KSM Safety Solutions Significantly Improve Productivity

With KSM Kollmorgen completes the motion safety chain from sensor-to-drive

- Significantly higher productivity using the Motion Safety Concept
- Low system costs using standard commercial off-the-shelf (COTS) components
- Flexible and expandable solutions for machine and motion safety utilizing a modular design
- Tested and certified by TÜV achieving PLe (ISO 13849) and SIL3 (IEC 61508)
- Interfaces seamlessly to Kollmorgen’s AKD, ServoStar, and KAS motion systems
- All important safe motion functions are available with the modules

In combination with AKD servo drives and other Kollmorgen solutions you can develop expandable motion systems to increase performance and productivity at lower costs.

**KSM-compact Safety Module**
- For 1 or 2 safe axes
- Up to 2 expansion modules
- Base unit with 16 safe I/O
- Expandable up to 60 safe I/O
- 1 safe relay output, expandable
- 2 pulse outputs, 2 standard outputs
- Expandable up to 6 pulse and 6 standard outputs
- Up to 800 function blocks
- Space-saving, compact design

**KSM-modular Safety PLC**
- Up to 12 safe axes
- Up to 8 expansion modules
- Base unit with 56 safe I/O
- Expandable up to 200 safe I/O
- 1 safe relay output, expandable
- 2 pulse outputs, up to 10 standard outputs
- Expandable up to 14 pulse and 22 standard outputs
- Up to 3000 function blocks
- For applications with large number of interfaces

**Available Safety Functions (PLe & SIL3)**
- Safe Stop Function: STO, SS1, SS2, SOS
- Safe Velocity Function: SLS, SSM, SSR, SMS
- Safe Position Function: SLP, SCA, SLI
- Safe Direction Function: SDI
- Safe Brake Function: SBC

**Connectivity:**
- EtherCAT
- CANopen
- Profinet
- PROFIsafe and EtherCAT FSOE
Motion Safety - The Concept for Safe Motion

**Motion Safety** - this is innovative safety technology from Kollmorgen combining safety logic and drive monitoring in a convenient solution. Conventional safety technology keeps the operator away from areas with hazardous motion. Drives with Motion Safety, however, allow operator intervention without process interruption.

**Productivity Gains with Motion Safety**

Intelligent Safety functions monitor areas with hazardous motion allowing the machine to effectively intervene with minimal process interruption. Functions such as safe position (SLP) limit the range of machine motion to ensure that personnel remains safe. Machine zones that pose no risk to the operator remain running. The diagram shows the gain in productivity. You can see from the yellow line that production continues during user intervention with Kollmorgen Motion Safety technology.

**Kollmorgen - Your Skilled Partner for Safe Motion Control Solutions**

**Safe Motion from a Motion Expert**

Safety logic, servo drives and motors and even complete safe automation solutions - Kollmorgen delivers matched components from one source. Additionally, we offer efficient configuration tools and engineering support to address existing machine designs, or contribute to innovative new creations. Take advantage of Kollmorgen’s innovative capacity and experience for the development of your safe motion control solution.

**KSM Safety Modules and Safety PLC - System Overview**

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1: Up to 6 expansion modules KSM 121/122
2: Single axis interface: Safe velocity monitoring only. Two axis interfaces: Safe velocity and safe position monitoring
3: Up to 6 axes with 6 KSM 121 modules
4: Up to 12 axes with 6 KSM 122(A) modules
5: Assignable as inputs or outputs
6: EtherCAT, CANopen, or Profinet, Profsafe, and EtherCAT FSOE

Example solution using the Kollmorgen Motion Safety concept.

Publications

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