00001 up to 9.999 can be programmed in. The keypad can be locked out to avoid unauthorised access. The user can select between 20 different operation modes, 5 different input modes, 3 types of output signals as well as the position of the decimal point. The maximum count frequency is 100 kHz. The two series have different housing types and dimensions; the 327 series boasts in addition an RS422 serial interface for remote operation and data networking. A choice of built-in power supplies is available: either 12 to 30 VDC or 115/230 VAC. The unit is programmed via 4 keys.

Kübler, Fax +49 (0) 7720-21564.

Author

Melanie Feldmann
is the editor of IEE magazine.

infoDIRECT 769iee0411