

PRODUCT INFORMATION

UNITROL® 1000 FLEX Systems

The standard control for your synchronous machine



The new UNITROL® 1000 FLEX Systems are prepackaged solutions for applications requiring single or dual channel controllers. All systems are fitted with UNITROL® 1020 FULL as a standard device, leveraging the best solution for optimum price and flexible project adjustment constraints.

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The systems are pre-designed, mounted and tested according to ABB's strictest production guidelines

Product description

Following rapid transition towards standard applications, the solution is gathering both IT and OT features needed for an excitation system. The prepackaged solution allows you to design your excitation system in the most flexible and cost oriented way.

All versions are designed on a common mechanical basis with various options for IOs and supply modes.

The systems are available featuring single or dual channel UNITROL 1020 FULL devices. By integrating the most complete product of ABB's excitation portfolio, the standard system will be suited perfectly for integrating systems into your control cabinets.

The system supports IOs extension via MODBUS TCP. Detailed feature information is given in the next page.

Request your System Description and contact:

Benefits:

- Optimized solution between project costs and later configuration possibilities
- Supporting UNITROL 1020 FULL single or dual channel systems with all software options of UNITROL 1000 Series included
- PSS – Power System Stabilizer as an option
- CMT 1000 Commissioning tool applicable to the standard system, reducing dramatically onsite configuration time
- Hardwired IO modulable and configurable custom logic
- Support from ABB Switzerland for the application setup

UNITROL® 1000 Supportline
unitrol.supportline@ch.abb.com
24h Hotline: +41 844 845 845



| UNITROL® 1000 FLEX Systems | | | | | | |
|---|--|--|-----------------|---------------------------|-----------------|------------------|
| Features | | Single Channel (1CH) | | Dual Channel (2CH) | | |
| | | F-CT-1CH | F-AUX-1CH | F-CT-2CH | F-AUX-2CH | |
| | | CT Boosting | Aux / Battery | CT Boosting | Aux / Battery | |
| Hardware | Max. Excitation current Nominal / Ceiling - CE | 20 A / 38 A (3 Phase Input Voltage) | | | | |
| | Max. Excitation current Nominal / Ceiling - UL | 15 A / 38 A (3 Phase Input Voltage) | | | | |
| | Maximum nominal input voltage | 250 Vac | | | | |
| | Max. ambient temperature | 55°C | | | | |
| | UNITROL® 1000 Type | UNITROL® 1020 FULL | | | | |
| | Dimensions WxHxD (mm) | 687 x 955 x 168 | | | | |
| | Weight (kg) | Contact ABB | | | | |
| | Main Excitation supply | Shunt, PMG, Auxiliary Windings | | | | |
| | CT Boosting during fault with I_e current limiter ECL-10 | CT Boosting | N/A | CT Boosting | N/A | |
| | Second Supply (during fault) incl. Inrush current limiter | Aux / Battery | | | | |
| | Redundant Exc. Supply terminal for two cables | N/A | | • | | |
| | Control Supply | AC Input: 20 Vac to 250 Vac DC Input: 20 Vdc to 300 Vdc | | | | |
| | Control Supply back up | Back up by excitation supply | | | | |
| | Analog / Digital IOs | Galvanic insulated IOs | | | | |
| | Excitation ON/OFF with pulse logic | • | | | | |
| | IO Configuration | Custom configuration | | | | |
| | Functions | AVR | • | | | |
| | | FCR | • | | | |
| | | PF / Var regulator | • | | | |
| | | Reactive load sharing via RS485, VDC | • | | | |
| Automatic Synchronizer | | • | | | | |
| Excitation current limiter | | • | | | | |
| PQ / Stator current limiter | | • | | | | |
| V/Hz Limiter | | • | | | | |
| Monitoring / protection | | • | | | | |
| Voltage matching / Synchronization | | • | | | | |
| Remote Control via MODBUS TCP (e.g. for IO extension) | | • | | | | |
| Power System Stabilizer (PSS) | | ○ | | | | |
| Ref. | | | F-CT-1CH | F-AUX-1CH | F-CT-2CH | F-AUX-2CH |
| | Order code: | 3BHE059249 | R6126 | R6136 | R6226 | R6236 |
| | With PSS: | 3BHE059249 | R6127 | R6137 | R6227 | R6237 |

Additional information

Related common documents

| Document Title | Document Number: |
|---|------------------|
| UNITROL® 1000 FLEX Systems – Function description | 3BHS884149 E41 |
| UNITROL 1020 User Manual | 3BHS335648 E82 |
| UNITROL 1020 Modbus Reference Manual | 3BHS358281 E80 |

FLEX System Aux. Supply and CT Boosting - Single Channel

| Document Title | Document Number: |
|--|------------------|
| UNITROL 1000 FLEX F-CT-1CH Layout Drawing | 3BHS884149 E01 |
| UNITROL 1000 FLEX F-CT-1CH Circuit Diagram | 3BHS884149 E21 |
| UNITROL 1000 FLEX F-CT-1CH Test Report | 3BHS884149 E31 |

FLEX System Aux. Supply - Single Channel

| Document Title | Document Number: |
|---|------------------|
| UNITROL 1000 FLEX F-AUX-1CH Layout Drawing | 3BHS884149 E02 |
| UNITROL 1000 FLEX F-AUX-1CH Circuit Diagram | 3BHS884149 E22 |
| UNITROL 1000 FLEX F-AUX-1CH Test Report | 3BHS884149 E32 |

FLEX System Aux. Supply and CT Boosting – Dual Channel

| Document Title | Document Number: |
|--|------------------|
| UNITROL 1000 FLEX F-CT-2CH Layout Drawing | 3BHS884149 E03 |
| UNITROL 1000 FLEX F-CT-2CH Circuit Diagram | 3BHS884149 E23 |
| UNITROL 1000 FLEX F-CT-2CH Test Report | 3BHS884149 E33 |

FLEX System Aux. Supply – Dual Channel

| Document Title | Document Number: |
|---|------------------|
| UNITROL 1000 FLEX F-AUX-2CH Layout Drawing | 3BHS884149 E04 |
| UNITROL 1000 FLEX F-AUX-2CH Circuit Diagram | 3BHS884149 E24 |
| UNITROL 1000 FLEX F-AUX-2CH Test Report | 3BHS884149 E34 |