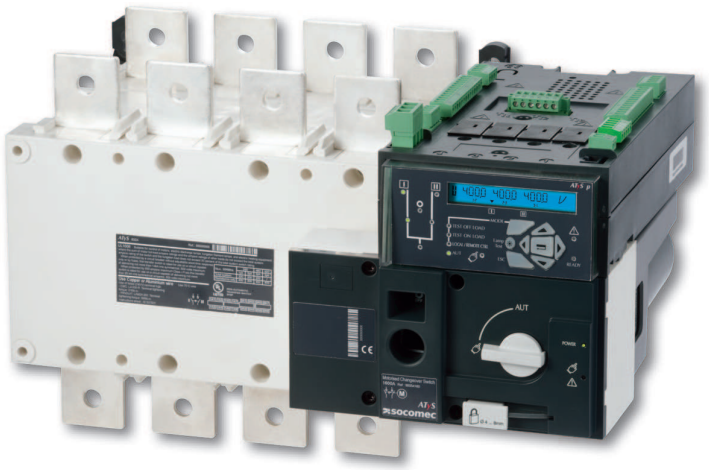
ATyS p

Automatic transfer switching equipment
from 125 to 3200 A



atys-p_001_b

The solution for

> Applications requiring power management and communication.

Strong points

> Optional communication modules
> Recording of events
> Configuration software
> Power measurements
> Possibility to set periodic genset startup

Conformity to standards

> IEC 60947-6-1
> IS/IEC 60947-3
> GB 14048.11

Webserver

The Webserver function comprises HTML pages embedded in the Ethernet communication module.

These pages can be accessed via an internet browser, simply by entering the IP address.

The webserver offers the following functionalities:

> Display of source status and switch position
> Display of the main measurements
> Extraction of the latest logged events
> Display of the product configuration

Function

ATyS p are 3 or 4 pole automatic transfer switches with positive break indication. They incorporate all the functions offered by the ATyS t and g, as well as functions designed for **power management and communication.**

In automatic mode they enable the monitoring of, and the on-load changeover between, two power supply sources, in accordance with the parameters configured through LCD display, or via communication.

They are intended for use in low voltage power supply systems where a brief interruption of the load supply is acceptable during transfer.

Advantages

Recording of events

ATyS p switches enable effective monitoring of your installation thanks to timestamped event recording.

Events can be retrieved and read via communication.

Optional communication modules

The ATyS p offers communication functions through the addition of optional modules, such as the RS485 Modbus or Ethernet with embedded Webserver.

Configuration software

Software (Easyconfig) is available enabling the ATyS p parameters to be easily configured and the existing configuration to be saved and sent to other units..

Power measurements

ATyS p products are particularly suited to energy management and monitoring.

In addition to their integrated power and energy measurement functions (with a 2% accuracy level), programmable inputs/outputs can be utilised to control load shedding based on a load level or tariff.

Possibility to set periodic genset startup

ATyS p switches offer additional functions for maintenance. They include a programmable genset starting function which allows the starting dates and operating times to be configured.

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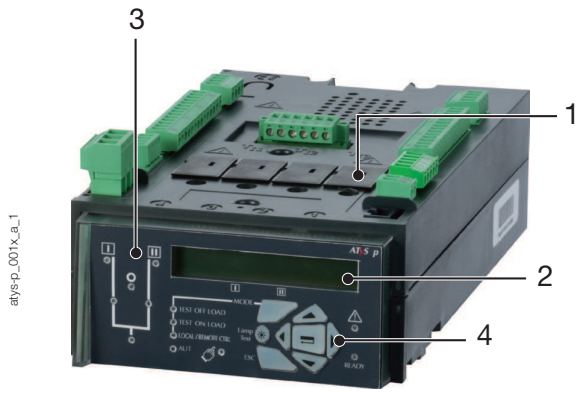
Front panel



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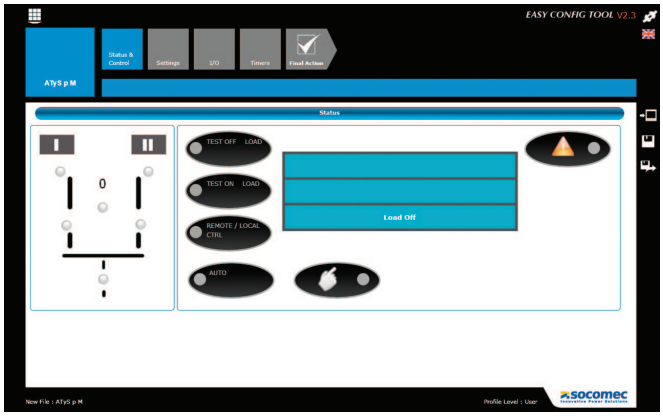
1. Slots for optional plug-in modules.
2. Backlit LCD display.
3. Source availability and position indication LEDs.
4. Pushbuttons for programming and mode selection.

Communication and configuration

Easyconfig

Easyconfig software is the ideal solution to save time and simplify complex configuration.

Allows configuration of the following parameters:
- application type,
- voltage/frequency thresholds,
- timers,
- inputs/outputs...

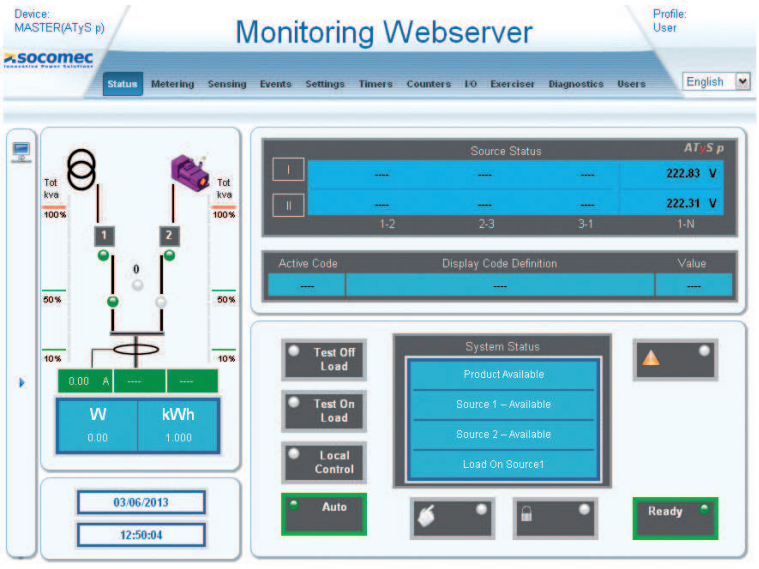


atys 849 b gb

Webserver

Thanks to optional modules, ATyS p can communicate in **Modbus** and **Ethernet** protocols.
The Ethernet communication module includes the **Webserver** function for access to the ATySp via an internet browser.

The Webserver function enables:
- display of source status and switch position,
- display of voltage measurements,
- display of parameters,
- access to the list of logged events.



atys 850 a

References

ATyS p

Rating (A) / Frame size	N° of poles	ATyS p + Bridging bars	Auxiliary contacts	Terminal shrouds[2]	Terminal screens	Spreaders	Interphase barriers	Optional modules
125 A / B3	4 P	9573 **4012SLVR**	1st/2nd NO/NC contact 1599 **0502G**	2694 **4014A**	Standard 1509 **4012A** Wide 1509 **4013A**	4106 **4016A**	2998 **5038A**	Only for ATyS p RS485 4825 **0092G** 2In/2Out 1599 **2001G** Ethernet 4825 **0203G** Ethernet + RS485 4825 **0204G** Analogue outputs 4825 **0093G** Pulse outputs 4825 **0090G**
160 A / B3	4 P	9573 **4016SLVR**						
200 A / B3	4 P	9573 **4020SLVR**						
250 A / B4	4 P	9573 **4025SLVR**		2694 **4021A**	Standard 1509 **4025A** Wide 1509 **4026A**	4106 **4025A**	2998 **5028A**	
315 A / B4	4 P	9573 **4031SLVR**				4106 **4040A**		
400 A / B4	4 P	9573 **4040SLVR**						
500 A / B5	4 P	9573 **4050SLVR**		2694 **4051A**	Standard 1509 **4063A** Wide 1509 **4064A**	4106 **4050A**	2998 **5018A**	
630 A / B5	4 P	9573 **4063SLVR**				4106 **4063A**		

Also available in 3 poles.
(1) Without bridging bars, to get them see "Copper bar connection pieces"
(2) To shroud front switch top and bottom, order quantity 2.

Technical information

- For reference including Voltage sensing and power supply kit, add "VR" at the end of the above reference, from 125 to 1600 A. And replace "G" by "VR" for 2000 to 3200 A
- Accessories:
- Characteristics:
- Terminals and connections:
- Dimensions:

ATyS p

Rating (A) / Frame size	N° of poles	ATyS p + Bridging bars	Auxiliary contacts	Terminal shrouds (2)	Terminal screens	Spreaders	Interphase barriers	Optional modules
800 A / B6	4 P	9573 **4080SLVR**	1st/2nd NO/NC contact 1599 **0532G**	-	Standard 1509 **4080A** Wide 1509 **4081A**		included	Only for ATyS p RS485 4825 **0092G** 2In/2Out 1599 **2001G** Ethernet 4825 **0203G** Ethernet + RS485 4825 **0204G** Analogue outputs 4825 **0093G** Pulse outputs 4825 **0090G**
1000 A / B6	4 P	9573 **4100SLVR**						
1250 A / B6	4 P	9573 **4120SLVR**						
1600 A / B7	4 P	9573 **4160SLVR**			Standard 1509 **4160A**	-		
2000 A / B8	4 P	9573 **4200VR**(1)	1st and 2nd NO/NC contact included		Standard 1509 **4200G**			
2500 A / B8	4 P	9573 **4250VR**(1)						
3200 A / B8	4 P	9573 **4320VR**(1)						

Also available in 3 poles.
(1) Without bridging bars, to get them see "Copper bar connection pieces"
(2) To shroud front switch top and bottom, order quantity 2.

ATyS range

ATyS r, ATyS t, ATyS p

from 125 to 3200 A

Accessories

Terminal shrouds

Use

IP2X protection against direct contact with terminals or connecting parts.

Advantages

Perforations allow remote thermographic inspection without the need to remove the shrouds.

Rating (A)	Frame size	No. of poles	Position	Reference
125 ... 200	B3	4 P	top / bottom / front (I) / rear (II)	2694 **4014A**(1)(2)
250 ... 400	B4	4 P	top / bottom / front (I) / rear (II)	2694 **4021A**(1)(2)
500 ... 630	B5	4 P	top / bottom / front (I) / rear (II)	2694 **4051A**(1)(2)

Also available in 3 poles.

(1) For complete shrouding at front, rear, top and bottom, order quantity 4; if equipped with bridging bars order quantity 3.

(2) For top and bottom shrouding for the front only, order quantity 2.

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Terminal screens

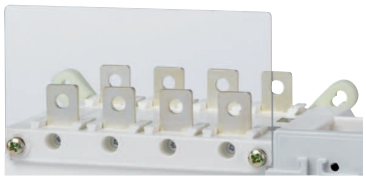
Use

Upstream and downstream protection against direct contact with terminals or connection parts. In case of use of spreaders, use the wide screens.

For upstream and downstream protection, order quantity one.

Rating (A) / Frame size	No. of poles	Position	Type	Reference
125...200 / B3	4 P	Top and bottom	Standard screens	1509 **4012A**
	4 P		Wide screens	1509 **4013A**
250...400 / B4	4 P		Standard screens	1509 **4025A**
	4 P		Wide screens	1509 **4026A**
500...630 / B5	4 P		Standard screens	1509 **4063A**
	4 P		Wide screens	1509 **4064A**
800...1250 / B6	4 P		Standard screens	1509 **4080A**
	4 P		Wide screens	1509 **4081A**
1600 / B7	4 P		Standard screens	1509 **4160A**
2000...3200 / B8	4 P			1509 **4200G**

Also available in 3 poles.



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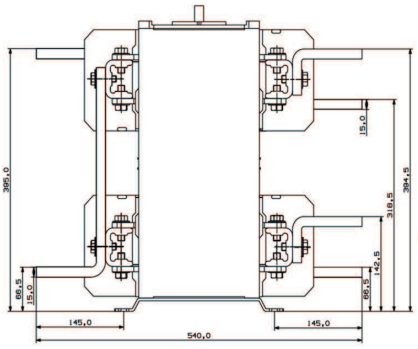
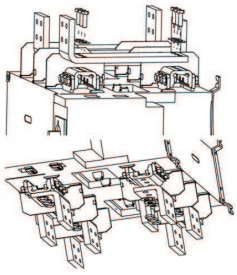
Bridging bars kit

For ratings 2000 to 2500 A.

S.No	FG Codes	Description	Req. Qty / Switch
1	26194251A	Bridging bar B8 4P Line side	1
2	41094250A	4P Bridging bar B8 load side	1
3	26191200A	U bridge 1Pole connector B8 CU	16





For ratings 3200 A.

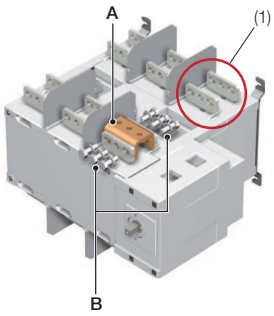
Enables:

- Flat connection: The connection pieces provide a link between the two power terminals of the same pole (Fig. 1).
- Edgewise connection: The connection pieces provide a link between the two power terminals of the same pole and an edgewise bar connection terminal.
- Top or bottom bridging between two poles (Fig. 3).

Once installed, the power terminal is connection ready

For 3200 A rating, connection pieces (part A) are supplied as standard. Bolt sets must be ordered separately.

Fig. 1



(1) Single pole connection: 1 pole (top or bottom) comprises two power terminals which are to be linked with the copper connection kit.

Connection: The quantities given in the below table refer to the number of pieces required per pole, top or bottom.
Bridging connection: The quantities given refer to the number of pieces required to complete a single bridging connection between two poles.

		3200 A		
		Fig. 1	Fig. 2	Fig. 3
		Connection		Bridging connection I - II
	Reference	Flat	Edgewise	
Connection - part A	2619 **1200A**	included	included	included
Bolt kit 35 mm - part B	2699 **1201A**	1(1)		2(2)
Bolt kit 45 mm - part B	2699 **1200A**	1(1)		
T + Bolt kit - part C	2629 **1200A**		1	1
Bracket + Bolt kit - part D	2639 **1200A**		1	
Bar + Bolt kit - part E	4109 **0320A**			1

(1) Choose the bolt length according to the thickness of the bars being connected; if bar thickness is greater than 20 mm, 45 mm bolts are required.
(2) For bridging connections, quantity 2 pieces are required for creating the link between the two power terminals of the same pole for switch bodies I and II.

Fig. 2

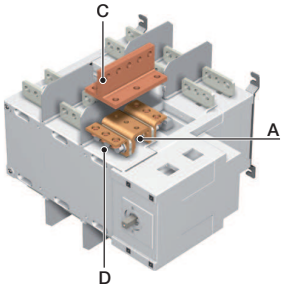
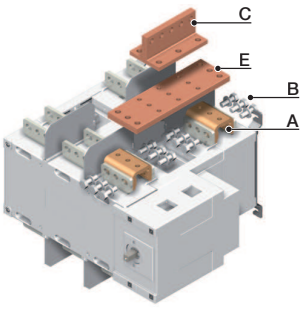


Fig. 3



The Below items are required to order for one ATyS Switch (3200A)

	Reference	Total quality
Bolt kit 45 mm - part B	2699 **1200**	16
T + Bolt kit - part C	2629 **1200**	12
Bracket + Bolt kit - part D	2639 **1200**	8
Bar + Bolt kit - part E	4109 **0320**	4

Accessories (continued)

Autotransformer

Use

For applications without neutral, this autotransformer provides the 230 VAC required to power these ATyS products.

Rating (A)	Frame size	Reference
125 … 3200	B3 … B8	1599 **4064G**

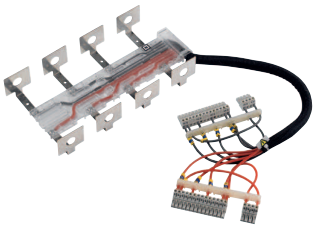
Voltage tapping and power supply kit

Use

For power supply and voltage measurement (4 wire, three-phase) for the ATyS t, g and p. Routing of the conductors is controlled, which means that no specific protective device is necessary for these connections.

The kit can be fitted on the top or bottom of the switch.

125 to 630 A kit



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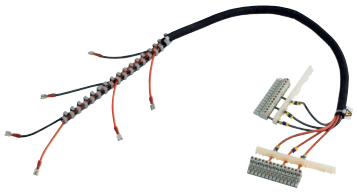
800 to 3200 A kit



atys_603_a_2_cat

For ATyS t, g and ATyS p - 4 pole		
Rating (A)	**Frame size**	**Reference**
125 … 200	B3	1559 **4012G**
250	B4	1559 **4025G**
315 … 400	B4	1559 **4040G**
500 … 630	B5	1559 **4063G**
800 … 1000	B6	1559 **4080G**
1250	B6	1559 **4120G**
1600	B7	1559 **4160G**
2000 … 3200	B8	1559 **4200G**

Voltage relay

Use

The DS is a voltage relay for monitoring a single power supply.

If it detects a fault in the source, the default relay contact closes.

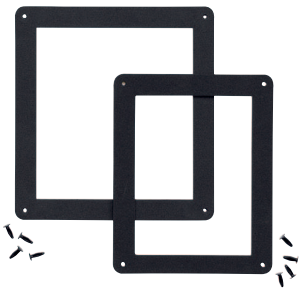
atys_762_a_1_cat

Rating (A)	Reference
DS	192X **0056G**

Door protective surround

Use

Door surround to provide a clean and safe finish to the panel's cut-out.



For ATyS r

Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	1529 **0012G**
800 ... 3200	B6 ... B8	1529 **0080G**

For ATyS t, and ATyS p

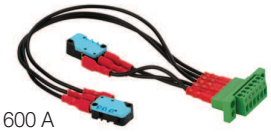
Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	1539 **0012G**
800 ... 3200	B6 ... B8	1539 **0080G**

Auxiliary contact

Use

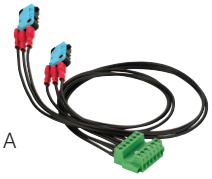
Pre-break and signalling of positions I and II: each reference provides 1 NO/NC auxiliary contact for positions I and II. Possibility to install up to 2 auxiliary contacts for each position.

Low level AC: contact us. ATyS are supplied with 1 NO aux contact for all three positions as standard.



800 to 1600 A

If additional auxiliary contacts are required please consult us.



125 to 630 A

Rating (A)	Frame size	Nominal current (A)	Operating current I_e (A) 250 VAC AC-13	400 VAC AC-13	24 VDC DC-13	48 VDC DC-13
125 ... 3200	B3 ... B8	16	12	8	14	6

Rating (A)	Frame size	Type of mounting	Reference
125 ... 630	B3 ... B5	Customer fit	1599 **0502G**
800 ... 1600	B6 ... B7	Customer fit	1599 **0532G**
2000 ... 3200	B8	-	2 AC per position fitted as standard

Mounting spacers

Use

Increases the distance between the rear power terminals and the backplate by 1 cm.

This accessory may also be used to replace the original mounting spacers.

Rating (A)	Frame size	Description of accessories	Reference
125 ... 630	B3 ... B5	1 set of 2 spacers	1509 **0001G**

Key handle interlocking system

Use

With the product in manual mode, it enables locking in position 0 using a RONIS EL11AP lock (factory fitted).

As standard, locking in position 0.
With the 3 position padlocking accessory: key interlocking in I, 0 & II.

Rating (A)	Frame size	Reference
125 ... 630	B3 ... B5	9599 **1006G**
800 ... 3200	B6 ... B8	9599 **1004G**

Accessories (continued)

Plug-in optional modules

Use - for ATyS p only

Number of modules per device

A maximum of four modules can be fitted to each ATyS p, unless you are using either Ethernet communication module. In this case, you can connect up to 2 modules as well as the Ethernet communication module.


atys_016_c_1_cat


diris_447_a_1_cat

RS485 JBUS / MODBUS® communication

- RS485 link with JBUS / MODBUS® protocol (speed up to 38400 bauds).


diris_449_a_1_cat

2 inputs - 2 outputs

- 2 inputs and 2 outputs (programmable) on each module.


diris_777_a_1_cat

Ethernet communication

- Ethernet link with MODBUS/TCP or JBUS/MODBUS RTU over TCP.
- Embedded Ethernet Webserver software.


diris_776_a_1_cat

Ethernet communication with RS485 JBUS/MODBUS gateway

- Ethernet link with MODBUS/TCP or JBUS/MODBUS RTU over TCP.
- Connect 1 to 247 RS485 JBUS/MODBUS slaves.
- Embedded Ethernet Webserver software.


diris_448_a_1_cat

Analogue outputs

- Allocate outputs to: 3I, In, 3V, 3U, F, ± ⊠P, ± ⊠Q, ⊠S.


diris_445_a_1_cat

Pulse outputs

- 2 configurable pulse outputs (type, weight and duration) on ±kWh, ±kvarh and kVAh.

Description of accessories	Reference
RS485 MODBUS communication	4825 **0092G**
2 inputs - 2 outputs	1599 **2001G**
Ethernet communication (embedded Ethernet Webserver software)	4825 **0203G**
Ethernet communication + RS485 JBUS/MODBUS gateway (embedded Ethernet Webserver software)	4825 **0204G**
Analogue outputs	4825 **0093G**
Pulse outputs	4825 **0090G**

Remote interfaces

Use

To remotely display source availability and position indication typically used on the front of a panel when the product is enclosed.

Interfaces are powered from the ATyS transfer switch via the RJ45 connection cable.

Maximum cable length: 3 m.

D10 - for ATyS t

To display source availability and position indication on the front panel of an enclosure.

Protection degree: IP21

D20 - for ATyS p

In addition to the functions of the D10, the D20 displays measurements and enables control and configuration from the front of a panel.

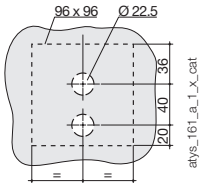
Protection degree: IP21

Door mounting

2 holes Ø 22.5.

ATyS transfer switch via RJ45 cable, not isolated. Cable available as an accessory.

RJ45 port to connect to ATyS.



Drilling

Description of accessories	Reference
D10	9599 **2010G**
D20	9599 **2020G**

Connecting cable for remote interfaces

Use

To connect between a remote interface (type D10 or D20) and a control product (ATyS t or ATyS p).

RJ45 8 straight-through, non insulated cables, length 3 m.

Characteristics

For ATyS t and ATyS p

Type	Length	Reference
RJ45 cable	3 m	1599 **2009G**

Sealable cover

Use - for ATyS t

Prevents access to the configuration of ATyS t devices (seals supplied).

Rating (A)	Frame size	Reference
125 … 3200	B3 … B8	9599 **0000G**

Auto/Manual key selector

Use

Replaces the standard Auto/Manual selector knob with a key selector.

Rating (A)	Frame size	Reference
125 … 3200	B3 … B8	9599 **1007G**

Double power supply - DPS

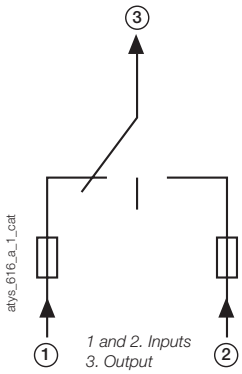
Use

Allows an ATyS r to be supplied by two 230 VAC, 50/60 Hz networks.

Input

- The input is considered “active” from 200 VAC.
- Maximum voltage: 288 VAC.
- Internal protection: each input is fuse protected (3.15 A).
- Connection on terminals: max. 6 mm².
- Modular device: 4 module width.

Description of accessories	Reference
DPS	1599 **4001G**



Characteristics according to IEC 60947-3 and IEC 60947-6-1

125 to 630 A

Thermal current I_{th} to 40°C		125 A	160 A	200 A	250 A	315 A	400 A	500 A	630 A
Frame size		**B3**	**B3**	**B3**	**B4**	**B4**	**B4**	**B5**	**B5**
Rated insulation voltage U_i (V) (power circuit)		800	800	800	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV) (power circuit)		8	8	8	12	12	12	12	12
Rated insulation voltage U_i (V) (control circuit)		300	300	300	300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (control circuit)		4	4	4	4	4	4	4	4
Rated operational currents I_e (A) according to IEC 60947-3									
Rated voltage	**Utilisation category**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**	**A/B[1]**
415 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
415 VAC	AC-23 A / AC-23 B	125/125	160/160	200/200	200/200	315/315	400/400	500/500	500 /630
500 VAC	AC-21 A / AC-21 B	125/125	160/160	200/200	250/250	315/315	400/400	500/500	630/630
500 VAC	AC-22 A / AC-22 B	125/125	160/160	200/200	200/250	200/315	200/400	500/500	500/500
500 VAC	AC-23 A / AC-23 B	80/80	80/80	80/80	200/200	200/200	200/200	400/400	400/400
690 VAC[3]	AC-21 A / AC-21 B	125/125	160/160	200/200	200/200	200/200	200/200	500/500	500/500
690 VAC[3]	AC-22 A / AC-22 B	125/125	125/125	125/125	160/160	160/160	160/160	400/400	400/400
690 VAC[3]	AC-23 A / AC-23 B	63/80	63/80	63/80	125/125	125/125	125/125	400/400	400/400
220 VDC	DC-21 A / DC-21 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-22 A / DC-22 B	125/125	160/160	200/200	250/250	250/250	250/250	500/500	630/630
220 VDC	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC [2]	DC-21 A / DC-21 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC [2]	DC-22 A / DC-22 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
440 VDC [2]	DC-23 A / DC-23 B	125/125	125/125	125/125	200/200	200/200	200/200	500/500	630/630
Rated operational currents I_e (A) according to IEC 60947-6-1									
Rated voltage	**Utilisation category**								
415 VAC	AC-31 B	125	160	200	250	315	400	500	630
415 VAC	AC-32 B				200	315	400	500	500
415 VAC	AC-33 B				200	200	200	400	400
Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3									
Prospective fuse protected short-circuit withstand at 415 VAC(6)		100	100	50	50	50	50	50	50
Prospective fuse protected short-circuit withstand at 690 VAC(kA rms)					50	50	50	50	50
Associated fuse rating (A)		125	160	200	250	315	400	500	630
Short-circuit withstand without protection as per IEC 60947-3									
Rated short-time withstand current 0.3s I_{cw} at 415 VAC (kA rms)		12	12	12	15[4]	15[4]	15[4]	17[4]	17[4]
Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms)		7	7	7	8[4]	8[4]	8[4]	11[4]	10[4]
Rated peak withstand current at 415 VAC (kA peak)		20	20	20	30	30	30	45	45
Short-circuit withstand without protection as per IEC 60947-6-1									
Rated short-time withstand current 30 ms I_{cw} at 415 VAC (kA rms)		10	10	10	10	10	10		
Rated short-time withstand current 60 ms I_{cw} at 415 VAC (kA rms)								10	12.6
Connection									
Minimum Cu cable cross-section as per IEC 60947-1 (mm²)		35	35	50	95	120	185	2 x 95	2 x 120
Recommended Cu busbar cross-section (mm²)								2 x 32 x 5	2 x 40 x 5
Maximum Cu cable cross-section (mm²)		50	95	120	150	240	240	2 x 185	2 x 300
Maximum Cu busbar width (mm)		25	25	25	32	32	32	50	50
Min./max. tightening torque (Nm)		9/13	9/13	9/13	20/26	20/26	20/26	40/45	40/45
Switching time (rated voltage, after receiving command)									
Transfer time I-II or II-I (s)		0.85	0.85	0.85	0.9	0.9	0.9	0.95	0.95
I-0 or II-0 (s)		0.55	0.55	0.55	0.5	0.5	0.5	0.55	0.55
Contact transfer time ("black-out" I-II) minimum (s)		0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4
Power supply									
Min./max. power (VAC)		166/332	166/332	166/332	166/332	166/332	166/332	166/332	166/332
Control supply power demand									
Demand/rated power (VA) - ATyS r		184/92	184/92	184/92	276/115	276/115	276/115	276/150	276/150
Demand/rated power (VA) - ATyS t, ATyS p		206/114	206/114	206/114	298/137	298/137	298/137	298/172	298/172
Mechanical specifications									
Durability (number of operating cycles)		10000	10000	10000	8000	8000	8000	5000	5000
Weight ATyS r 3 P / 4 P (kg)		5.7/ 6.9	5.7/ 6.9	5.7/ 6.9	6.6/ 7.4	6.7/ 7.8	6.7/ 7.8	11.4/ 13.3	11.9/ 14.0
Weight ATyS t, ATyS p 3 P / 4 P (kg)		6.8/ 8.0	6.8/ 8.0	6.8/ 8.0	7.7/ 8.5	7.8/ 8.9	7.8/ 8.9	12.5/ 14.4	13.0/ 15.1

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".
4-pole device with 2 poles in series by polarity.
(3) Interphase barriers must be installed on the products.
(4) Values given at 690 VAC.

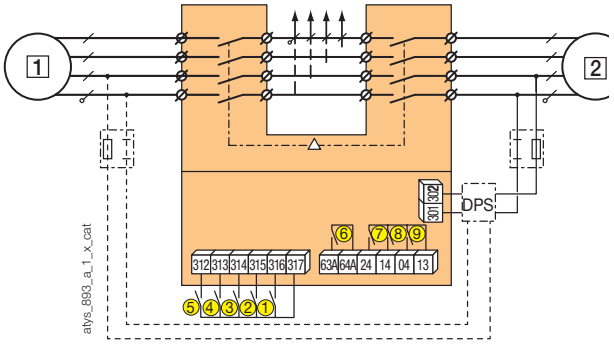
800 to 3200 A

Thermal current I_{th} at 40°C		800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A
Frame size		**B6**	**B6**	**B6**	**B7**	**B8**	**B8**	**B8**
Rated insulation voltage U_i (V) (power circuit)		1000	1000	1000	1000	1000	1000	1000
Rated impulse withstand voltage U_{imp} (kV) (power circuit)		12	12	12	12	12	12	12
Rated insulation voltage U_i (V) (control circuit)		300	300	300	300	300	300	300
Rated impulse withstand voltage U_{imp} (kV) (control circuit)		4	4	4	4	4	4	4
Rated operational currents I_e (A) according to IEC 60947-3								
Rated voltage	**Utilisation category**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**	**A/B(1)**
415 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC	AC-22 A / AC-22 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2500	-/3200
415 VAC	AC-23 A / AC-23 B	800/800	1000/1000	1250/1250	1250/1250	-/1600	-/1600	-/1600
500 VAC	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2000	-/2000
500 VAC	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1600/1600			
500 VAC	AC-23 A / AC-23 B	630/630	630/630	800/800	1000/1000			
690 VAC(3)	AC-21 A / AC-21 B	800/800	1000/1000	1250/1250	1600/1600	-/2000	-/2000	-/2000
690 VAC(3)	AC-22 A / AC-22 B	630/630	800/800	1000/1000	1000/1000			
690 VAC(3)	AC-23 A / AC-23 B	630/630	630/630	800/800	800/800			
220 VDC	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
220 VDC	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC (2)	DC-21 A / DC-21 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC (2)	DC-22 A / DC-22 B	800/800	1000/1000	1250/1250	1250/1250			
440 VDC (2)	DC-23 A / DC-23 B	800/800	1000/1000	1250/1250	1250/1250			
Rated operational currents I_e (A) according to IEC 60947-6-1								
Rated voltage	**Utilisation category**							
415 VAC	AC-31 B	800	1000	1250	1600	2000	2500	3200
415 VAC	AC-32 B	800	1000	1250	1250	2000	2000	2000
415 VAC	AC-33 B	800	1000	1000	1000	1250	1250	1250
Current rated as conditional short-circuit with fuse gG DIN, according to IEC 60947-3								
Prospective fuse protected short-circuit withstand at 415 VAC(kA rms)		50	50	100	100			
Prospective fuse protected short-circuit withstand at 690 VAC(kA rms)		50	50	50				
Associated fuse rating (A)		800	1000	1250	2x800			
Short-circuit withstand without protection as per IEC 60947-3								
Rated short-time withstand current 0.3s I_{cw} at 415 VAC (kA rms)		64	64	64	78	78	78	78
Rated short-time withstand current 1s I_{cw} at 415 VAC (kA rms)		35	35	35	50	50	50	50
Rated peak withstand current at 415 VAC (kA peak)		55	55	80	110	120	120	120
Short-circuit withstand without protection as per IEC 60947-6-1								
Rated short-time withstand current 30 ms I_{cw} at 415 VAC (kA rms)								
Rated short-time withstand current 60 ms I_{cw} at 415 VAC (kA rms)		20	20	25	32	50	50	50
Connection								
Minimum Cu cable cross-section as per IEC 60947-1 (mm^2)		2 x 185						
Recommended Cu busbar cross-section (mm^2)		2 x 50 x 5	2 x 63 x 5	2 x 60 x7	2 x 100 x 5	3 x 100 x 5	2 x 100 x 10	3 x 100 x 10
Maximum Cu cable cross-section (mm^2)		4 x 185	4 x 185	4 x 185	6 x 185			
Maximum Cu busbar width (mm)		63	63	63	100	100	100	100
Min./max. tightening torque (Nm)		9/13	9/13	20/26	40/45	40/45	40/45	40/45
Switching time (rated voltage, after receiving command)								
Transfer time I-II or II-I (s)		2.8	2.8	2.8	2.9	2.8	2.8	2.8
I-0 or II-0 (s)		1.4	1.4	1.4	1.4	1.8	1.8	1.8
Contact transfer time ("black-out" I-II) minimum (s)		1.4	1.4	1.4	1.5	1	1	1
Power supply								
Min./max. power (VAC)		166/332	166/332	166/332	166/332	166/332	166/332	166/332
Control supply power demand								
Demand/rated power (VA) - ATyS r		460/184	460/184	460/184	460/230	812/322	812/322	812/322
Demand/rated power (VA) - ATyS t, ATyS p		482/206	482/206	482/206	482/252	834/344	834/344	834/344
Mechanical specifications								
Durability (number of operating cycles)		4000	4000	4000	3000	3000	3000	3000
Weight ATyS r 3 P / 4 P (kg)		27.9/ 32.2	28.4/ 32.9	28.9/ 33.6	33.1/ 39.4	50.7/ 61.6	50.7/ 61.6	61.0/ 75.3
Weight ATyS t, ATyS p 3 P / 4 P (kg)		29.0/ 33.3	29.5/ 34.0	30.0/ 34.7	34.2/ 40.5	51.8/ 62.7	51.8/ 62.7	62.1/ 76.4

(1) Category with index A = frequent operation - Category with index B = infrequent operation.
(2) 3-pole device with 2 pole in series for the "+" an 1 pole for the "-".
4-pole device with 2 poles in series by polarity.
(3) Interphase barriers must be installed on the products.
(4) Values given at 690 VAC.

Connections and terminals

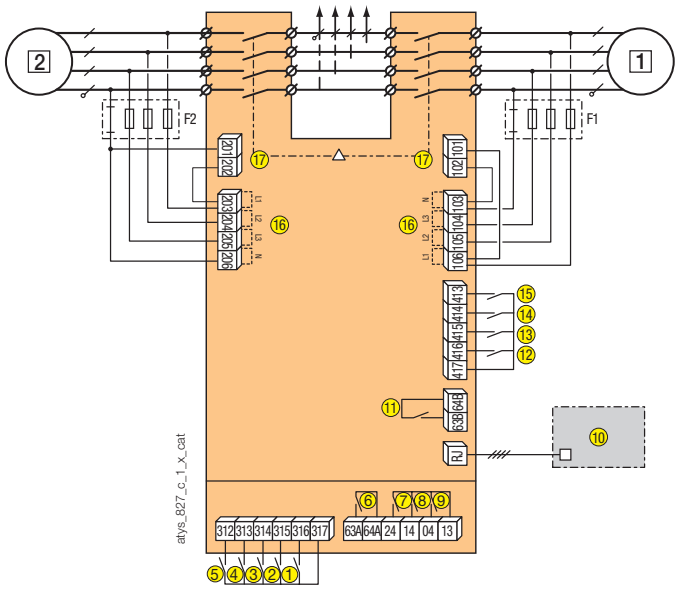
ATyS r



1 primary source (network or genset)
2 backup source (mains network or genset)

1 : position 0 control (contact or logic if closed)
2: position I control
3: position II control
4: primary control position 0
5: closing this contact allows position control commands
6: product availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when ther switch is in position I
9: auxiliary contact - closed when the switch is in position 0

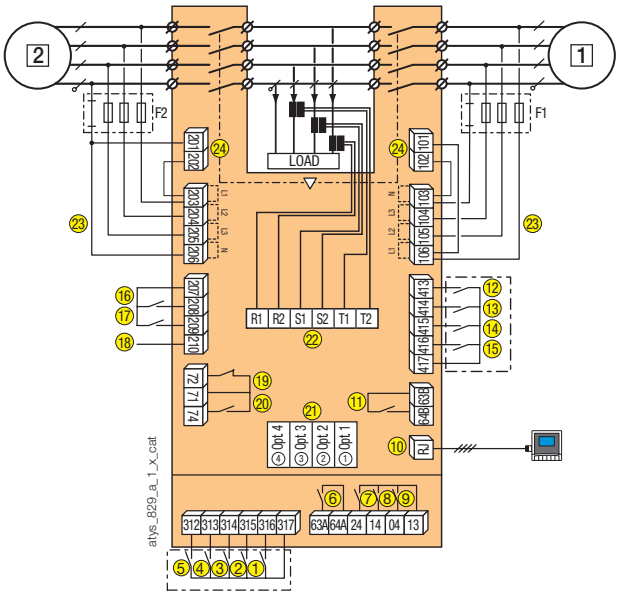
ATyS t



1 primary source (mains network)
2 backup source (mains)

1: position 0 control (contact or logic if closed)
2: position I control
3: position II control
4: primary control position 0
5: closing this contact allows position control commands
6: Motor unit availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when the switch is in position I
9: auxiliary contact - closed when the is in position 0
10: D10 remote interface
11: Electrical unit availability relay
12: automatic operation inhibited
13: confirm manual retransfer
14: preferred source selection
15 : function with or without priority
16 : voltage inputs
17 : power inputs

ATyS p



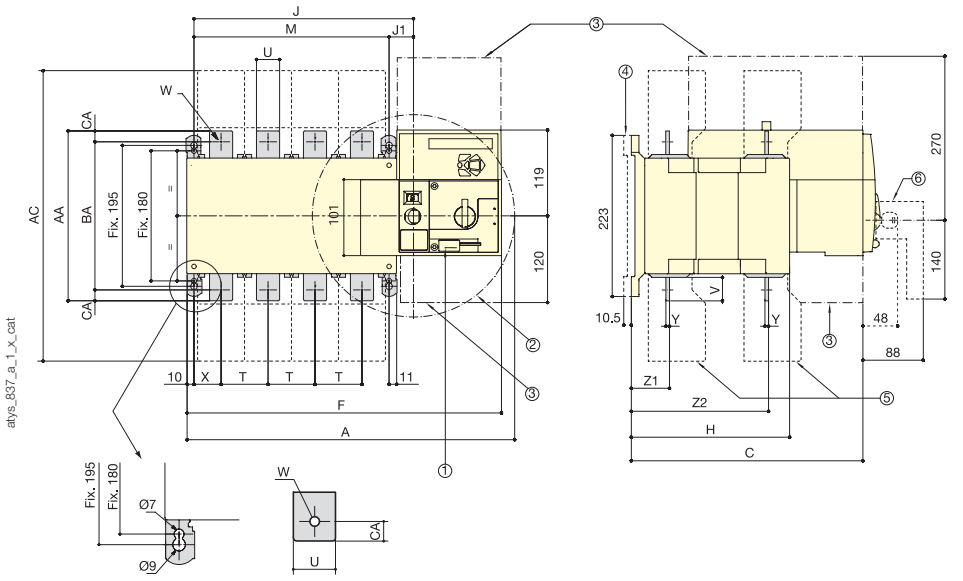
1 primary source (network or genset)
2 backup source (network or genset)
1: position 0 control (contact or logic if closed)
2: position I control
3: control position II
4: primary control position 0
5: closing this contact allows position control commands
6: Motor unit availability relay
7: auxiliary contact - closed when the switch is in position II
8: auxiliary contact - closed when the switch is in position I
9: auxiliary contact - closed when the switch is in position 0
10: D20 remote interface
11: Electrical unit availability relay
12-17: programmable inputs
18: auxiliary power supply for optional modules
19-20: genset start and stop commands

Order	71/72 (19)	71/74 (20)
Genset start-up	Closed contact	Open contact
Genset stop	Open contact	Closed contact

21 : 4 slots for optional modules
22: TI measurement connection
23 : voltage inputs
24 : power inputs

Dimensions

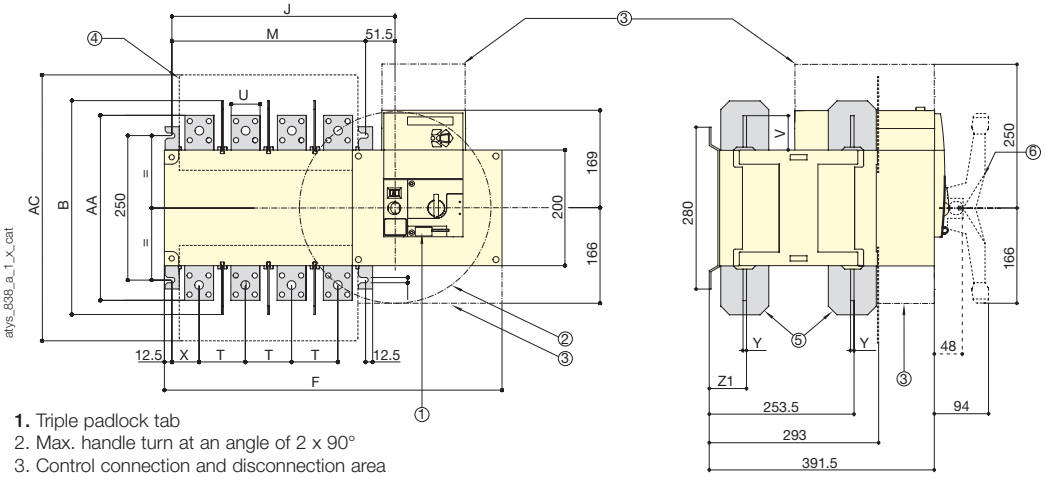
125 to 630 A / B3 to B5



1. Triple padlock tab
2. Max. handle turn at an angle of 2 x 90°
3. Control connection and disconnection area
4. Spacers
5. Terminal shrouds
6. Handle

Rating (A) / Frame size	Overall dimensions		Terminal shrouds	Switch body				Switch mounting	Connection										
	A 4p.	C	AC	F 4p.	H	J 4p.	J1	M 4p.	T	U	V	W	X 4p.	Y	Z1	Z2	AA	BA	CA
125 / B3	334	244	233	317	151	184	34	150	36	20	25	9	22	3.5	38	134	135	115	10
160 / B3	334	244	233	317	151	184	34	150	36	20	25	9	22	3.5	38	134	135	115	10
200 / B3	334	244	233	317	151	184	34	150	36	20	25	9	22	3.5	38	134	135	115	10
250 / B4	395	244	288	378	152	245	35	210	50	25	30	11	33	3.5	39.5	133.5	160	130	15
315 / B4	395	244	288	378	152	245	35	210	50	35	35	11	33	3.5	39.5	133.5	170	140	15
400 / B4	395	244	288	378	152	245	35	210	50	35	35	11	33	3.5	39.5	133.5	170	140	15
500 / B5	454	320.5	402	437	221	304	34	270	65	32	50	14	37.5	5	53	190	260	220	15
630 / B5	454	320.5	402	437	221	304	34	270	65	45	50	13	37.5	5	53	190	260	220	20

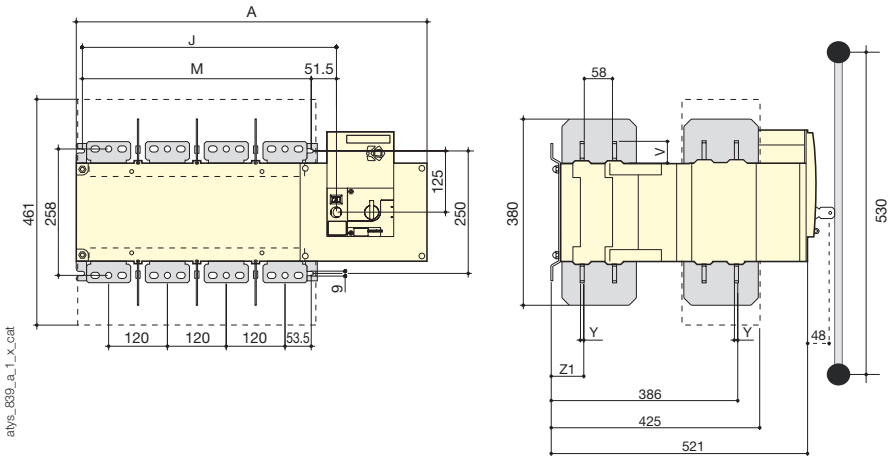
800 to 1600 A / B6 to B7



1. Triple padlock tab
2. Max. handle turn at an angle of 2 x 90°
3. Control connection and disconnection area
4. Terminal screens
5. Inter-phase screen
6. Handle

Rating (A) / Frame size	Overall dimensions	Terminal shrouds	Switch body		Switch mounting	Connection						
	B	AC	F 4p.	J 4p.	M 4p.	T	U	V	X	Y	Z1	AA
800 / B6	370	461	584	386.5	335	80	50	60.5	47.5	7	66.5	321
1000 / B6	370	461	584	386.5	335	80	50	60.5	47.5	7	66.5	321
1250 / B6	370	461	584	386.5	335	80	60	65	47.5	7	66.5	330
1600/B7	380	531	716	518.5	467	120	90	44	53	8	67.5	288

2000 to 3200 A / B8

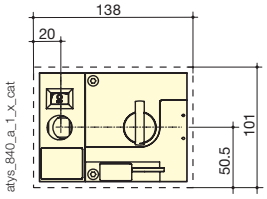


Rating (A)	Overall dimensions B	Terminal shrouds AC	Switch body A 4p.	Switch body J 4p.	Switch mounting M 4p.	Connection T	Connection U	Connection V	Connection X	Connection Y	Connection Z1	Connection AA
2000 ... 3200	380	531	716	519	467	120	90	44	53	8	67.5	288

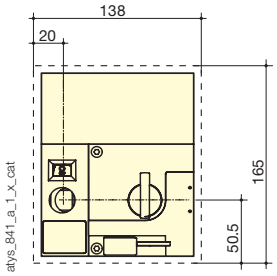
Door cutout

125 to 630 A / B3 to B5

ATyS r

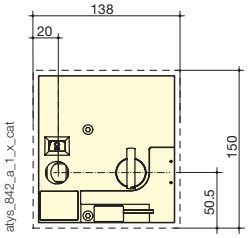


ATyS t, ATyS p

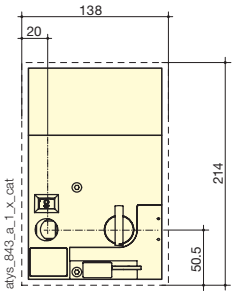


800 to 1600 A / B6 to B7

ATyS r

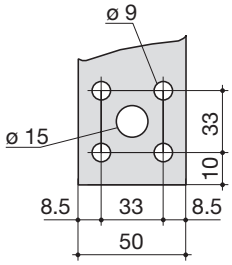


ATyS t, ATyS p

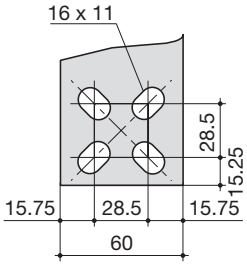


Connection terminals

800 to 1000 A / B6



1250 A / B6



1600 to 3200 A / B7 to B8