

DISTRIBUTION SOLUTIONS

## UniSec JTI-HBC

Secondary distribution switchgear  
with rapid delivery



- Defined solutions
- Compliant with CEI-016 Standard
- Fast delivery time



# UniSec JTI-HBC

## Thought up and built for industry customers

The JTI “Just To Install” acronym indicates a type of medium voltage switchgear for primary and secondary distribution featuring very rapid delivery and putting into service. Delivery time for UniSec JTI switchgear is normally two weeks. By means of a product configurator allowing precise and rapid estimates to be made, the customer receives complete proposals and does not have to make out the technical specifications and design drawings.

UniSec JTI switchgear is based on the standard switchgear design and has a range of all types able to satisfy even special plant requirements, thanks both to its electrical characteristics and standard fitting of accessories.

UniSec JTI switchgear is always fitted with mechanical and electromechanical interlocks in accordance with the IEC 62271-200 standard. It is available with vacuum circuit-breakers and integrated multifunction apparatus. All solutions have incoming units that comply with CEI 0-16 standards and use the REF 601 relay, or alternatively, the REF542plus unit as the protection unit.

The technical design documentation is available immediately and the customer provides official approval of the design right from the offer stage.



# UniSec JTI-HBC

## Characteristics

### General characteristics

- Compartments and side pieces made of pre-galvanized or painted metal sheets
- Front panel doors painted grey RAL 7035 colour
- Removable VD4/R-Sec circuit-breaker
- HySec multi-function apparatus with vacuum circuit-breaker and SF6 gas-insulated switch-disconnector
- KECA 250 B1 current sensors or KEV CD 24 AE3 combined current/voltage sensors to DIN standards
- REF601 protection relay or REF542plus microprocessor control and protection unit
- Incoming unit protection system according to Standard CEI 0-16 – December 2012 edition
- Pre-engineering for earthing by means of movable devices or earthing switch in the incoming unit, on the network side

### Compliance with Standards

- IEC 62271-200
- EN 62271-200

### Version

- Standard internal arc proof on switchgear front

### Classification

- Service continuity: LSC2A
- Partitions: PM (Metal partitions)

### Degree of protection

- IP2X inside the switchgear
- IP3X on the external housing

### Available mechanical interlocks

- Line-side isolator and earthing switch
- Door with earthing switch
- Circuit-breaker with disconnector (for HySec)

### Auxiliary circuit voltage

- 230 V c.a.

### Electrical ratings

Rated voltage	kV	24
Test voltage (50 Hz/1 min)	kV	50
Impulse withstand voltage	kV	125
Rated frequency	Hz	50
Rated current	A	630
Rated short-time withstand current (1 s)	kA	16
Peak current	kA	40
Internal arc withstand current (up to IAC AF) (1 s)	kA	16

# UniSec JTI-HBC

## Main components

— 01 HySec multi-function apparatus (with vacuum circuit-breaker and gas-insulated switch-disconnector)

— 02 VD4/R-Sec vacuum circuit-breakers

— 03 G-Sec gas-insulated switch-disconnector

— 04 REF542plus multifunction control and protection unit

— 05 KEV CD 24 AE3 combined current/voltage sensor

— 06 REF 601 protection relay

— 07 KECA 250 B1 current sensor



01



02



03



04



05



06



07

# UniSec JTI

## Solutions available with undervoltage coil and protection relay (50 - 51 - 50N - 51N)

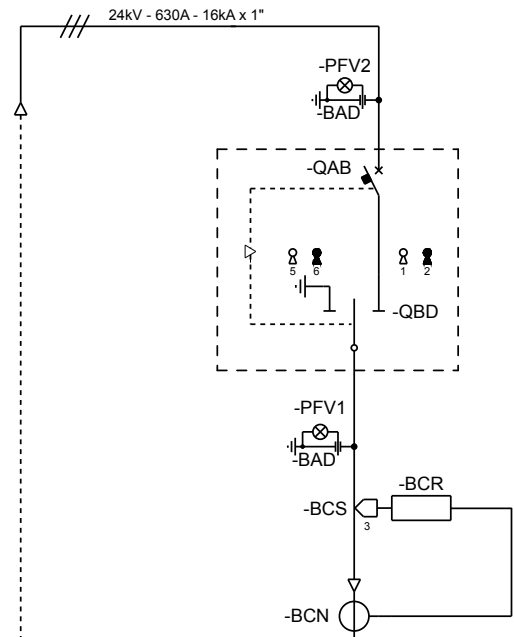
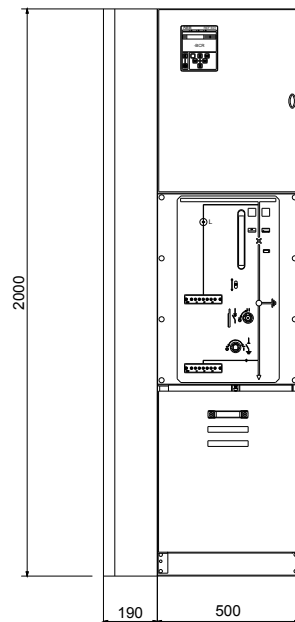
### JTI A1\_F - RLC + HBC switchgear

#### 1 (one) HBC unit with HySec + multifunction apparatus

#### 1 (one) RLC unit with cable inlet on the left

- Voltage present on busbar side and cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts, undervoltage release and temporary mechanical override of the undervoltage release;

- SF<sub>6</sub> switch-disconnector with:
  - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
  - 1 removable key with earthing switch in the closed position and 1 removable key in the open position;
- REF 601 protection relay without protection (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16.
- Pre-engineered for earthing by means of insulating rod on busbar side. The insulating rod is not included in the supply and must be ordered separately.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

**Codes for galvanized compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_A1_F_Z_RLC_N_N_N_HBC	1VCF838000R0700	Basic version without accessories
HySec	JTI_SEC_A1_F_Z_RLC_N_R_N_HBC	1VCF838000R0701	Anti-condensation heater
HySec	JTI_SEC_A1_F_Z_RLC_I_N_N_HBC	1VCF838000R0702	Internal lighting
HySec	JTI_SEC_A1_F_Z_RLC_I_R_N_HBC	1VCF838000R0703	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_Z_RLC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0704	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_Z_RLC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0705	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_A1_F_V_RLC_N_N_N_HBC	1VCF838000R0848	Basic version without accessories
HySec	JTI_SEC_A1_F_V_RLC_N_R_N_HBC	1VCF838000R0849	Anti-condensation heater
HySec	JTI_SEC_A1_F_V_RLC_I_N_N_HBC	1VCF838000R0850	Internal lighting
HySec	JTI_SEC_A1_F_V_RLC_I_R_N_HBC	1VCF838000R0851	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_V_RLC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0852	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_V_RLC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0853	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

Completion	Description	Sales code
Insulating rod	Movable earthing kit	1VCF838000R0174

Completion	Height	Sales code
Height adjustment plinth	300 mm	1VCF838000R1001

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with undervoltage coil and protection relay (50 - 51 - 50N - 51N)

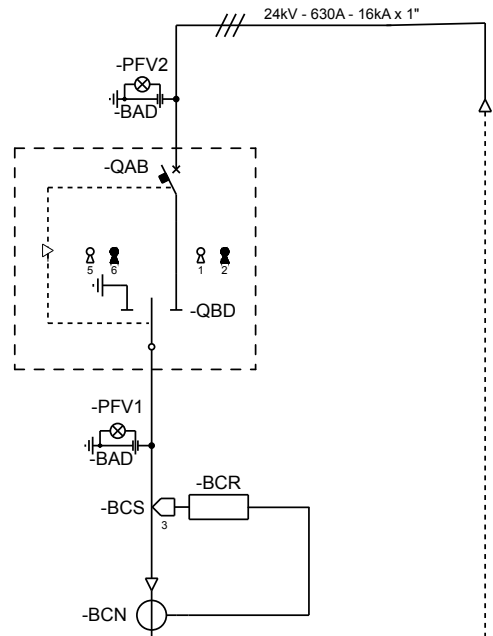
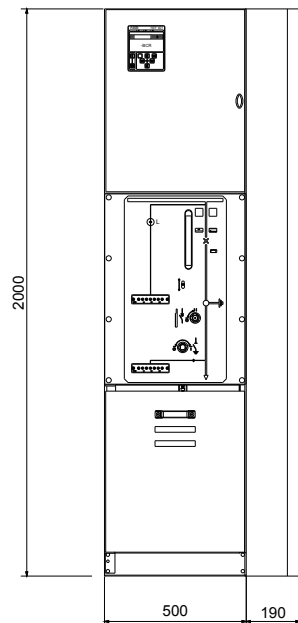
JTI A1\_F – RRC + HBC switchgear

**1 (one) HBC unit with HySec + multifunction apparatus**

**1 (one) RRC unit with cable inlet on the right**

- Voltage present on busbar side and cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts, undervoltage release and temporary mechanical override of the undervoltage release;

- SF<sub>6</sub> switch-disconnector with:
  - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
  - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.
- REF 601 protection relay without protection (51, I>; 51, I>>; 50, I>>>; 51N, I<sub>o</sub>>; 50N, I<sub>o</sub>>>, 68), with 3 current sensors and toroid for earth fault, conforming to standard CEI 0-16.
- Pre-engineered for earthing by means of insulating rod on busbar side. The insulating rod is not included in the supply and must be ordered separately.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons



**Codes for galvanized compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_A1_F_Z_RRC_N_N_N_HBC	1VCF838000R0706	Basic version without accessories
HySec	JTI_SEC_A1_F_Z_RRC_N_R_N_HBC	1VCF838000R0707	Anti-condensation heater
HySec	JTI_SEC_A1_F_Z_RRC_I_N_N_HBC	1VCF838000R0708	Internal lighting
HySec	JTI_SEC_A1_F_Z_RRC_I_R_N_HBC	1VCF838000R0709	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_Z_RRC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0710	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_Z_RRC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0711	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_A1_F_V_RRC_N_N_N_HBC	1VCF838000R0712	Basic version without accessories
HySec	JTI_SEC_A1_F_V_RRC_N_R_N_HBC	1VCF838000R0713	Anti-condensation heater
HySec	JTI_SEC_A1_F_V_RRC_I_N_N_HBC	1VCF838000R0714	Internal lighting
HySec	JTI_SEC_A1_F_V_RRC_I_R_N_HBC	1VCF838000R0715	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_V_RRC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0716	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_V_RRC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0717	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

<b>Completion</b>	<b>Description</b>	<b>Sales code</b>
Insulating rod	Movable earthing kit	1VCF838000R0174

<b>Completion</b>	<b>Height</b>	<b>Sales code</b>
Height adjustment plinth	300 mm	1VCF838000R1001

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N)

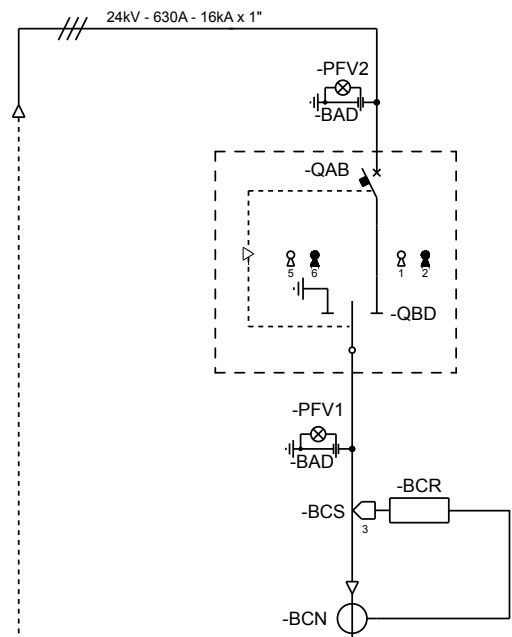
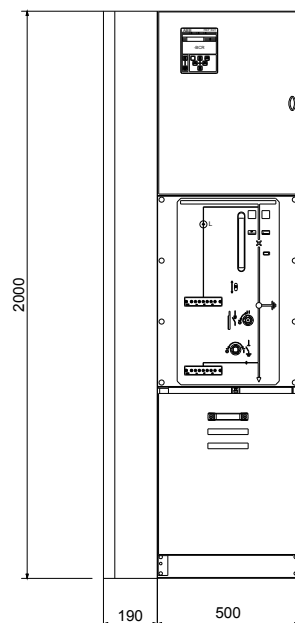
### JTI A1\_F\_DL – RLC + HBC switchgear

#### 1 (one) HBC unit with HySec + multifunction apparatus

#### 1 (one) RLC unit with cable inlet on the left

- Voltage present on busbar side and cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.

- REF 601 protection relay with Data Logger, Modbus communication and RS 485 serial output (51,I>; 51, I>>; 50, I>>>; 51N, I>; 50N, I>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16<sup>(\*\*)</sup>.
- Pre-engineered for earthing by means of insulating rod on busbar side. The insulating rod is not included in the supply and must be ordered separately.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

(\*\*) The software for the Data Logger function can be downloaded free of charge from our website: [www.abb.it/mediatensione\\_portale\\_CEI\\_0-16](http://www.abb.it/mediatensione_portale_CEI_0-16)  
A USB/RS485 converter is required  
We recommend use of a MOXA Uport 1130 v.1.4 converter

**Codes for galvanized compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_A1_F_DL_Z_RLC_N_N_N_HBC	1VCF838000R0718	Basic version without accessories
HySec	JTI_SEC_A1_F_DL_Z_RLC_N_R_N_HBC	1VCF838000R0719	Anti-condensation heater
HySec	JTI_SEC_A1_F_DL_Z_RLC_I_N_N_HBC	1VCF838000R0720	Internal lighting
HySec	JTI_SEC_A1_F_DL_Z_RLC_I_R_N_HBC	1VCF838000R0854	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_DL_Z_RLC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0721	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_DL_Z_RLC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0722	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_A1_F_DL_V_RLC_N_N_N_HBC	1VCF838000R0723	Basic version without accessories
HySec	JTI_SEC_A1_F_DL_V_RLC_N_R_N_HBC	1VCF838000R0724	Anti-condensation heater
HySec	JTI_SEC_A1_F_DL_V_RLC_I_N_N_HBC	1VCF838000R0725	Internal lighting
HySec	JTI_SEC_A1_F_DL_V_RLC_I_R_N_HBC	1VCF838000R0855	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_DL_V_RLC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0726	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_DL_V_RLC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0727	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

<b>Completion</b>	<b>Description</b>	<b>Sales code</b>
Insulating rod	Movable earthing kit	1VCF838000R0174

<b>Completion</b>	<b>Height</b>	<b>Sales code</b>
Height adjustment plinth	300 mm	1VCF838000R1001

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N)

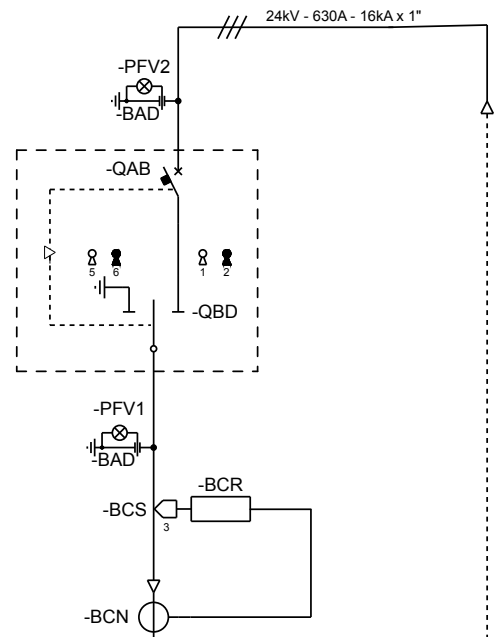
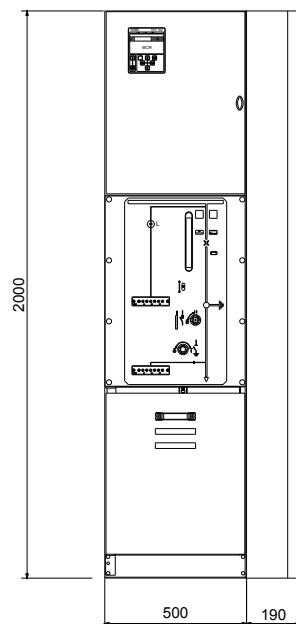
JTI A1\_F\_DL – RRC + HBC  
switchgear

**1 (one) HBC unit with HySec + multifunction apparatus**

**1 (one) RRC unit with cable inlet on the right**

- Voltage present on busbar side and cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.

- REF 601 protection relay with Data Logger, Modbus communication and RS 485 serial output (51,I>; 51, I>>; 50, I>>>; 51N, I>; 50N, I>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16<sup>(\*\*)</sup>.
- Pre-engineered for earthing by means of insulating rod on busbar side. The insulating rod is not included in the supply and must be ordered separately.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

(\*\*) The software for the Data Logger function can be downloaded free of charge from our website: [www.abb.it/mediatensione portale CEI 0-16](http://www.abb.it/mediatensione portale CEI 0-16)  
A USB/RS485 converter is required  
We recommend use of a MOXA Uport 1130 v.1.4 converter

**Codes for galvanized compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_A1_F_DL_Z_RRC_N_N_N_HBC	1VCF838000R0728	Basic version without accessories
HySec	JTI_SEC_A1_F_DL_Z_RRC_N_R_N_HBC	1VCF838000R0729	Anti-condensation heater
HySec	JTI_SEC_A1_F_DL_Z_RRC_I_N_N_HBC	1VCF838000R0730	Internal lighting
HySec	JTI_SEC_A1_F_DL_Z_RRC_I_R_N_HBC	1VCF838000R0731	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_DL_Z_RRC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0732	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_DL_Z_RRC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0733	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_A1_F_DL_V_RRC_N_N_N_HBC	1VCF838000R0734	Basic version without accessories
HySec	JTI_SEC_A1_F_DL_V_RRC_N_R_N_HBC	1VCF838000R0735	Anti-condensation heater
HySec	JTI_SEC_A1_F_DL_V_RRC_I_N_N_HBC	1VCF838000R0736	Internal lighting
HySec	JTI_SEC_A1_F_DL_V_RRC_I_R_N_HBC	1VCF838000R0737	Internal lighting and anti-condensation heater
HySec	JTI_SEC_A1_F_DL_V_RRC_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0738	Motor-operated circuit-breaker
HySec	JTI_SEC_A1_F_DL_V_RRC_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0739	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

<b>Completion</b>	<b>Description</b>	<b>Sales code</b>
Insulating rod	Movable earthing kit	1VCF838000R0174

<b>Completion</b>	<b>Height</b>	<b>Sales code</b>
Height adjustment plinth	300 mm	1VCF838000R1001

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N)

### JTI B1\_DL switchgear

#### 1 (one) incoming feeder with HBC + Unit 2 (two) transformer protections with HBC Unit

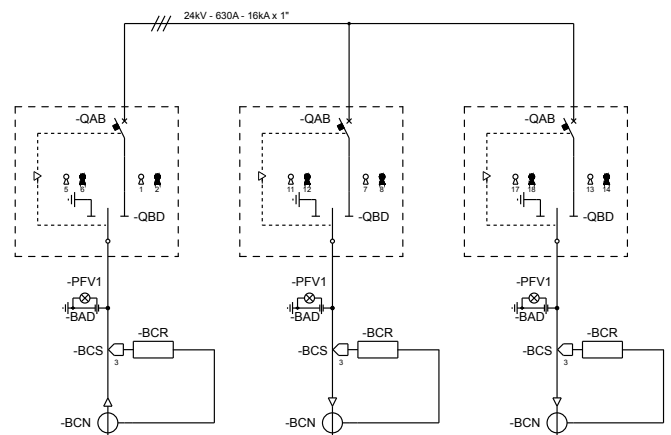
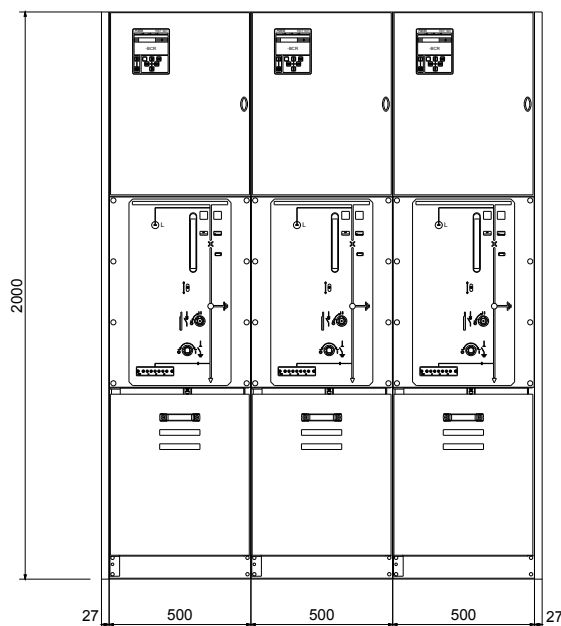
##### CEI 0-16 incoming unit

- Voltage present on cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - removable key with earthing switch in the closed position and 1 removable key in the open position.
  - Earthing switch on utility undertaking's side with key under the responsibility of the utility undertaking, in accordance with Standard CEI 0-16.

- REF 601 protection relay with Data Logger, Modbus communication and RS 485 serial output (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16<sup>(\*\*)</sup>.

##### Transformer protection unit

- Voltage present on cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.
- REF 601 protection relay without protection (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>, 68), with 3 current sensors and toroid for earth fault, conforming to the IEC standard.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

(\*\*) The software for the Data Logger function can be downloaded free of charge from our website: [www.abb.it/mediatensione\\_portale CEI 0-16](http://www.abb.it/mediatensione_portale_CEI_0-16)  
A USB/RS485 converter is required  
We recommend use of a MOXA Uport 1130 v.1.4 converter

**Codes for galvanized compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_B1_DL_Z_N_N_N_HBC	1VCF838000R0764	Basic version without accessories
HySec	JTI_SEC_B1_DL_Z_N_R_N_HBC	1VCF838000R0765	Anti-condensation heater
HySec	JTI_SEC_B1_DL_Z_I_N_N_HBC	1VCF838000R0766	Internal lighting
HySec	JTI_SEC_B1_DL_Z_I_R_N_HBC	1VCF838000R0767	Internal lighting and anti-condensation heater
HySec	JTI_SEC_B1_DL_Z_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0768	Motor-operated circuit-breaker
HySec	JTI_SEC_B1_DL_Z_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0769	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec	JTI_SEC_B1_DL_V_N_N_N_HBC	1VCF838000R0770	Basic version without accessories
HySec	JTI_SEC_B1_DL_V_N_R_N_HBC	1VCF838000R0771	Anti-condensation heater
HySec	JTI_SEC_B1_DL_V_I_N_N_HBC	1VCF838000R0772	Internal lighting
HySec	JTI_SEC_B1_DL_V_I_R_N_HBC	1VCF838000R0773	Internal lighting and anti-condensation heater
HySec	JTI_SEC_B1_DL_V_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0774	Motor-operated circuit-breaker
HySec	JTI_SEC_B1_DL_V_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0775	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

<b>Completion</b>	<b>Height</b>	<b>Sales code</b>
Height adjustment plinth	300 mm	1VCF838000R1003

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N - 67N)

### JTI B2\_DL switchgear

- 1 (one) incoming feeder with SBR + Unit**
- 2 (two) transformer protections with HBC Unit**

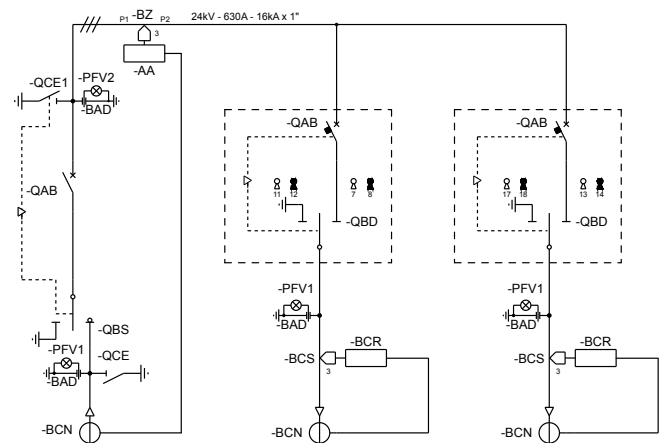
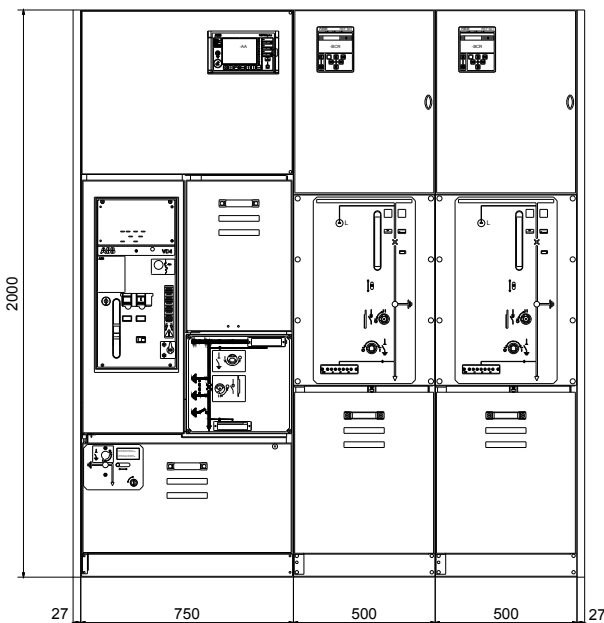
#### CEI 0-16 SBR incoming unit

- Voltage present on busbar side and cable side.
- VD4/R-Sec p230 circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, 3NO + 4NC aux. contacts, operation counter and springs loaded signalling.
- REF542plus control and protection unit (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>; 67NI; 67NC) with Data Logger and 3 ABB type KEVCD current/voltage sensors installed inside the busbar compartment and toroid for earth fault conforming to Standard CEI 0-16.
- G-Sec switch-disconnector with:
  - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
  - 1 removable key with earthing switch in the closed position and 1 removable key with earthing switch in the open position;

- auxiliary contacts: 4 NO or NC for the feeder disconnector and 4 NO or NC for the earthing switch.
- Earthing switch on utility undertaking's side with key under the responsibility of the utility undertaking, in accordance with Standard CEI 0-16.

#### Transformer protection unit

- Voltage present on cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.
- REF 601 protection relay without protection (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>,68), with 3 current sensors and toroid for earth fault, conforming to the IEC standard.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons



**Codes for galvanized compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec VD4/R	JTI_SEC_B2_DL_Z_N_N_N_HBC	1VCF838000R0776	Basic version without accessories
HySec VD4/R	JTI_SEC_B2_DL_Z_N_R_N_HBC	1VCF838000R0777	Anti-condensation heater
HySec VD4/R	JTI_SEC_B2_DL_Z_I_N_N_HBC	1VCF838000R0778	Internal lighting
HySec VD4/R	JTI_SEC_B2_DL_Z_I_R_N_HBC	1VCF838000R0779	Internal lighting and anti-condensation heater
HySec VD4/R	JTI_SEC_B2_DL_Z_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0780	Motor-operated circuit-breaker
HySec VD4/R	JTI_SEC_B2_DL_Z_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0781	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

<b>Circuit-breaker</b>	<b>Switchgear description</b>	<b>Sales code</b>	<b>Fittings</b>
HySec VD4/R	JTI_SEC_B2_DL_V_N_N_N_HBC	1VCF838000R0782	Basic version without accessories
HySec VD4/R	JTI_SEC_B2_DL_V_N_R_N_HBC	1VCF838000R0783	Anti-condensation heater
HySec VD4/R	JTI_SEC_B2_DL_V_I_N_N_HBC	1VCF838000R0784	Internal lighting
HySec VD4/R	JTI_SEC_B2_DL_V_I_R_N_HBC	1VCF838000R0785	Internal lighting and anti-condensation heater
HySec VD4/R	JTI_SEC_B2_DL_V_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0786	Motor-operated circuit-breaker
HySec VD4/R	JTI_SEC_B2_DL_V_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0787	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

<b>Completion</b>	<b>Height</b>	<b>Sales code</b>
Height adjustment plinth	300 mm	1VCF838000R1004

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N)

### JTI B3\_DL switchgear

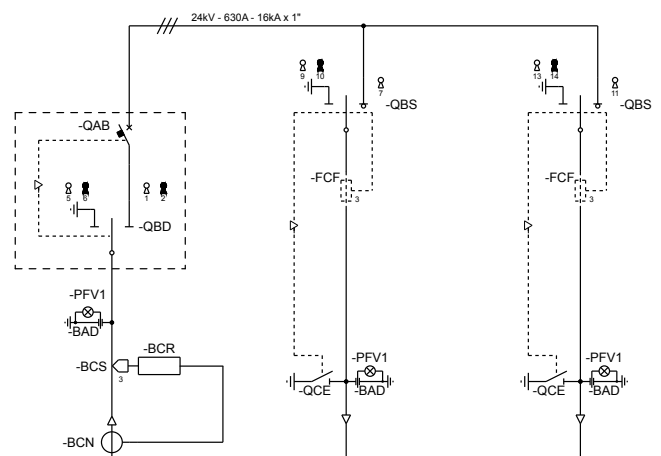
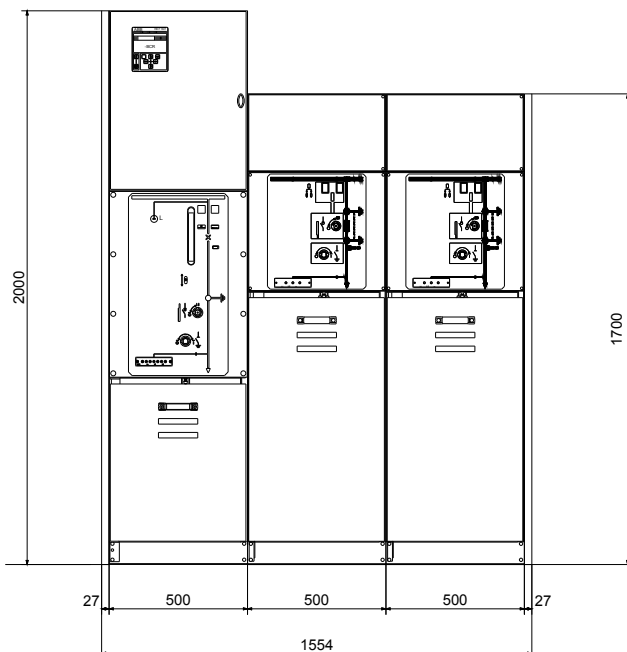
- 1 (one) incoming feeder with HBC + Unit**  
**2 (two) transformer protections with SFC Unit**

#### Incoming unit

- Voltage present on cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.
- REF 601 protection relay with Data Logger, Modbus communication and RS 485 serial output (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16<sup>(\*\*)</sup>.

#### SFC transformer protection unit (width of unit 500 mm)

- Voltage present on cable side.
- G-Sec gas-insulated switch-disconnector with:
  - 1 removable key with line isolator in the open position;
  - 1 removable key with earthing switch in the closed position and 1 removable key in the open position;
  - shunt opening release;
  - fuseholder;
  - mechanical release system for tripped fuse;
  - fuse tripped signalling contact;
  - auxiliary contacts: 4 NO or NC for the feeder disconnecter and 4 NO or NC for the earthing switch.
- Supply does not include fuses unless ordered separately.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

(\*\*) The software for the Data Logger function can be downloaded free of charge from our website: [www.abb.it/mediatensione portale CEI 0-16](http://www.abb.it/mediatensione portale CEI 0-16)  
 A USB/RS485 converter is required  
 We recommend use of a MOXA Uport 1130 v.1.4 converter

**Codes for galvanized compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_B3_DL_Z_N_N_N_HBC	1VCF838000R0788	Basic version without accessories
HySec	JTI_SEC_B3_DL_Z_N_R_N_HBC	1VCF838000R0789	Anti-condensation heater
HySec	JTI_SEC_B3_DL_Z_I_N_N_HBC	1VCF838000R0790	Internal lighting
HySec	JTI_SEC_B3_DL_Z_I_R_N_HBC	1VCF838000R0791	Internal lighting and anti-condensation heater
HySec	JTI_SEC_B3_DL_Z_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0792	Motor-operated circuit-breaker
HySec	JTI_SEC_B3_DL_Z_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0793	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_B3_DL_V_N_N_N_HBC	1VCF838000R0794	Basic version without accessories
HySec	JTI_SEC_B3_DL_V_N_R_N_HBC	1VCF838000R0795	Anti-condensation heater
HySec	JTI_SEC_B3_DL_V_I_N_N_HBC	1VCF838000R0796	Internal lighting
HySec	JTI_SEC_B3_DL_V_I_R_N_HBC	1VCF838000R0797	Internal lighting and anti-condensation heater
HySec	JTI_SEC_B3_DL_V_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0798	Motor-operated circuit-breaker
HySec	JTI_SEC_B3_DL_V_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0799	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

Fuse for SFC units	Sales code	Note
24 kV – 16A	1VCF838000R0167	To order in multiples of 3
24 kV – 25A	1VCF838000R0168	To order in multiples of 3
24 kV – 40A	1VCF838000R0169	To order in multiples of 3
24 kV – 50A	1VCF838000R0170	To order in multiples of 3
24 kV – 63A	1VCF838000R0171	To order in multiples of 3
24 kV – 80A	1VCF838000R0172	To order in multiples of 3

Completion	Height	Sales code
Height adjustment plinth	300 mm	1VCF838000R1003

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N)

### JTI B4\_DL switchgear

- 1 (one) incoming feeder with HBC + Unit**
- 2 (two) transformer protections with SFC Unit**

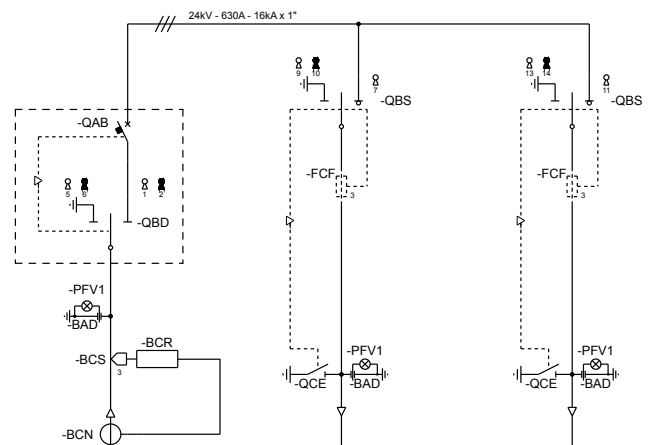
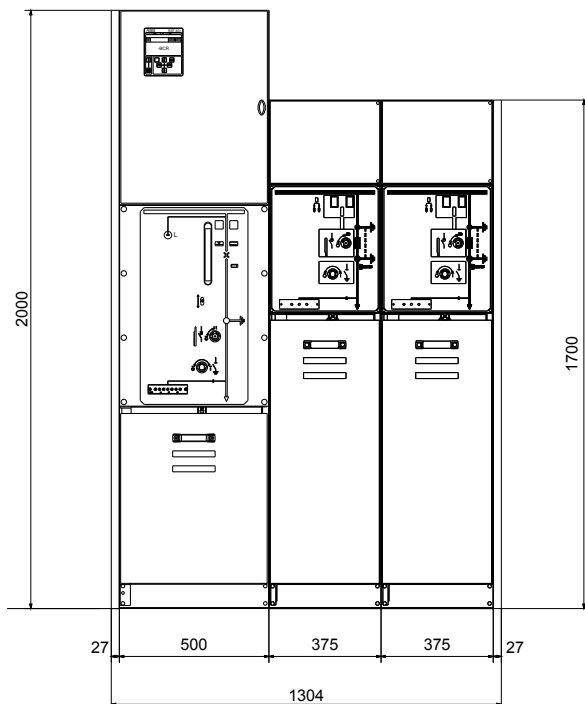
#### Incoming unit

- Voltage present on cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position;
  - Earthing switch on utility undertaking's side with key under the responsibility of the utility undertaking, in accordance with Standard CEI 0-16.

- REF 601 protection relay with Data Logger, Modbus communication and RS 485 serial output (51, I>; 51, I>>; 50, I>>>; 51N, lo>; 50N, lo>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16<sup>(\*\*)</sup>.

#### SFC transformer protection unit (width of unit 375 mm)

- Voltage present on cable side.
- G-Sec gas-insulated switch-disconnector with:
  - 1 removable key with line isolator in the open position;
  - 1 removable key with earthing switch in the closed position and 1 removable key in the open position;
  - shunt opening release;
  - fuseholder;
  - mechanical release system for tripped fuse;
  - fuse tripped signalling contact;
  - auxiliary contacts: 4 NO or NC for the feeder disconnector and 4 NO or NC for the earthing switch.
- Supply does not include fuses unless ordered separately.



(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

(\*\*) The software for the Data Logger function can be downloaded free of charge from our website: [www.abb.it/mediatensione](http://www.abb.it/mediatensione) portale CEI 0-16  
A USB/RS485 converter is required  
We recommend use of a MOXA Uport 1130 v.1.4 converter

**Codes for galvanized compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_B4_DL_Z_N_N_N_HBC	1VCF838000R0800	Basic version without accessories
HySec	JTI_SEC_B4_DL_Z_N_R_N_HBC	1VCF838000R0801	Anti-condensation heater
HySec	JTI_SEC_B4_DL_Z_I_N_N_HBC	1VCF838000R0802	Internal lighting
HySec	JTI_SEC_B4_DL_Z_I_R_N_HBC	1VCF838000R0803	Internal lighting and anti-condensation heater
HySec	JTI_SEC_B4_DL_Z_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0804	Motor-operated circuit-breaker
HySec	JTI_SEC_B4_DL_Z_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0805	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_B4_DL_V_N_N_N_HBC	1VCF838000R0806	Basic version without accessories
HySec	JTI_SEC_B4_DL_V_N_R_N_HBC	1VCF838000R0807	Anti-condensation heater
HySec	JTI_SEC_B4_DL_V_I_N_N_HBC	1VCF838000R0808	Internal lighting
HySec	JTI_SEC_B4_DL_V_I_R_N_HBC	1VCF838000R0809	Internal lighting and anti-condensation heater
HySec	JTI_SEC_B4_DL_V_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0810	Motor-operated circuit-breaker
HySec	JTI_SEC_B4_DL_V_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0811	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

Fuse for SFC units	Sales code	Note
24 kV – 16A	1VCF838000R0167	To order in multiples of 3
24 kV – 25A	1VCF838000R0168	To order in multiples of 3
24 kV – 40A	1VCF838000R0169	To order in multiples of 3
24 kV – 50A	1VCF838000R0170	To order in multiples of 3
24 kV – 63A	1VCF838000R0171	To order in multiples of 3
24 kV – 80A	1VCF838000R0172	To order in multiples of 3

Completion	Height	Sales code
Height adjustment plinth	300 mm	1VCF838000R1006

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

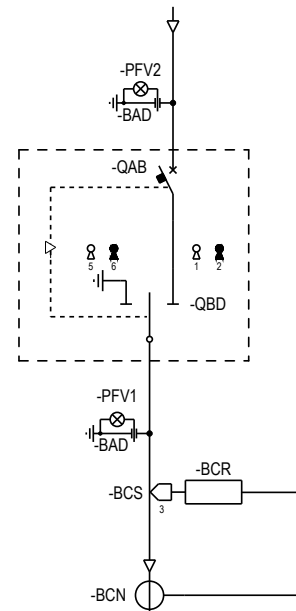
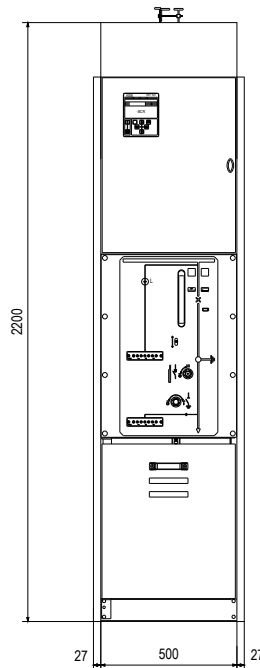
## Configurations available with Data Logger and protection relay (50 - 51 - 50N - 51N)

### JTI C1\_AC\_DL switchgear

#### 1 (one) Incoming/Outgoing unit with cable outlet from below<sup>(\*)</sup> and inlet from above

- Voltage present on busbar side and cable side.
- HySec p230 multifunction apparatus comprising:
  - Vacuum circuit-breaker with or without motor<sup>(\*\*)</sup>, with shunt opening release, shunt closing release, operation counter, 6NO + 6NC aux. contacts;
  - SF<sub>6</sub> switch-disconnector with:
    - 1 removable key with line-side isolator in the closed position and 1 removable key in the open position;
    - 1 removable key with earthing switch in the closed position and 1 removable key in the open position.

- REF 601 protection relay with Data Logger, Modbus communication and RS 485 serial output (51, I>; 51, I>>; 50, I>>>; 51N, Io>; 50N, Io>>, 68), with 3 current sensors and toroid for earth fault, conforming to Standard CEI 0-16<sup>(\*\*\*)</sup>
- Pre-engineered for earthing by means of an earthing stick on the distributor side. The earthing stick is not included in the supply and must be ordered separately.



(\*) Non internal arc proof solution

(\*\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

(\*\*\*) The software for the Data Logger function can be downloaded free of charge from our website: [www.abb.it/mediatensione\\_portale](http://www.abb.it/mediatensione_portale) CEI 0-16

A USB/RS485 converter is required

We recommend use of a MOXA Uport 1130 v.1.4 converter

**Codes for galvanized compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_C1_AC_DL_Z_N_N_N_HBC	1VCF838000R0836	Basic version without accessories
HySec	JTI_SEC_C1_AC_DL_Z_N_R_N_HBC	1VCF838000R0837	Anti-condensation heater
HySec	JTI_SEC_C1_AC_DL_Z_I_N_N_HBC	1VCF838000R0838	Internal lighting
HySec	JTI_SEC_C1_AC_DL_Z_I_R_N_HBC	1VCF838000R0839	Internal lighting and anti-condensation heater
HySec	JTI_SEC_C1_AC_DL_Z_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0840	Motor-operated circuit-breaker
HySec	JTI_SEC_C1_AC_DL_Z_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0841	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

**Codes for painted compartments and side pieces**

Circuit-breaker	Switchgear description	Sales code	Fittings
HySec	JTI_SEC_C1_AC_DL_V_N_N_N_HBC	1VCF838000R0842	Basic version without accessories
HySec	JTI_SEC_C1_AC_DL_V_N_R_N_HBC	1VCF838000R0843	Anti-condensation heater
HySec	JTI_SEC_C1_AC_DL_V_I_N_N_HBC	1VCF838000R0844	Internal lighting
HySec	JTI_SEC_C1_AC_DL_V_I_R_N_HBC	1VCF838000R0845	Internal lighting and anti-condensation heater
HySec	JTI_SEC_C1_AC_DL_V_N_N_M_HBC <sup>(*)</sup>	1VCF838000R0846	Motor-operated circuit-breaker
HySec	JTI_SEC_C1_AC_DL_V_I_R_M_HBC <sup>(*)</sup>	1VCF838000R0847	Internal lighting, anti-condensation heater and motor-operated circuit-breaker

Completion	Description	Sales code
Insulating rod	Movable earthing kit	1VCF838000R0174

Completion	Height	Sales code
Height adjustment plinth	300 mm	1VCF838000R1007

(\*) Motor-operated HySec includes the local/remote selector switch and opening and closing push-buttons

# UniSec JTI

## Configurations available

### JTI (TR) switchgear

#### 1 (one) transformer box unit

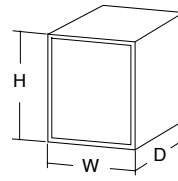
The transformer box unit is only available in the standard version. The transformer box is made of galvanized sheet metal with doors painted in standard RAL 7035 colour. It is supplied in an assembly kit and can be fitted with internal lighting. Please contact us if transformer boxes with other dimensions are required.

#### Choosing the transformer box units

After having defined the type of transformer box unit in relation to the total losses of the transformer, check to make sure that the dimensions of the box unit are sufficient to ensure adequate insulation distances.

#### Available types

Unit	W [mm]	D [mm]	H [mm]
TR1	1600	1150	1950
TR2	2000	1150	1950
TR3	2000	1300	2250
TR4	2200	1500	2250
TR5	2200	1800	2250



#### Maximum operating temperature of the transformer T [°C]

No-load losses	Wo [W]
Load losses	Wcc [W]
Load factor	a
Rated current	In [A]
Total losses	Ptot. = Wo + a2 x Wcc

Type of box	Total losses [W]		
	T=100 °C	T=120 °C	T=140 °C
TR1	5.000	6.000	7.000
TR2	6.000	7.500	8.500
TR3	7.500	9.000	10.500
TR4	8.500	10.000	11.500
TR5	9.000	10.500	12.500

Description of unit	Sales code
TR1	1VCF838000R0163
TR2	1VCF838000R0164
TR3	1VCF838000R0165
TR4	1VCF838000R0166
TR5	1VCF838000R0173





# Notes

A large grid of small dots for taking notes, consisting of 25 rows and 30 columns of dots.



# Notes

A large grid of small dots for taking notes, consisting of 20 columns and 30 rows of dots.





---

For more information please contact:



---

More product information:

[abb.com/mediumvoltage](http://abb.com/mediumvoltage)

Your contact center:

[abb.com/contactcenters](http://abb.com/contactcenters)

More service information:

[abb.com/service](http://abb.com/service)