

CC TRACK DIP SWITCH



COMFORTLINE DIP SWITCH UT-160

**187105, 187106, 187107, 187121, 187122, 187123,
187252, 187253, 187254**

Typical Applications

For common track systems

- Retail lighting



ComfortLine DIP switch UT-160

- **SELECTABLE OUTPUT CURRENT VIA DIP SWITCH**
- **COMPATIBLE WITH DIFFERENT 3-PHASE TRACK SYSTEMS**
- **SELV**
- **LONG SERVICE LIFE:
UP TO 100,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**



ComfortLine DIP switch UT-160

Product features

- Adapter with integrated LED driver electronics for common 3-phase track systems (compatibility see page 5)
- Available in three different casing colours: white (RAL 9010), black (RAL 9005) and grey (RAL 7040)

Functions

- Selectable current output by DIP switches
- The output current can be freely adjusted between 350 mA and 500 mA for 187105, 187121, 187252 or 550 mA and 700 mA for 187106, 187122, 187253 or 800 mA and 1050 mA for 187107, 187123, 187254.

Electrical features

- Mains voltage: 220–240 V ±10%
- Mains frequency: 50–60 Hz
- Push-in terminals: 0.2–0.75 mm²
- Power factor at full load: > 0.95
- Open circuit voltage (U_{max.}): 55 V
- Secondary side switching of LED modules is not allowed.

Safety features

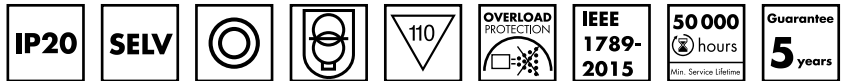
- Protection against transient main peaks up to 2 kV (between L and N) and up to 4 kV (between L/N and PE)
- Electronic short-circuit protection
- Overload protection
- Degree of protection: IP20
- Protection class II
- SELV

Packaging units

Type	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
ECXe 500.468	40	36	118
ECXe 700.469	40	36	120
ECXe 1050.470	40	36	110

Product guarantee

- 5 years
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com). We will be happy to send you these conditions upon request.



Applied standards

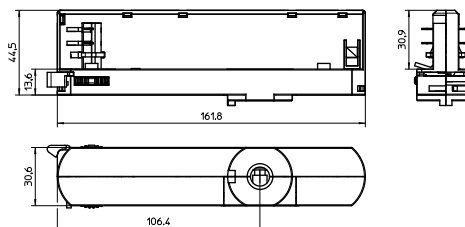
- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015



Dimensions

Type	Casing	Length mm	Width mm	Height (mm) visible
ECXe 500.468	UT-160.1	162	30.6	44.5 13.6
ECXe 700.469	UT-160.1	162	30.6	44.5 13.6
ECXe 1050.470	UT-160.1	162	30.6	44.5 13.6

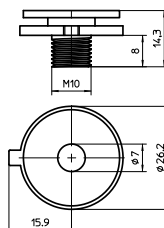
UT-160.1



Connector nipple for track adapter

Material: aluminium

Ref. No.: 187275 M10x1, length: 8 mm



The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

LED Drivers – ComfortLine DIP switch UT-160

Electrical characteristics

Max. output W	Type	Ref. No.	Casing colour	Voltage 50–60 Hz V	Mains current mA	Inrush current A / μ s	Current output DC mA (\pm 5%)	Voltage output DC (V)	THD at full load % (230 V)	Efficiency at full load % (230 V)	Ripple 100 Hz %
21	ECXe 500.468	187105	white (RAL 9010)	220–240	130	30 / 150	350–500	20–42	< 8	> 87	< 6
		187121	black (RAL 9005)								
		187252	grey (RAL 7040)								
30	ECXe 700.469	187106	white (RAL 9010)	220–240	136	30 / 128	550–700	27–42	< 6	> 90	< 6
		187122	black (RAL 9005)								
		187253	grey (RAL 7040)								
42	ECXe 1050.470	187107	white (RAL 9010)	220–240	196	45 / 128	800–1050	27–40	< 9	> 90	< 6
		187123	black (RAL 9005)								
		187254	grey (RAL 7040)								

Maximum ratings

Exceeding the maximum ratings can lead to reduction of service life or destruction of the drivers.

Type	Ambient temperature range		Operation humidity range		Storage temperature range		Storage humidity range		Max. operation temperature at t_c point °C	Degree of protection
	°C min.	°C max.	% min.	% max.	°C min.	°C max.	% min.	% max.		
ECXe 500.468	-20	+40	20	90	-20	+60	20	90	+75	IP20
ECXe 700.469	-20	+40	20	90			20	90	+70	
ECXe 1050.470	-20	+35	10	90			10	90	+70	

Expected service life time

at operation temperatures at t_c point

Operation current	Ref. No.			
		187105, 187121, 187252	187106, 187122, 187253, 187107, 187123, 187254	
All	65 °C	75 °C	60 °C	70 °C
hrs.	100,000	50,000	100,000	50,000

Product labels

ECXe 500.468

VS LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1 73614 Schorndorf
Electronic Controller for LED
Type **ECXe 500.468**
Ref.-No. 187105
Made in China

$t_c = 75^\circ\text{C}$
 $t_a = 40^\circ\text{C}$

1	2	Rated I _A	Rated P _{out}	PRI	SEC =
–	–	350	14.7	U _i = 220...240V-	U _{rated} = 20...42V
ON	–	400	16.8	I _n = 170 mA	U _{max} = 60V
–	ON	450	18.9	f _i = 50/60 Hz	IS 15885PART 2/SEC 13/2012
ON	ON	500	21	λ : 0,95	R-41212997 www.bis.gov.in

LED-SELV, CE, UK, ENEC, ENEC

VS LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1 73614 Schorndorf
Electronic Controller for LED
Type **ECXe 500.468**
Ref.-No. 187121
Made in China

$t_c = 75^\circ\text{C}$
 $t_a = 40^\circ\text{C}$

1	2	Rated I _A	Rated P _{out}	PRI	SEC =
–	–	350	14.7	U _i = 220...240V-	U _{rated} = 20...42V
ON	–	400	16.8	I _n = 170 mA	U _{max} = 60V
–	ON	450	18.9	f _i = 50/60 Hz	IS 15885PART 2/SEC 13/2012
ON	ON	500	21	λ : 0,95	R-41212997 www.bis.gov.in

LED-SELV, CE, UK, ENEC, ENEC

VS LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1 73614 Schorndorf
Electronic Controller for LED
Type **ECXe 500.468**
Ref.-No. 187252
Made in China

$t_c = 75^\circ\text{C}$
 $t_a = 40^\circ\text{C}$

1	2	Rated I _A	Rated P _{out}	PRI	SEC =
–	–	350	14.7	U _i = 220...240V-	U _{rated} = 20...42V
ON	–	400	16.8	I _n = 170 mA	U _{max} = 60V
–	ON	450	18.9	f _i = 50/60 Hz	IS 15885PART 2/SEC 13/2012
ON	ON	500	21	λ : 0,95	R-41212997 www.bis.gov.in

LED-SELV, CE, UK, ENEC, ENEC

ECXe 500.468				
Pin		Output W	Current mA	Factory settings (mA)
1	2			
OFF	OFF	14.7	350	500
ON	OFF	16.8	400	
OFF	ON	18.9	450	
ON	ON	21	500	

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LED Drivers – ComfortLine DIP switch UT-160

ECXe 700.469

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1 73614 Schorndorf
 Electronic Controller for LED
Type ECXe 700.469 LED+ ■ LED- ■ SELV
 Ref.-No. 187106 Made in China

tc = 70 °C	ta = 35 °C	1	2	Rated	Rated	Prated	Prated	PRI	SEC
		-	-	550	23.1	-	-	U _N = 220...240V~	U _{rated} = 27...42V
		ON	ON	600	25.2			I _N = 220 mA	U _{max} = 55V
		ON	ON	650	27.3			f _N = 50/60 Hz	IS 15885/PART 2/SEC 13:2012
		ON	ON	700	29.4			λ > 0,95	R-41212991 www.bis.gov.in

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1 73614 Schorndorf
 Electronic Controller for LED
Type ECXe 700.469 LED+ ■ LED- ■ SELV
 Ref.-No. 187253 Made in China

tc = 70 °C	ta = 35 °C	1	2	Rated	Rated	Prated	Prated	PRI	SEC
		-	-	550	23.1	-	-	U _N = 220...240V~	U _{rated} = 27...42V
		ON	ON	600	25.2			I _N = 220 mA	U _{max} = 55V
		ON	ON	650	27.3			f _N = 50/60 Hz	IS 15885/PART 2/SEC 13:2012
		ON	ON	700	29.4			λ > 0,95	R-41212991 www.bis.gov.in

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1 73614 Schorndorf
 Electronic Controller for LED
Type ECXe 1050.470 LED+ ■ LED- ■ SELV
 Ref.-No. 187123 Made in China

tc = 70 °C	ta = 35 °C	1	2	Rated	Rated	Prated	Prated	PRI	SEC
		-	-	800	32	-	-	U _N = 220...240V~	U _{rated} = 27...40V
		ON	ON	900	36			I _N = 340 mA	U _{max} = 55V
		ON	ON	950	38			f _N = 50/60 Hz	IS 15885/PART 2/SEC 13:2012
		ON	ON	1050	42			λ > 0,95	R-41212991 www.bis.gov.in

ECXe 700.469				
Pin		Output	Current	Factory
1	2	W	mA	settings (mA)
OFF	OFF	23.1	550	700
ON	OFF	25.2	600	
OFF	ON	27.3	650	
ON	ON	29.4	700	

ECXe 1050.470

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1 73614 Schorndorf
 Electronic Controller for LED
Type ECXe 700.469 LED+ ■ LED- ■ SELV
 Ref.-No. 187122 Made in China

tc = 70 °C	ta = 35 °C	1	2	Rated	Rated	Prated	Prated	PRI	SEC
		-	-	550	23.1	-	-	U _N = 220...240V~	U _{rated} = 27...42V
		ON	ON	600	25.2			I _N = 220 mA	U _{max} = 55V
		ON	ON	650	27.3			f _N = 50/60 Hz	IS 15885/PART 2/SEC 13:2012
		ON	ON	700	29.4			λ > 0,95	R-41212991 www.bis.gov.in

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1 73614 Schorndorf
 Electronic Controller for LED
Type ECXe 1050.470 LED+ ■ LED- ■ SELV
 Ref.-No. 187107 Made in China

tc = 70 °C	ta = 35 °C	1	2	Rated	Rated	Prated	Prated	PRI	SEC
		-	-	800	32	-	-	U _N = 220...240V~	U _{rated} = 27...40V
		ON	ON	900	36			I _N = 340 mA	U _{max} = 55V
		ON	ON	950	38			f _N = 50/60 Hz	IS 15885/PART 2/SEC 13:2012
		ON	ON	1050	42			λ > 0,95	R-41212991 www.bis.gov.in

VS LIGHTING SOLUTIONS
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1 73614 Schorndorf
 Electronic Controller for LED
Type ECXe 1050.470 LED+ ■ LED- ■ SELV
 Ref.-No. 187254 Made in China

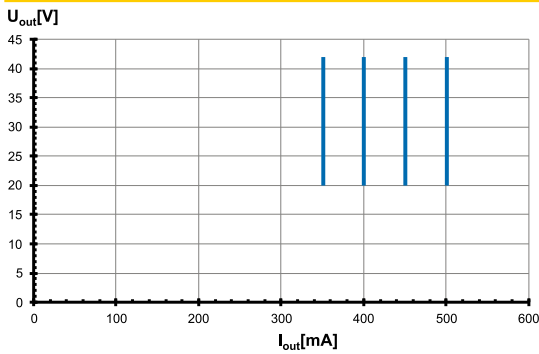
tc = 70 °C	ta = 35 °C	1	2	Rated	Rated	Prated	Prated	PRI	SEC
		-	-	800	32	-	-	U _N = 220...240V~	U _{rated} = 27...40V
		ON	ON	900	36			I _N = 340 mA	U _{max} = 55V
		ON	ON	950	38			f _N = 50/60 Hz	IS 15885/PART 2/SEC 13:2012
		ON	ON	1050	42			λ > 0,95	R-41212991 www.bis.gov.in

ECXe 1050.470				
Pin		Output	Current	Factory
1	2	W	mA	settings (mA)
OFF	OFF	32	800	1050
ON	OFF	36	900	
OFF	ON	38	950	
ON	ON	42	1050	

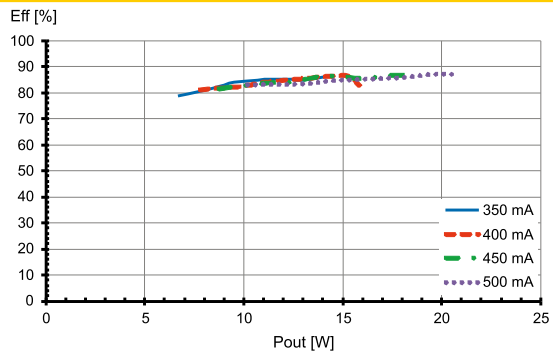
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Typ. performance graphs for 187105, 187121, 187252 / Type ECXe 500.468

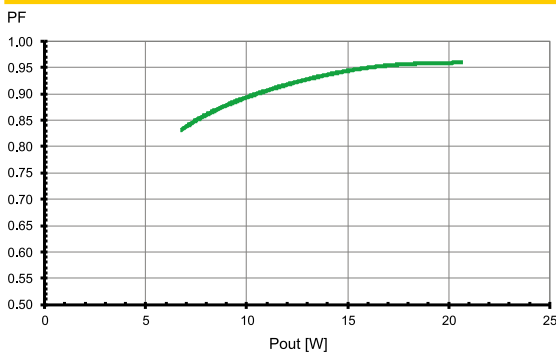
Working area



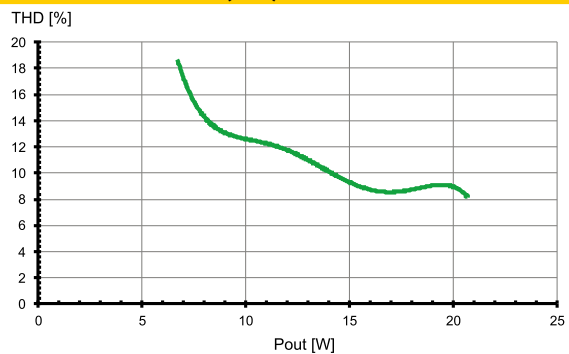
Efficiency



Power factor

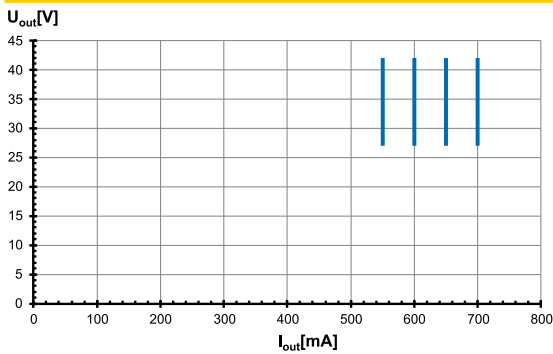


Total harmonic factor (THD)

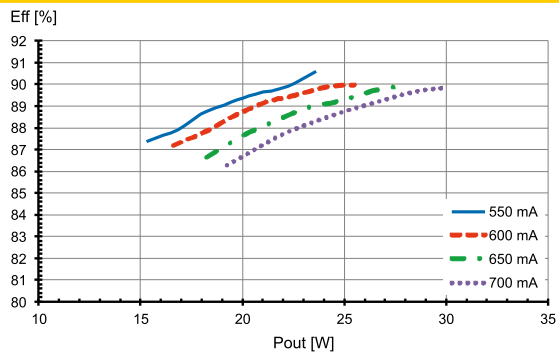


Typ. performance graphs for 187106, 187122, 187253 / Type ECXe 700.469

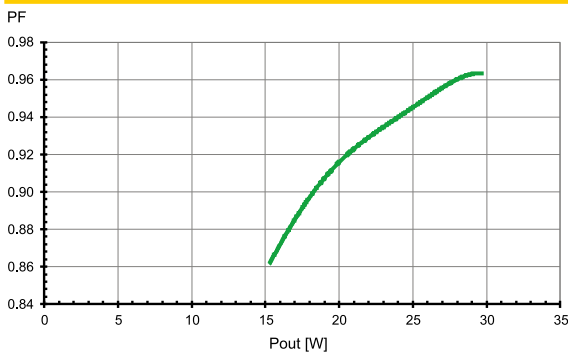
Working area



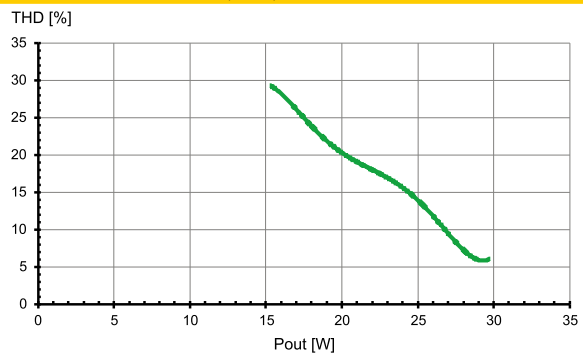
Efficiency



Power factor



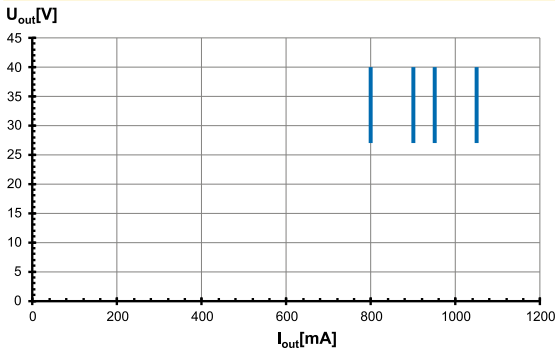
Total harmonic factor (THD)



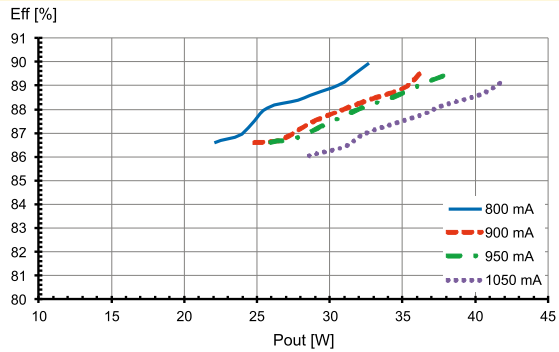
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Typ. performance graphs for 187107, 187123, 187254 / Type ECXe 1050.470

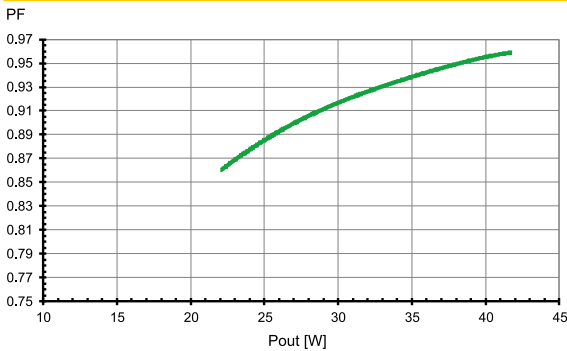
Working area



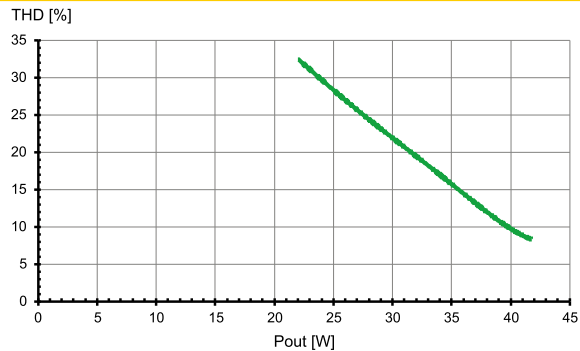
Efficiency



Power factor



Total harmonic factor (THD)



Safety functions

- Transient mains peaks protection:
Values are in compliance with EN 61547 (interference immunity).
Surges between L-N: up to 2 kV
Surges between L/N-PE: up to 4 kV
- Short-circuit protection: The control gear is protected against permanent short-circuit with automatic restart function.
- Overload protection: The control gear only works in range of rated output power and voltage problemfree. Please check before switch-on mains power supply that the selected LED load is suitable (see electrical characteristics on data sheet).
- If any of the above mentioned safety functions will be triggered, disconnect the control gear from the power supply then find and eliminate the cause of the problem.

Compatibility of track rails

Suitable for following tracks

- Global
- PowerGear

Not suitable for

- IG DALI

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Assembly and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advices must be observed; non-observance can result in the destruction of the LED drivers, fire and/or other hazards.

Mandatory regulations

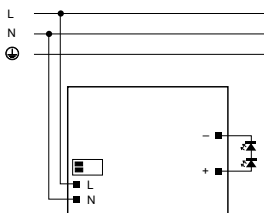
- DIN VDE 0100
- EN 60598-1

Mechanical mounting

- Mounting position and location:
 - Common track system
- 3-phase option: 3 phases are selectable with a rotary switch. The neutral is in a fixed position in the track.
- Degree of protection: IP20
- Clearance: Min. 0.10 m from walls, ceilings and insulation
- Fastening: Double mechanical locking for perfect track fixing
- Load: max. up to 50 N

Electrical installation

- Connection terminals: Push-in terminals for rigid or flexible conductors with a section of 0.2–0.75 mm²
- Stripped length: 8.5–10 mm
- Polarity: Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Through-wiring: Is not allowed.
- Secondary load: The sum of forward voltages of LED loads has to be within the tolerances which are mentioned in the table "Electrical Characteristics" in this data sheet.
- Wiring diagram:



Selection of automatic cut-outs for VS LED drivers

- Dimensioning automatic cut-outs
 - High transient currents occur when an LED driver is switched on because the capacitors have to load. Ignition of LED modules occurs almost simultaneously. This also causes a simultaneous high demand for power. These high currents when the system is switched on put a strain on the automatic conductor cut-outs, which must be selected and dimensioned to suit.
- Release reaction
 - The release reaction of the automatic conductor cut-outs comply with VDE 0641, part 11, for B, C characteristics. The values shown in the following tables are for guidance purposes only and are subject to system-dependent change.
- No. of LED drivers
 - The maximum number of VS LED drivers applies to cases where the devices are switched on simultaneously. Specifications apply to single-pole fuses. The number of permissible drivers must be reduced by 20% for multi-pole fuses. The considered circuit impedance equals 400 mΩ (approx. 20 m [2.5 mm²] of conductor from the power supply to the distributor and a further 15 m to the luminaire).

Type	Ref. No.	Automatic cut-out type and possible no. of VS drivers pcs.		
		B 10 A	B 16 A	B 20 A
Automatic cut-out type B				
ECXe 500.468	187105, 187121, 187252	30	45	53
ECXe 700.469	187106, 187122, 187253	21	35	43
ECXe 1050.470	187107, 187123, 187254	21	35	43
Automatic cut-out type C				
ECXe 500.468	187105, 187121, 187252	38	57	66
ECXe 700.469	187106, 187122, 187253	36	58	72
ECXe 1050.470	187107, 187123, 187254	36	58	72

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