



# CNC SMART DOOR SOLUTIONS.

Your Door Drive System for  
Machine Tools – TSG V4.

## TSG Drive System



## Turning and milling machines, machining centres



## TSG V4 External – IP54



## TSG V4 Internal – IP20



# Benefits of the TSG V4



Underwriter  
Laboratorie



## High safety standards

- TÜV-certified: Performance Level (PL) "d" in accordance with EN ISO 13849-1
- Emergency stop function always active – including during the automatic learning cycle
- UL-certified for the USA and Canada

## Flexible integration

- External (IP54) or internal (IP20) control unit
- Integrated power supply in the enclosure, saving space in the control cabinet
- Cable lengths from 1.5 m to 20 m available
- PROFINET, EtherCAT or CAN-Bus
- Standalone unit
- All parameters and their evaluation handled on board

## Easy operation

- All parameters can be configured directly on the unit – no software required
- Optional operation via web interface or Ethernet
- Automatic learning cycle
- Plug-in connection for motor and encoder
- Optional diagnostic unit for manufacturers – convenient commissioning via IP access using a PC, laptop or tablet

## Availability

- Dedicated support team
- All components kept in stock for rapid delivery

# TSG V4 technical specifications

## Enclosure

- External for machine mounting (IP54)
- Internal for installation in the control cabinet (IP20)

## Operating modes and additional functions

- Automatic mode
- Enable mode
- Safety guard mode
- Assisted operation
- Push-to-open operation
- Operation with a safety sensor (e.g. light curtain, safety edge or laser scanner)
- Dual-channel emergency stop function
- Obstacle detection (automatic reverse function)
- Positioning to any desired position

## Mechanical specifications

- Door travel of up to 20 m as standard (greater distances available on request)
- Drive system for interlocking safety doors weighing up to 1,000 kg
- Cable lengths between the drive system and control unit: 1.5 m to 20 m
- Connection of additional safety devices possible

## Interfaces / control options

- PROFINET
- EtherCAT
- CAN bus
- Discrete inputs and outputs

## Supply voltage

- 115 V AC
- 200 V AC
- 230 V AC
- 400 V AC
- 480 V AC
- 24 V DC / 36 V DC

## Certifications

- EN ISO 13849-1 PL "d"
- EN 14120
- EN ISO 23125
- EN 81-20
- EN 81-50
- EN 16005
- EN 16089
- EN 16090-1
- EN 16092-1
- UL certification for the USA and Canada
- Atex 100 certification

## Commissioning and diagnostics

- Visualisation via web interface
- Connection via Ethernet or Wi-Fi
- Integrated control panel

## Comparison table

| L+L                                                                          | Notes                                                                                                                                                                          | Siemens                                                                        | Notes                                                               |
|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Door control units TSG V4                                                    |                                                                                                                                                                                | Door control units                                                             |                                                                     |
| 8.20.40415.04<br>Internal Version<br>Relay                                   | All parameters and the au-<br>tomatic learning cycle can<br>be configured and activated<br>directly on the door control<br>unit – no additional software<br>or tools required. | SIDOOR ATD401W<br>6FB1141-1AT11-3WE2<br>Relay module                           | Power supply, additional<br>software and control<br>panel required. |
| 8.20.40410.04<br>External Version<br>Relay                                   |                                                                                                                                                                                | SIDOOR ATD401W<br>6FB1141-1AT11-3WE2<br>Relay module                           |                                                                     |
| 8.20.40xxx.04<br>Internal Version<br>PROFIBUS available upon<br>request      |                                                                                                                                                                                | SIDOOR ATD420W<br>6FB1141-2AT10-3WE2<br>PROFIBUS                               |                                                                     |
| 8.20.40xxx.04<br>External Version<br>PROFIBUS available upon<br>request      |                                                                                                                                                                                | SIDOOR ATD420W<br>6FB1141-2AT10-3WE2<br>PROFIBUS                               |                                                                     |
| 8.20.40676.04<br>Internal Version<br>PROFINET                                |                                                                                                                                                                                | SIDOOR ATD430W<br>6FB1141-3AT10-3WE2<br>PROFINET                               |                                                                     |
| 8.20.40691.04<br>External Version<br>PROFINET                                |                                                                                                                                                                                | SIDOOR ATD430W<br>6FB1141-3AT10-3WE2<br>PROFINET                               |                                                                     |
| Drives                                                                       |                                                                                                                                                                                | Drives                                                                         |                                                                     |
| TSG2x Drive<br>8.20.20×20.X1<br>With 1.5 m cable set<br>Left-hand, 200 kg    | Fixed pinion<br>(176 mm circumference)                                                                                                                                         | SIDOOR M3 L<br>6FB1103-0AT10-4MB0<br>Cable length: 1.5 m<br>Left-hand, 180 kg  | Fixed pinion<br>(176 mm circumference)                              |
| TSG2x Drive<br>8.20.20×21.X1<br>With 1.5 m cable set<br>Right-hand, 200 kg   | Fixed pinion<br>(176 mm circumference)                                                                                                                                         | SIDOOR M3 R<br>6FB1103-0AT11-4MB0<br>Cable length: 1.5 m<br>Right-hand, 180 kg | Fixed pinion<br>(176 mm circumference)                              |
| TSG2x Drive<br>8.20.20020.X1<br>Plug-in<br>Left-hand, 200 kg                 | Without drive pinion                                                                                                                                                           | SIDOOR MDG3 L<br>6FB1103-0AT14-4MB1<br>Plug-in<br>Left-hand, 180 kg            | Without drive pinion                                                |
| TSG2x Drive<br>8.20.20021.X1<br>Plug-in<br>Right-hand, 200 kg                | Without drive pinion                                                                                                                                                           | SIDOOR MDG3 R<br>6FB1103-0AT13-4MB1<br>Plug-in<br>Right-hand, 180 kg           | Without drive pinion                                                |
| TSG4x Drive<br>8.20.40224.X1<br>With fixed 2.5 m cable<br>Left-hand, 400 kg  | Fixed pinion<br>(176 mm circumference)                                                                                                                                         | SIDOOR M4 L<br>6FB1103-0AT10-3MC0<br>Cable length: 1.5 m<br>Left-hand, 400 kg  | Fixed pinion<br>(176 mm circumference)                              |
| 8.20.40225.X1<br>TSG4x Drive<br>With fixed 2.5 m cable<br>Right-hand, 400 kg | Fixed pinion<br>(176 mm circumference)                                                                                                                                         | SIDOOR M4 R<br>6FB1103-0AT11-3MC0<br>Cable length: 1.5 m<br>Right-hand, 400 kg | Fixed pinion<br>(176 mm circumference)                              |
| TSG4x Drive<br>8.20.40020.X1<br>Plug-in<br>Left-hand, 400 kg                 | Without drive pinion                                                                                                                                                           | SIDOOR MDG4 L<br>6FB1103-0AT14-3MC2<br>Plug-in<br>Left-hand, 400 kg            | Without drive pinion                                                |

## Comparison table

| L+L                                                                                                                                                            | Notes                                                                                             | Siemens                                                                        | Notes                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|------------------------------------------|
| Drives                                                                                                                                                         |                                                                                                   | Drives                                                                         |                                          |
| TSG4x Drive<br>8.20.40021.X1<br>Plug-in<br>Right-hand, 400 kg                                                                                                  | Without drive pinion                                                                              | SIDOOR MDG4 R<br>6FB1103-0AT13-3MC2<br>Plug-in<br>Right-hand, 400 kg           | Without drive pinion                     |
| TSG7x Drive<br>8.20.700×2.X1<br>With 1.5 m cable set<br>Left-hand, 700 kg                                                                                      | Fixed pinion<br>(176 mm circumference)                                                            | SIDOOR M5 L<br>6FB1103-0AT10-3MD0<br>Cable length: 1.5 m<br>Left-hand, 700 kg  | Fixed pinion<br>(176 mm circumference)   |
| TSG7x Drive<br>8.20.700×3.X1<br>With 1.5 m cable set<br>Right-hand, 700 kg                                                                                     | Fixed pinion<br>(176 mm circumference)                                                            | SIDOOR M5 R<br>6FB1103-0AT11-3MD0<br>Cable length: 1.5 m<br>Right-hand, 700 kg | Fixed pinion<br>(176 mm circumference)   |
| TSG7x Drive<br>8.20.70002.X1<br>Plug-in<br>Left-hand, 700 kg                                                                                                   | Without drive pinion                                                                              | SIDOOR MDG5 L<br>6FB1103-0AT14-3MG2<br>Plug-in<br>Left-hand, 700 kg            | Without drive pinion                     |
| TSG7x Drive<br>8.20.70003.X1<br>Plug-in<br>Right-hand, 700 kg                                                                                                  | Without drive pinion                                                                              | SIDOOR MDG5 R<br>6FB1103-0AT13-3MG2<br>Plug-in<br>Right-hand, 700 kg           | Without drive pinion                     |
| Power supplies                                                                                                                                                 |                                                                                                   | Power supplies                                                                 |                                          |
| The power supplies are integrated into the door control units and are available for the following supply voltages:<br>115 V, 200 V, 230 V, 400 V and 480 V ... |                                                                                                   | SITOP PSU8200<br>6EP3446-8SB10-0AY0                                            | Power supplies required for SIDOOR       |
|                                                                                                                                                                |                                                                                                   | SIDOOR NT40<br>6FB1112-0AT20-3PS0                                              |                                          |
|                                                                                                                                                                |                                                                                                   | SIDOOR TRANSFORMER<br>6FB1112-0AT20-2TR0                                       |                                          |
| Software with all operating functions is fully integrated into the door control units. No additional software packages or hardware are required.               |                                                                                                   | SIDOOR TRANSFORMER<br>UL<br>6FB1112-0AT21-2TR0                                 | Required for commissioning and servicing |
|                                                                                                                                                                |                                                                                                   | SIDOOR SOFTWARE KIT                                                            |                                          |
| Commissioning and diagnostic tools                                                                                                                             |                                                                                                   | Commissioning and diagnostic tools                                             |                                          |
| Web interface<br>8.20.70041                                                                                                                                    | Optional – not required for commissioning or servicing. Software and power supply are integrated. | SIDOOR SERVICE TOOL                                                            | Required for commissioning and servicing |
| Web interface with WiFi-Router<br>8.20.70051                                                                                                                   |                                                                                                   | SIDOOR LINK Adapter                                                            |                                          |