



# CFW500 AC Drives – Accessories

## WEG CFW500 Safety Module

The CFW500-SFY2 is a safety module capable of providing STO (Safe Torque Off) and SS1-t (Safe Stop 1 Time Controlled) safety operations.

- The STO function disables torque-generating power to the motor. This method of disabling the motor is very reliable against unexpected motor starts, even under a fault condition. When activated, the STO safety function blocks power from the drive's output electronic circuit, causing the motor to coast to a stop.
- The SS1-t function also disables torque-generating power to the motor but waits a predetermined period of time to allow the drive to impose a deceleration ramp before removing torque. This is especially useful in situations where inertial loads need to be decelerated before torque is removed from the motor.

The CFW500-SFY2 module can be installed on any CFW500 series drive in a dedicated slot on the top of the drive. It does not conflict with the installation of I/O or communications modules.



| WEG CFW500 Safety Module   |                                                                                          |         |                                         |                                                              |                                                                                                                              |                     |              |
|----------------------------|------------------------------------------------------------------------------------------|---------|-----------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------|
| WEG MAT #                  | Model #                                                                                  | Price   | Description                             | Features/Specifications                                      |                                                                                                                              | Drawing Link        | CFW500 Drive |
| <a href="#">15560296</a>   | CFW500-SFY2                                                                              | \$72.00 | Safety function module (STO and SS1-t)* | <b>Safety functions</b>                                      | Safe torque off (STO) according to IEC/EN 61800-6-2 or stop category 0 according to IEC/EN 60204-1                           | <a href="#">PDF</a> | All          |
|                            |                                                                                          |         |                                         |                                                              | Safe stop 1 time controlled (SS1-t) according to IEC/EN 61800-6-2 or stop category 1 according to IEC/EN 60204-1             |                     |              |
|                            |                                                                                          |         |                                         | <b>Safety category</b>                                       | SIL 3, per IEC 61508 / IEC 62061 / IEC 61800-5-2 PL e, category 4, as pwer EN ISO 13849-1                                    |                     |              |
|                            |                                                                                          |         |                                         | <b>PFD<sub>avg</sub></b>                                     | < 2.74 x 10 <sup>-4</sup>                                                                                                    |                     |              |
|                            |                                                                                          |         |                                         | <b>PFH (1/h)</b>                                             | <3.13 x 10 <sup>-9</sup>                                                                                                     |                     |              |
|                            |                                                                                          |         |                                         | <b>MTTF<sub>d</sub>(y)</b>                                   | > 1600 years                                                                                                                 |                     |              |
|                            |                                                                                          |         |                                         | <b>DC<sub>avg</sub></b>                                      | 93%                                                                                                                          |                     |              |
|                            |                                                                                          |         |                                         | <b>Proof test interval</b>                                   | 20 years                                                                                                                     |                     |              |
|                            |                                                                                          |         |                                         | <b>Response/reaction time</b>                                | <100ms                                                                                                                       |                     |              |
|                            |                                                                                          |         |                                         | <b>OSSD test pulses</b>                                      | Pulse duration: <1ms<br>Interval between pulses on same channel: >8ms<br>Interval between pulses on different channels: >4ms |                     |              |
|                            |                                                                                          |         |                                         | <b>Safety input signals</b>                                  | ON: 15VDC – 30 VDC                                                                                                           |                     |              |
|                            |                                                                                          |         |                                         | <b>Maximum discrepancy time between safety input signals</b> | 1s                                                                                                                           |                     |              |
| <b>Safety power supply</b> | +24VDC ± 15%<br>SELV type according to IEC 60950-1<br>PELV type according to IEC 60204-1 |         |                                         |                                                              |                                                                                                                              |                     |              |

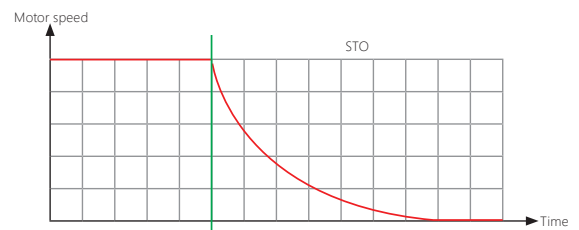


Figure 1.1: STO behavior

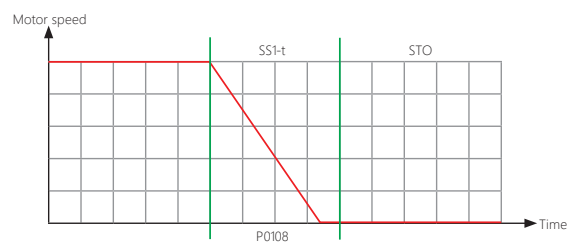


Figure 1.2: SS1-t behavior