

Prevention of Unexpected start

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ACS800-04, R2-R6 – Feb 05

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Prevention of unexpected start-up (option)

■ Principle

- The prevention of unexpected start-up function disables the control voltage of the power semiconductors, thus preventing the inverter from generating the AC voltage required to rotate the motor. By using this function, short-time operations (like cleaning) and/or maintenance work on non-electrical parts of the machinery can be performed without switching off the AC power supply to the drive.

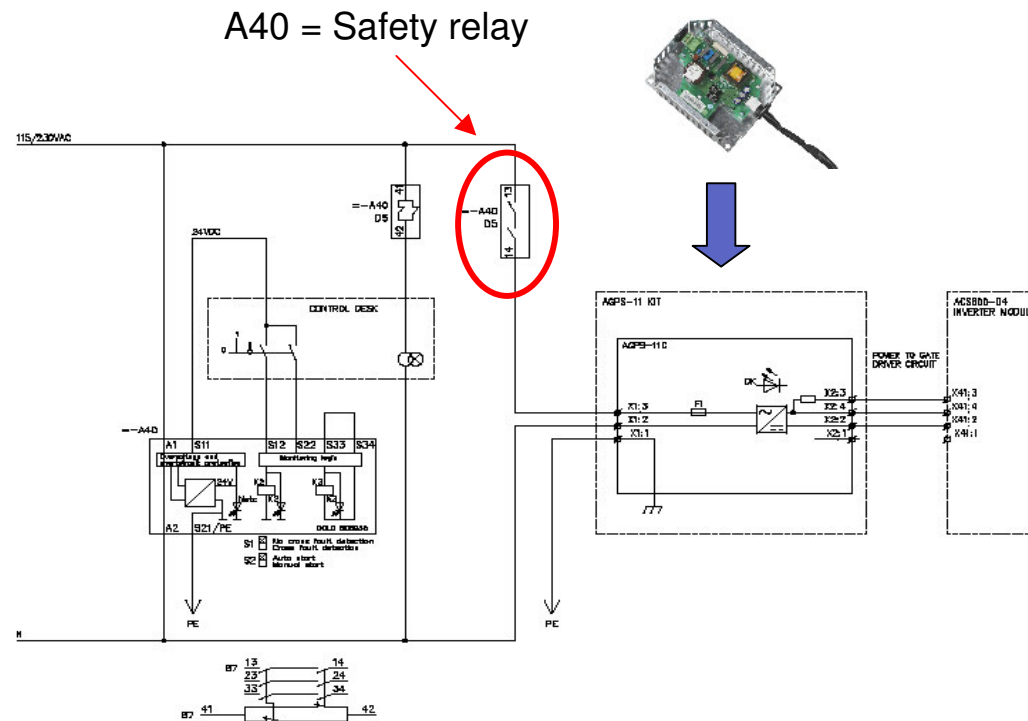
■ Implementation / option +Q950

- Terminal for gate driver power supply available in module front side with this option
- Externally mounted AGPS (power supply for IGBT gate drivers) board with IP20 cover and 3m connection wire (between AGPS and ACS800-04) included in the converter package
- Also the requirements of EN954-1, category 3 can be fulfilled (see next pages).

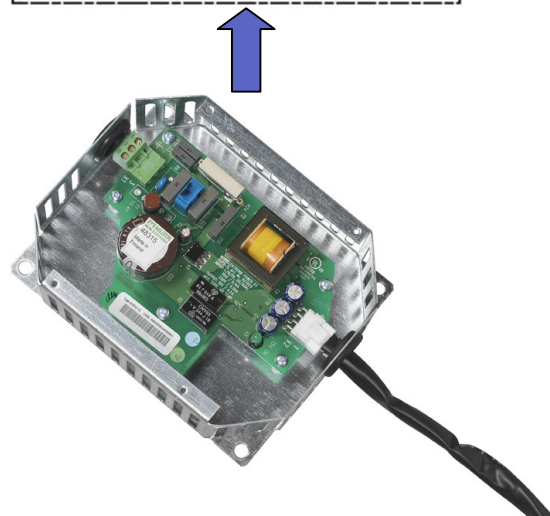
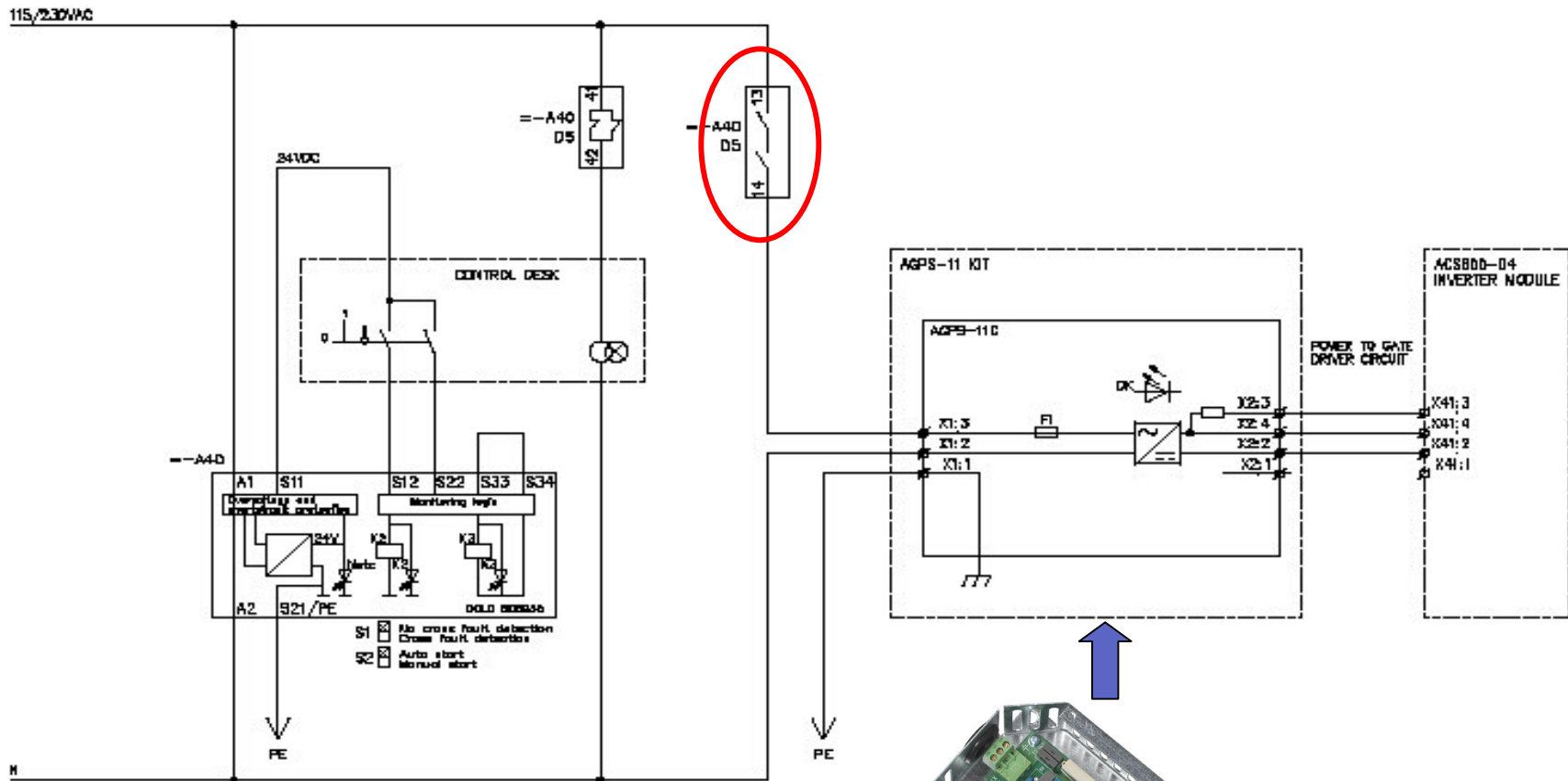


Prevention of unexpected start-up

- AGPS board is mounted inside the module
- Customer terminals on the top of the module
- Safety relay and terminal block to be supplied separately and to be placed outside the module
- Panel builder can fulfil the requirements of EN954-1, category 3 (see next pages)



Prevention of unexpected start-up



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ACS800-04, R2-R₁



EN954-1, category 3

- ABB has certification for this safety function according to EN954-1, category 3 with following concept
 - To allow ACS800-04 modules to comply:,
 - A safety relay (type BD5935, approved by ABB) is also needed
 - Additionally, the following items are normally required (not required by EN954-1)
 - Switching/disconnecting device for the circuitry. “Means shall be provided to prevent inadvertent, and/or mistaken closure of the disconnecting device.” EN 60204-1: 1997.
 - Indicating lamp; on = starting the drive is prevented, off = drive is operative.
 - This concept meets the requirements => Customer can get certification from local authority for the safety function.
 - Connection diagram => See previous page

