

Digital Control System for Industrial Doors

- **Integrated Wireless Safety Edge**
- **Integrated Radio Receiver**
- **Two independently programmable relay contacts**
- **Suitable for both Digital & Mechanical Limit Drive Units**
- **Limit switch setting from ground level (Digital Limits only)**
- **Programmable Door Maintenance Indicator**
- **Plug connections between control panel and drive unit**
- **Load monitoring in the open direction (Sectional Doors with Digital limits only)**
- **Digital display of door status and/or fault diagnostic**
- **Stores the last six fault codes**
- **Slim line enclosure IP65**
- **Operations cycle counter (non re-settable)**
- **Certified to BS EN 12453**



Features

For use with the Guthrie Douglas range of drives with digital limits (DES) or mechanical limits (NES) the TS971 allows for easy and rapid setting of limit switch positions and door parameters from ground level (digital limits only). The TS971 has the facility to monitor the load in the open direction on Sectional doors (digital limits only); this feature prevents objects or a person being accidentally lifted by the door as well as preventing people intentionally riding on a door when opening. The TS971 includes as standard a programmable door maintenance indicator. This allows the installer to set a maintenance interval to suit the door and its application of between 1000 to 99000 operations on completion of which the control will indicate to the user that the door needs servicing.

Installation and Commissioning

The drive motor and limits are connected to the TS971 control by a single plug in protected interconnecting cable (supplied separately in lengths of 3, 5, 7, 9 or 13m). The TS971 incorporates an integrated wireless Safety edge receiver thus eliminating the need for a separate control. The TS971 automatically recognises three types of safety edge: Fraba optical type, Normally closed with 1K2 resistor (air switch, tested every cycle) and Normally open with 8K2

resistor (contact strip, monitored). The TS971 incorporates an integrated radio receiver which will work with Guthrie Douglas radio transmitters. Unnecessary call-backs are minimised as the user can read back the doors status using the digital display, which is visible through the enclosure lid. The panel stores the last 6 fault codes thus simplifying the fault finding procedure on those difficult intermittent problems. With digital limits the TS971 will carry out some door adjustments automatically for instance re-adjustment of the close limit to allow for cable stretch and/or for changes in finished floor level. Two independently programmable volt free changeover relays allow the panel to interface with other systems or provide traffic light functions.

Enclosure Enhancements

The purpose built enclosure with a fully protected printed-circuit board if hard wired to the mains supply meets the IP65 class for dust and moisture

protection. It is sized to permit fitting to the "I" beam often found to the side of where the door is fitted. The enclosure allows for top and bottom cable entry and is supplied with standoff feet to allow cables to be run at the back of the panel. The TS971 open, close and stop push buttons are illuminated with the provision for installing a key switch, to allow use by a key holder, selector switch for a part opening position and/or latching stop button if required. There is a provision for a mains isolator switch to be fitted at the bottom of the panel.

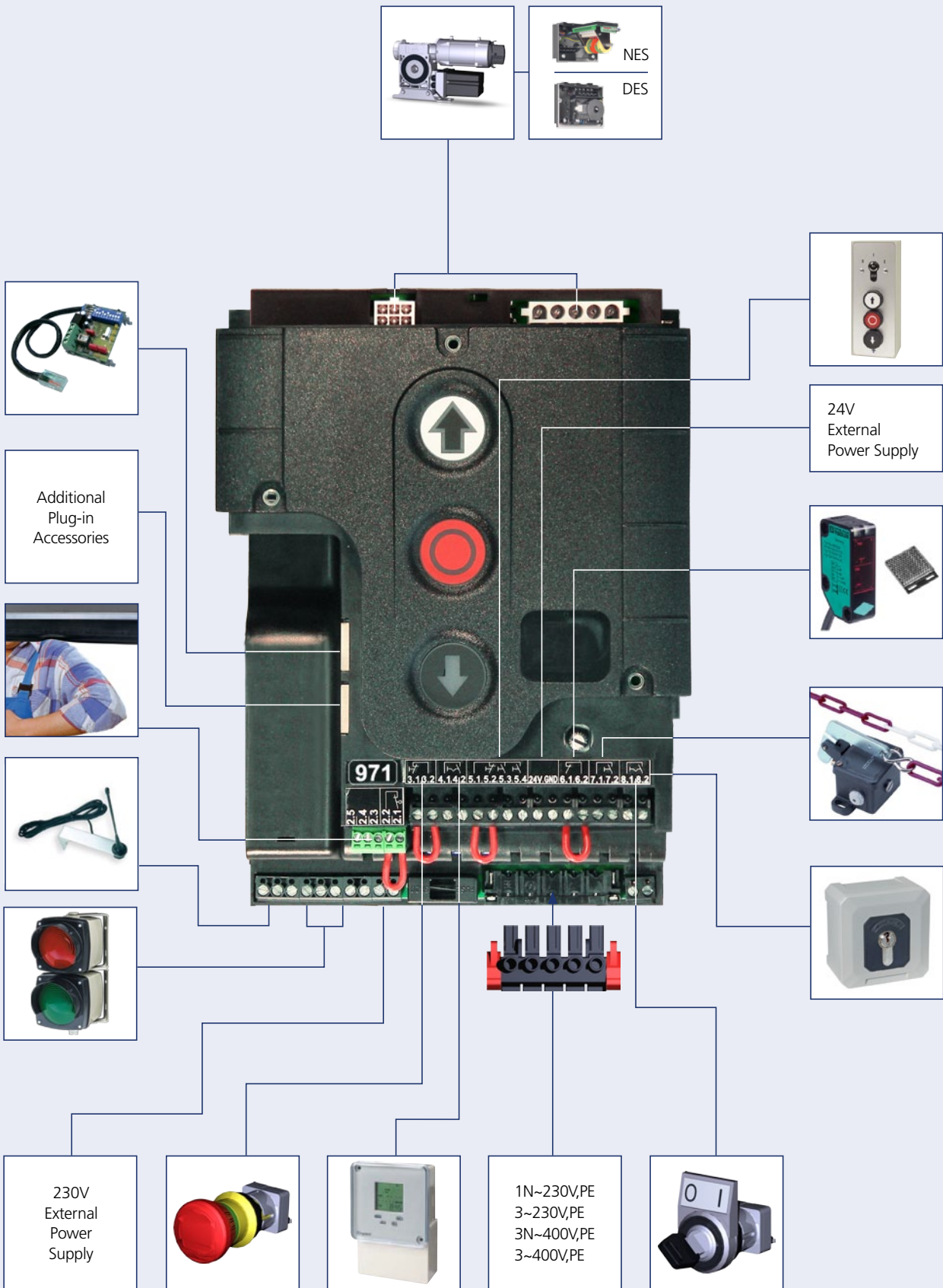
Meeting the Standards

The TS971 meets the requirements of the BS EN 12453 and the introduction of a programmable maintenance indicator only further enhances the safety regime for the user. According to whether the intended users are trained or not, whether the door is in a public area or not and the speed of the door determines the degree of safety required.

Door User	Control Unit	Obligatory Accessories	Function
Trained user only Not in a public area	TS971 In sight of door	N/A	Impulse Open Hold to run close
Trained user in a public area	TS971 In sight of door	Key Switch on/off	Impulse Open Hold to run close
Trained user in a public area	TS971 Out of sight of door	Safety Edge	Impulse Open Impulse Closed
General Public	TS971 In/out of sight of door	Safety Edge and Photo Beam	Impulse Open Impulse Closed

Note: Doors that can lift a person require additional safety devices

Control Panel TS971



Control Panel TS971

The features of the TS971 control include:

- Limit switch and door parameter setting from ground level. (Digital Limits only)
- Drive direction can be reversed via push buttons (only during first installation)
- Load monitoring in the open direction (Sectional Doors, Digital Limits only)
- Digital display of door status and/or fault diagnostic
- Operations cycle counter (non re-settable)
- Illuminated Pushbuttons
- Integrated Wireless Safety edge system.
- Integrated Radio Receiver (up to 64 transmitters can be expanded)
- Programmable Door Maintenance Indicator with three response modes including the option for the service due function to be overridden once to allow a further 500 cycles
- Automatic adjustment for changes in floor level and/or cable stretch (Digital Limits only)
- 1 to 240 second variable timed closing
- Function to prevent unintentional activation of the photo beam, for example by the safety edge spiral cable allowing the photo beam to be mounted as close to the door or guide as possible. (Digital limits only)
- Last 6 faults memorised.
- Automatic recognition of the safety edge type (contact, pressure switch or Fraba optical type)
- Dynamic run time monitoring adjustable up to 90 seconds. (Mechanical limits only)
- Selectable Part open facility.
- 2 Independently programmable auxiliary relays giving enhanced functions.
- Test function for Laser and light curtains

	<p>GE305132 Mains Isolator Kit</p>	<p>Mains isolator for TS971 panel includes cover and mains switch</p>	
	<p>GE304616 Key Switch</p>	<p>2 position panel mounted key switch for either "part open" function or "on/off" function to immobilise the panel</p>	
	<p>GE34615 Stop button</p>	<p>Mains isolator for TS971 panel includes cover and mains switch</p>	
	<p>GE34679 Selector Switch</p>	<p>2 position selector switch for "part open" function</p>	
	<p>GE417317 Cover Plate</p>	<p>Cover Plate for TS971 Push buttons</p>	

Accessories for use with Control Panels



- GE23029/030**
Protected cable (3m)
- GE23029/050**
Protected cable (5m)
- GE23029/070**
Protected cable (7m)
- GE23029/090**
Protected cable (9m)
- GE23029/130**
Protected cable (13m)

Mechanical limit
cables available



- GE46390***
Pull switch, for wall or ceiling
mounting with 2.5m chain
- ELS 145FH**
Shoot bolt interlock system



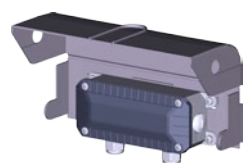
- GE301955***
Traffic indicator assembly, red
and green



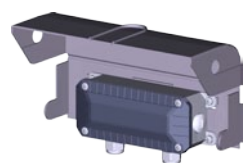
- KSR6***
Wireless Safety Edge Kit (<6m)
- KSR6/10**
Wireless Safety Edge Kit (<10m)



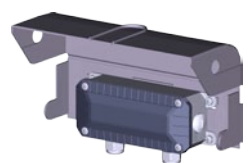
- GF10045**
Edge profile, roller shutters
- GF10050**
Bump stop for roller shutters



- GF10085**
Edge profile, sectional doors
- GF10095**
Bump stop for sectional doors



- GF10100**
Edge profile, high speed doors



- GF10110**
Bump stop for high speed doors

- GF40594** Mounting rail 3m

- GF417478*** Splash Cover for
S/Edge Junction Box/Slave unit

Hardwired Safety edge kit
available, POA



- IFALCONXL**
Industrial motion sensor
(3.5m high)



- IFALCON***
Industrial motion sensor (<7m high)

- ICONDOR**
Motion and presence sensor (<6m high)

- IMILAN**
Industrial presence sensor (<6m high)

- ILZR100**
Laser safety sensor (5m x 5m
coverage)

- ILZR110**
Laser safety sensor (10m x 10m
coverage)

- IREMOTE***
Remote control setting



- PES/9R**
Polarised reflex photo-beam
(<9m range)

- PES/30T***
Through-beam sender and
receiver (<30m range)



- CALOOPKIT***
Plug in loop detector c/w
latching stop button for
TS970 Series 2 & TS971



- GE3513202***
3 Phase mains supply lead
- GE3513206**
Single phase mains supply lead,
for Ranger, Safedrive® Mini and
Safedrive® Fi

- GE3513214**
Single phase mains supply
lead for Safedrive®



- VR/TF2E***
Key-fob transmitter 2 Channel
433MHz

- VR/TF4E***
Key-fob transmitter 4 Channel

- VR/SEA433**
Tuned Aerial

- VR/60733***
Vehicle mounted transmitter, 1
channel 433MHz

- VR/K2E***
Wireless Keypad channel

- VR/60734**
Vehicle mounted transmitter, 2
channel 433 Mhz



*ILLUSTRATED