

Cutter Type F

Item No. 2 685 551 (Edition 06/97)

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Introduction

This installation manual is provided for the connection and starting procedure of your cutter. Further informations like e.g. dimensioned drawings are available in our Printers and Cutters Catalogue or on request. The devices of the type F (0685.7) model series are electric motor driven paper cutters. The paper is cut by two flat knives. Cutting is monitored by an internal microswitch.

The cutting mode can be changed from full to partial cut (in any order) by pole reversal of the motor voltage.

In partial cutting mode the paper remains linked in its center by a strip of about 2 mm in width.

Cutting is triggered by an external SPDT contact.

The units are available in various widths, depending on the paper width to be cut.

Safety Instructions

This cutter is a quality product manufactured in accordance with established electrical engineering standards. The unit has been delivered from the factory in perfect conformance to safety regulations. To maintain this condition, please observe all notes and warnings in this document!

- Installation and mounting of electrical devices may only be performed by an electrotechnical expert!
- When installing and mounting the cutter, please observe the demands made on the whole facility by the respective device safety regulation.
- The cutter may only be used for the purpose it was designed for – i.e. for cutting paper strips.
- The cutter is designed complying with EN 60950, protection class III. To prevent dangerous structure-borne currents, the equipment has to be run on safety extra-low voltage (SELV) and must be in an area of equipotential bonding.
- The cutter may only be operated within the limits specified by the technical data. Maximum operating voltages must not be exceeded!
- Hengstler Cutters are designed for industrial use.
- Installation environment and cabling have a very significant influence on Electromagnetic Compatibility (EMC). When installing the cutter sub-assembly in a complete unit, you should seek guarantees from the manufacturer of the complete unit regarding EMC.

Caution: Danger!

- The flat knives have sharp cutting edges; the drive motor has a high torque! Therefore never reach into the cutting area, e.g. for removing jammed paper! Only use tweezers, tongs or the like for this purpose (do not damage the knife!)
- It is expressly emphasized that the cutter is to be started only when completely installed, i.e. the flat knives are covered on all sides and the paper feed and delivery slot are dimensioned such that, e.g., small children cannot reach into the cutting area.



Caution: Danger!

- Installation or servicing works are to be carried out only when the power supply lines are disconnected from the cutter!
- If safe operation is not possible any more, the cutter has to be set out of order and to be protected against unintended starting.

Operating Instructions

- Do not cut self-adhesive labels! The traces of adhesive will pollute the flat knives and impair safe operation!
- During the cutting process, there must be no paper feed.
- Please make sure that the cutter remains free from shreds of paper.
- Having applied voltage, please ensure that the knives are in home position before paper is fed.
- For cutters with trigger control type K (mechanical contact) the user has to make sure that – in case of malfunction (e.g. blocked knife) – the drive motor is separated from operating voltage after max. 10 seconds by a suitable external protective switch. Otherwise the motor will possibly be destroyed by overheating.
- Do not use cleaning agents containing solvents – these agents dissolve the case parts.

Installation Instructions

- The cutter must be installed in the intended unit before connecting the power lines!
- The cutter can be installed in any position. The strips cut off, however, must not collect in the cutting area, thus blocking the rotary knife!
- The cutter can be attached by means of two M3 screws.
- Install the cutter in the unit/housing such that paper transport is smooth.
- Switch off the control system and power supply at first. Then connect them to the cutter electrically.

Preparations for use

- Make sure that the cutter is turned off. Slide the paper through the paper channel in the paper feed direction indicated. If the knives are not in home position they will hinder the paper strip from being slid through the channel.

You can put the knives to home position in two different ways:

1. Turn the shaft screw on the outside of the case using a flat screwdriver until the channel is clear.
2. Turn on the assembly and conduct one cutting cycle without paper.

Perform a trial run with paper.

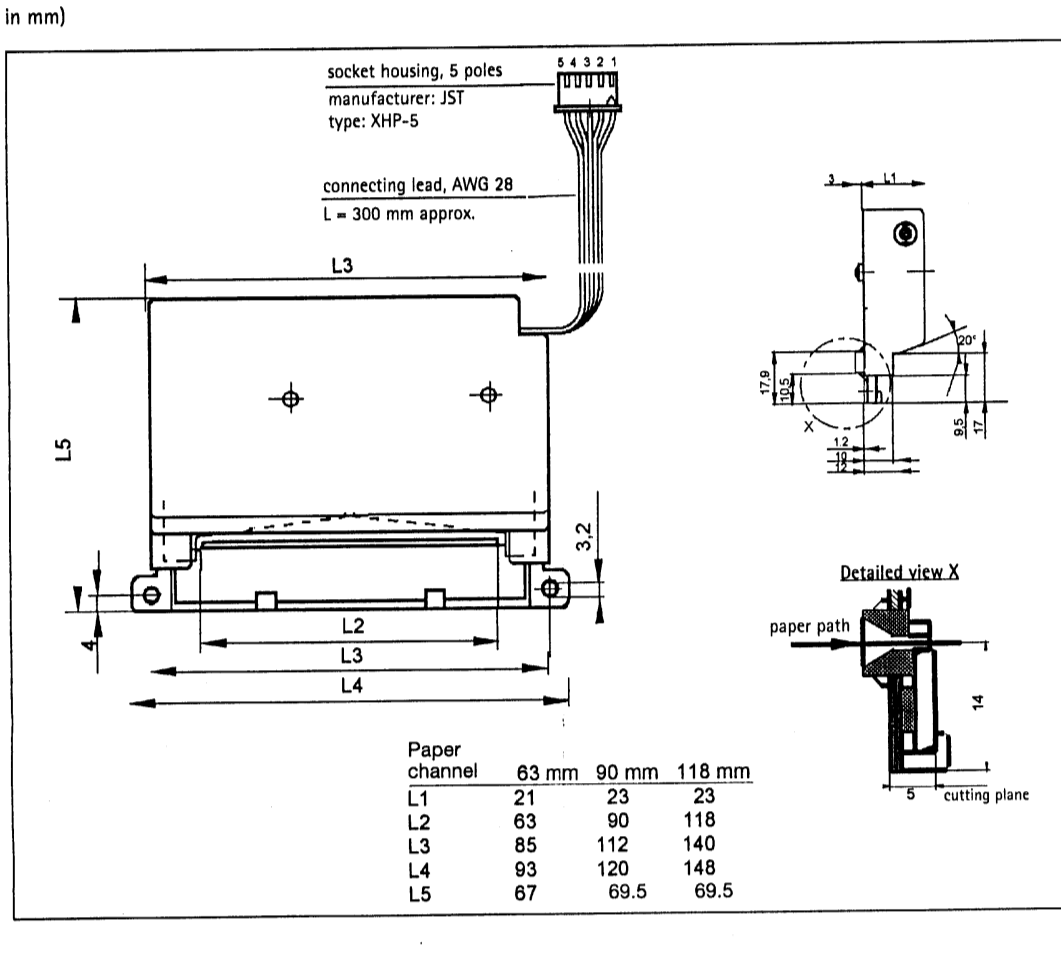
Ensure that the paper strips are fed to the cutter continuously and properly and that the unit cuts them precisely.

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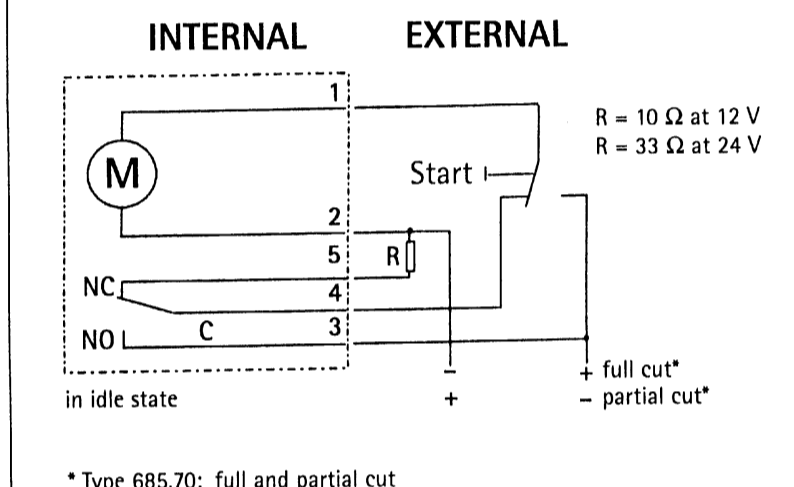
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1 – Dimensioned drawings

(dimensions in mm)



2 – Connection diagram



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Technical data

External start pulse by	SPDT contact
Cutting mode control by	pole reversal of operating voltage
triggering pulse length	≥ 100 ms ≤ 150 ms
Cutting cycle max. (only either full or partial cut)	350 ms
(full cut/partial cut in turn)	370 ms
Operating voltage	12 V DC / 24 V DC (SELV)
voltage tolerance	± 10 %
Current (at T _u = 20 °C)	U = 12 V DC: U = 24 V DC
making current	2.4 A 1.2 A
no-load current	0.24 A 0.12 A
cutting current	1.0 A 0.5 A
when motor is blocked	2.4 A 1.2 A
Climate	operating temperature: -10 °C ... +60 °C storage temperature: -40 °C ... +70 °C medium relative humidity: 65 % without condensation
Service life (number of cuts)	Type 685.70 (full and partial cut): 1,000,000 for paper weights up to 120 g/m ² Type 685.72 (full cut): 1,000,000 for paper weights up to 120 g/m ² 500,000 for paper weights 120 g/m ² up to 170 g/m ²
Noise emission (distance 30 cm, U + 10 %)	75 dB(A)
General design	as per EN 60950, protection class III
Protection class (IEC 529)	IP 10
Vibration performance (IEC 68-2-6)	50 m/s ² , 10 ... 500 Hz
Shock resistance (IEC 68-2-27)	800 m/s ² , 6 ms
Noise immunity	EN 50082-2
Drop test (DBP DIN ISO 2206, 2233, 2246)	passed
Mounting	2 hubs and 2 plastic inlets for M3 screws
Paper channel width	63 mm 90 mm 118 mm
Dimensions	85 x 67 x 21 mm 112 x 69.5 x 24 mm 140 x 69.5 x 24 mm
Weight	160 g approx. 320 g approx. 360 g approx.
Paper	paper width ≤ 60 mm ≤ 60 mm ≤ 60 mm paper weight type 685.70 (full and partial cut) 60 ... 120 g/m ² 60 ... 120 g/m ² 60 ... 120 g/m ² paper weight type 685.72 (full cut) 60 ... 170 g/m ² 60 ... 170 g/m ² 60 ... 170 g/m ²
Electrical connection	flat ribbon cable with 5 cores and JST-plug

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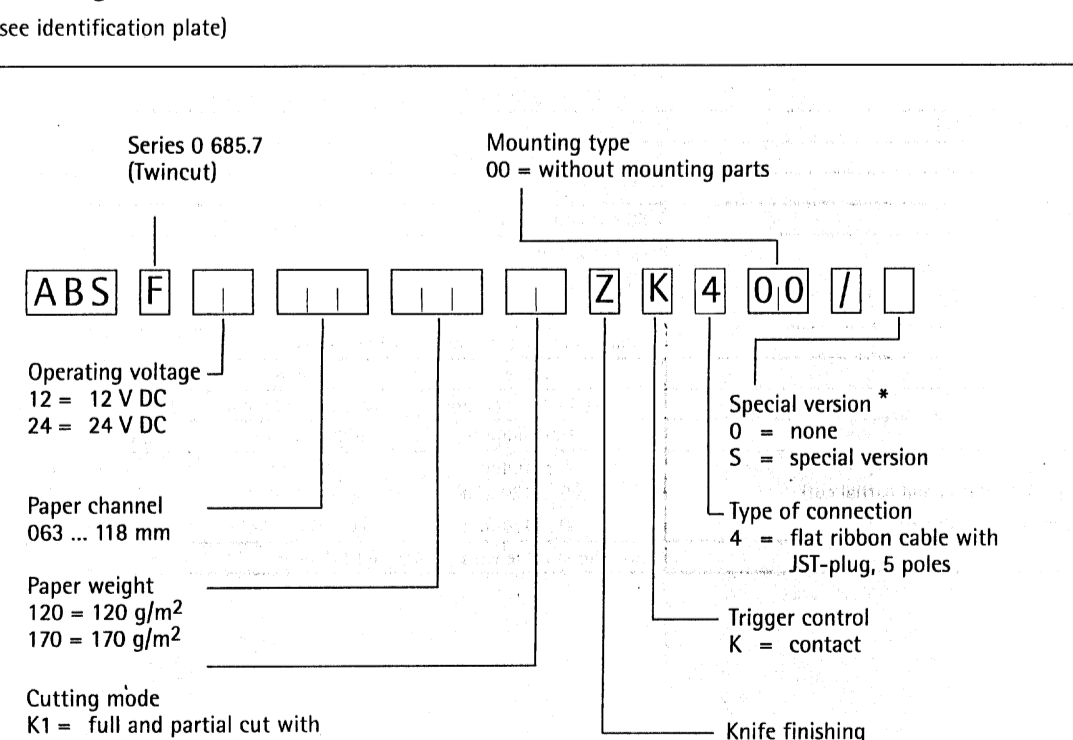
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Malfunctions

Result	Cause	Measure
Flat knives do not move	- Operating voltage failure	- Check the power supply
	- Defective connecting cable	- Check the cutter's connecting cable as well as the plug-in resp. soldered connections
	- Defective trigger control	- Check mechanical resp. electronic pulsers
	- Flat knives blocked by paper shreds/foreign objects	- Switch off the appliance! Remove paper shreds from cutting area! Remove foreign objects!
Flat knives do not return to home position	- Cause unknown	- Please contact the manufacturer
	- Defective reset switch or gear	- Please contact the manufacturer

Ordering code

(see identification plate)



* We apply customer specifications to special versions. If you don't know these please call us for the specifications, indicating the cutter's item number.