

T63845 Variable Speed Curtain Track Drive Instructions.**1 INTRODUCTION**

The variable speed electric track drive is designed to be mounted on the end of Doughty 'Six Track', using the Doughty Black Hauling line T63780.

If wall mounting is required, the universal drive unit can be supplied in place of the standard unit but this is more costly.

Power supply is 230 volts 50 hz. Single phase for 0.25 kw motor, and must be fused at 5 amps.

The unit is supplied with a mains plug to BS1363 incorporating a 5 amp fuse.

Normal track operating speed is 3 metres in 4 seconds, but this may be increased or decreased by means of a simple control knob.

Maximum tractive effort is 20 kg .

2 DRIVE UNIT, weight 20 kg.

Fig 1 shows the drive unit mounted on the end of the track. Be sure that the track is well supported with one support within 60 mm of the end of the track and another support within 300 mm.

The routing for the hauling line is shown by fig 1. The line entering the drive is labelled [1] and routing proceeds in sequence 1-2-3-4-5-6, the line leaving at [6].

To install, leave the line clear of the pulley between [3] and [4] to enable the rope clamps to be fitted at the master runners. Then pull down the pulley and place the line into the pulley as shown.

Arrange the length of the line so the pulley is positioned as shown when the line is taught throughout the system. The drive unit is enclosed by a cover plate. It is essential for safety that the cover plate is secured by all six screws before the drive is operated.

Dimensions : 704mm high × 254mm wide × 113mm depth in line with axis of track.

(Track is 36mm off centre. Return line position is optional, front or rear.)

3 LIMIT SWITCHES

Fig 2 shows the limit switch mounted to the top bar of the track.

Note that the limit switch arm is operated by the master runner between the hauling line and the line clamp. The limit switch must be mounted on the correct side as the top view of fig 2.

Note that the switch arm has to clear the track profiles, so please observe the dimensions '125 mm min.' and '30 mm min.'

The cable to the limit switches carries 24 volts ac, and this has to be secured to the top rail of the track using cable ties.

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4 LOCAL CONTROL

The local control station has an Emergency Stop button which should be pushed in to isolate the drive except when the drive is to be used.

Ten metres of supply cable are provided terminated by a standard BS1363 plug with 5 amp fuse.

Four metres of screened lead are provided for connection to the electric motor in 'delta' mode.

Connecting points are provided for 'open' and 'closed' limit switches.

Connecting points are provided for the optional remote control.

Control functions are as follows :

- Emergency Stop which switches the control off completely.
- 'open' and 'close' buttons.
- Local / Remote control selector switch.
- Power on indicator
- Status indicator flashes yellow when stationary and green when running.

5 OPTIONAL REMOTE CONTROL

The optional remote control station comprises a control box having 'open' and 'close' buttons for operation of the drive from a remote position, by 24 Vac control circuit.

Twenty metres of cable are provided with the remote control.

The remote 'emergency stop' control is provided for mounting near to the control box. This control interrupts the mains supply to the 'local control' to provide an independent and secure means of emergency stop.

Ten metres of cable are provided with the emergency stop, and BS1363 plug and socket are fitted either end.

6 INSTALLATION

All this equipment must be installed into a suitable environment, such as a Television studio, theatre, hall or other weatherproof venue; with less than 45°C ambient temperature and less than 95% relative humidity.

All electrical and mechanical work must be undertaken by suitable qualified persons capable of ensuring a safe installation.

SAFETY WARNING

Read these instructions and the Penta[KB]Power instructions carefully and thoroughly before commencing installation. (See page 3).

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7 CIRCUIT DIAGRAM

Fig 3 is the circuit diagram for the control of the drive, using the 'KB' inverter with RFI filter.

The separate 'Penta[KB]Power' instructions explain the use of this inverter, and the following settings have been selected for the 'Variable Speed Track Drive' according to the 'KB' booklet. These have been already set as required.

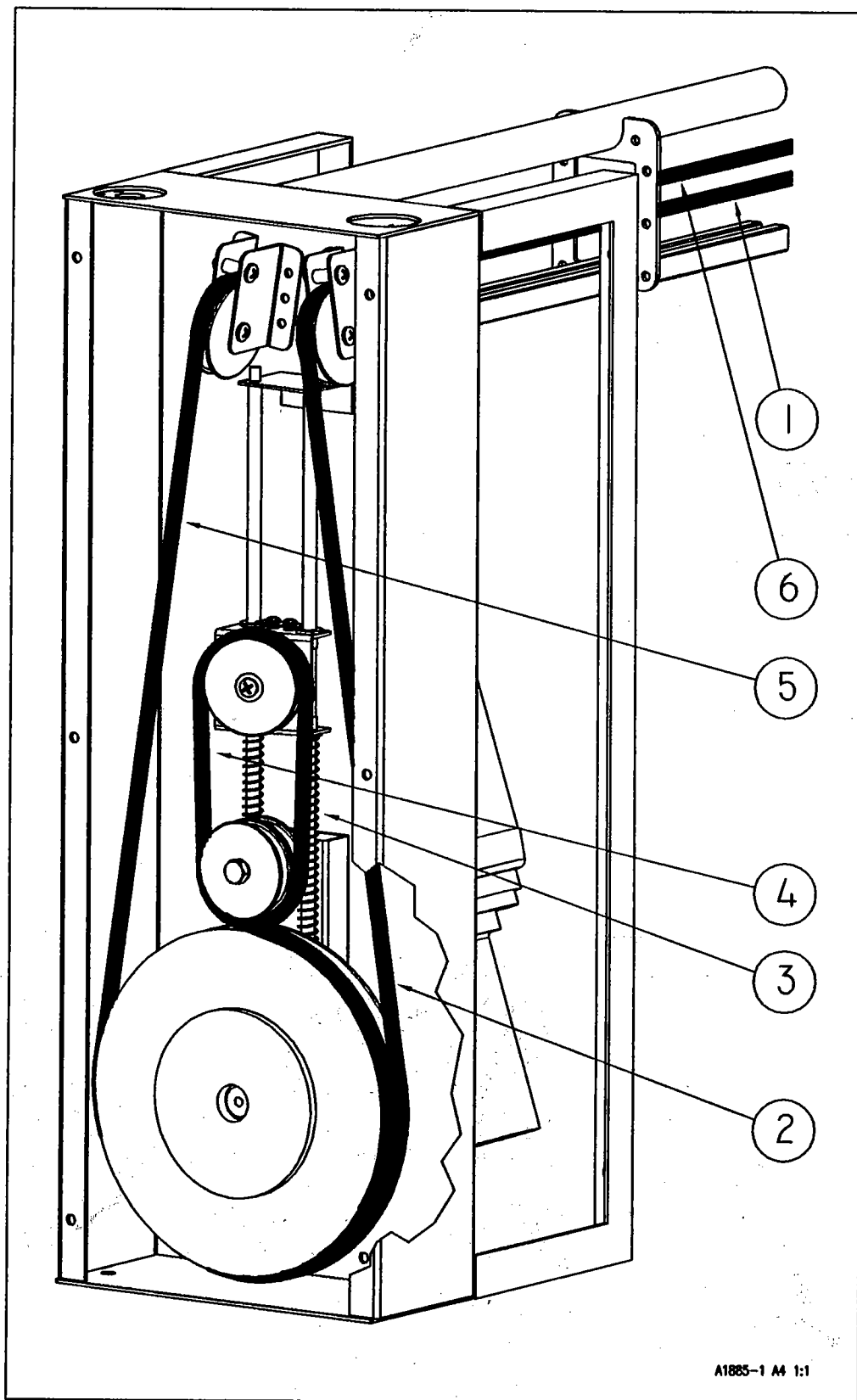
- Fig 10 page 8 → set for 230 volts.
- Fig 11 page 8 → set for ¼ HP.
- Fig 12 page 9 → set for MAN.
- Fig 13 page 9 → set for 50 Hz.
- Fig 14 page 9 → set for 1X.
- Fig 15 page 9 → set for FIX.
- Fig 17 page 11 → set for 70.
- Fig 18 page 11 → set for 40.
- Fig 19 page 11 → set for 0.3.
- Fig 20 page 12 → set for 0.3.
- Fig 21 page 12 → set for 1.5.
- Fig 22 page 12 → set for 160.
- Fig 24 page 13 → set for 5.

8 SPECIAL FEATURES

There are many special features that can be provided for the track drive and these may be available to special order. Please discuss requirements with Doughty.

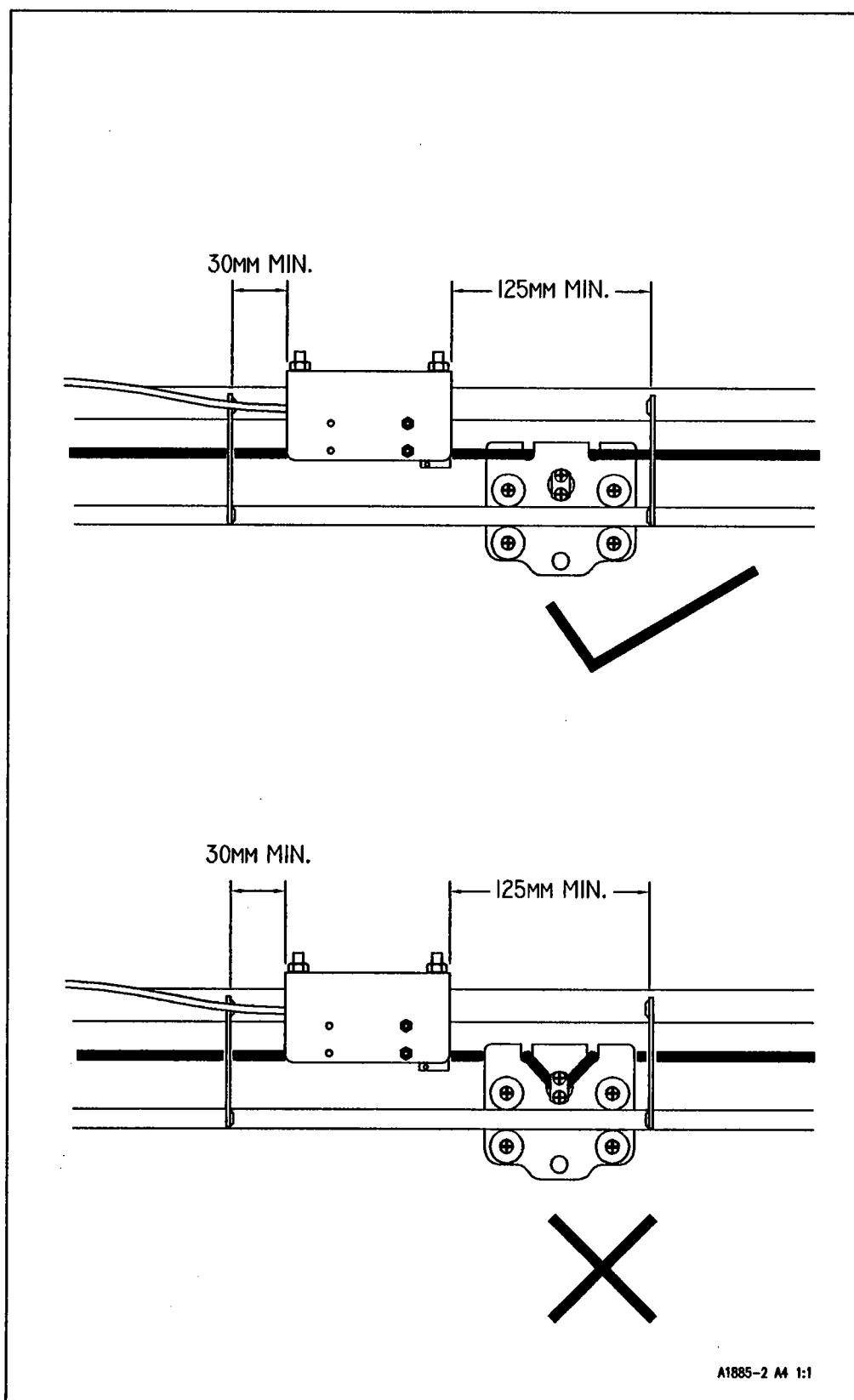
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Fig. 1 Drive Unit



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Fig. 2 Limit Switch



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Fig. 3 Circuit Diagram.

