



The new Fingerscan 2.0  
from FSB



product  
design  
award

2009 gold 

## Fingerscan 2.0 is the key to your handles.

FSB's Fingerscan 2.0 is about always having your key to hand – literally. Mislaid or stolen keys are a thing of the past. A further benefit concerns the flexible handling of access authorisation. If you've got friends or relatives round for a few days, for instance, affording them access to your house is no problem and, once they've left, you simply revoke their authorisation.

A menu-driven programming unit allows you to straightforwardly authorise or delete up to 99 fingers.

Operating the Fingerscan door pull is likewise child's play: simply take hold of the handle, run your index (or other) finger over the scanner and open the door.

### Fingerscan 2.0 at a glance:

- ever-available: no need to rummage around for mislaid keys, forgotten access codes or cards. Additional convenience through combination with motorised locks.
- highly convenient: your key is always "to hand" – one key/finger opens your front door, garage door, garden door, office etc.
- ergonomic: easy to operate due to integration of biometric scanner in door handle.
- loss-proof: keys can no longer be mislaid or forgotten or their owners locked out.
- theft-proof: the key cannot be stolen. Even safer in combination with motorised locks.
- forgery-proof: every finger is unique.
- user-friendly: users save or delete authorised parties themselves (no need for PCs or technicians) using a menu-driven control unit built into the door.
- tamper-proof: outside interference impossible, as data flows are encrypted and hence secure.
- simple to connect: to electric opener, motors lock or electric multipoint lock.
- full outdoor capability: from -40° to +85° C
- very long life: up to 4 million operations guaranteed.
- robust: unsusceptible to minor knocks or scratches.
- 24-month guarantee.



## Systematically secure: individually adaptable, flexibly expandable.

FSB-Fingerscan 2.0 comes in three different system variants: home integra, home2 integra and home3 Surface-mounted.

**home** – with one relay as pure handle-only solution

**home2** – with two relays for actuating peripheral devices or other functions such as alarm systems or garage openers

**home3** – with three relays for actuating peripheral devices or other functions such as alarm systems or garage openers – as surface-mounted or top-hat-rail solution (control unit)

A detailed comparison can be found on Page 3. The three application scenarios set out below are feasible for home integra, home2 integra and home3 Surface-mounted alike.

### Retrofitting existing doors

The FSB Fingerscan door pull can be fitted to existing doors that do not feature a motor lock or motor-driven multipoint lock.

Besides involving lower investment costs, this form of Fingerscan door pull is just the job, in combination with an electric door opener, for doors kept on the latch – during the day, for instance. The opener can be directly actuated by Fingerscan and releases the latch in the event of positive identification. Remote-control opening is also possible, of course. Here, the door is locked in the “classical” manner, i.e. manually with the aid of a lock cylinder.

### Locking/unlocking the door via intercom unit or “buzzer”

The FSB Fingerscan door pull is compatible with the principal motor-driven multipoint locks and security locking elements such as those marketed by Winkhaus, KFV, G.U, Roto and Fuhr, meaning you need not forego such comforts.

The advantage here is that, as well as being kept on the latch or released by a buzzer, the door is completely locked/unlocked after every closing/opening operation.

This constellation can accordingly be regarded as being the most rigorous in security terms, since the door is always considered “locked” for insurance purposes. This holds whether operation involves a remote opening function or not.

### “Opening hours” or time-based access arrangements

Fingerscan also offers scope for expansion to suit requirements of this kind – the opening hours of your business premises, for instance.

A set-up incorporating an electric door-opener unlocking system simultaneously facilitates direct electronic control of the motor lock for day/night operation. Either a manually operated switch or a programmable pilot relay directly connected to the motor lock is suitable for this purpose. The door remains unlocked in both cases during the day but is completely locked/unlocked after every closing/opening operation at night. Access is then only possible with due authorisation. All you need to do to set this up is enter days of the week and the concomitant times into the pilot relay once so that no finger identification is required to open the door during business hours. With switch operation it is necessary to manually change the setting from daytime to night and vice versa each time.

Mains connection of the Fingerscan door pull must be performed on site by qualified staff.

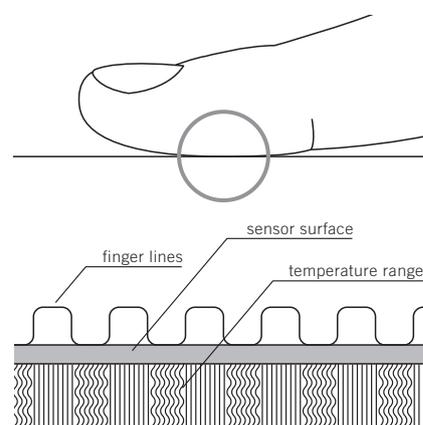
System- and  
Technologypartner



## Always at hand: your fingers.

Biometric systems have been used in banks and high-security areas for many years and have now become available for everyday use by private persons and companies. Today's systems scan optically, capacitively or thermally. Given its fine anti-tamper credentials, resistance to environmental impacts and best scanning results, we have opted for the thermal line sensor.

Special features known as minutiae are filtered out of the scanned image of your finger, archived as biometric keys and compared. It is not so much the "pattern" of your fingerprint that matters here as temperature differentials at specific points – at the "peaks" and "valleys" of your fingerprint to be precise. Hence it is impossible to tamper with the system by using fingerprints taken from other surfaces. Instead of image data, a binary code is memorised that cannot be reproduced in the form of a fingerprint image.



	FSB Fingerscan 2.0		
	home integra	home2 integra	home3 Surface- mounted
Area of application	private		
Number of fingers	99		
Relay 30 V DC, 2 A	1	2	3
Assembly height	scanner centre 1,200 mm above FFL finger scanner in handle		
Power supply	230 V AC or 110 V AC via external power pack		
Input voltage	8–24 V AC or 8–30 V DC		9–12 V AC or DC
Power uptake	approx. 1 W		approx. 2 W
Time-controlled access authorisation	—	via external timer switch	
Temperature range	-40° to +85° C		
Humidity	max. 95%		
Biometric characteristics	FAR* 1.0 x 10 <sup>-6</sup> / FRR** 1.4 x 10 <sup>-2</sup>		
Power failure protection	Power failure protection Data are memorised and cannot be lost		
Finger scanner security	tamper-proof		
Guarantee	24 months		
Life cycle	4 million finger scans (under normal conditions)		

\* FAR = False Acceptance Rate: the system authorises a person who has yet to be registered in the system to a probability of approx. 1.0 x 10<sup>-6</sup>

\*\* FRR = False Rejection Rate: the system fails to recognise a person who has been registered in the system to a probability of approx. 1.4 x 10<sup>-2</sup>



## 6538 ....

■ Stainless Steel

oval

A Dimensions up to 1,500 mm

RH version:  
... 4524  
... 9924

LH version:  
... 4525  
... 9925



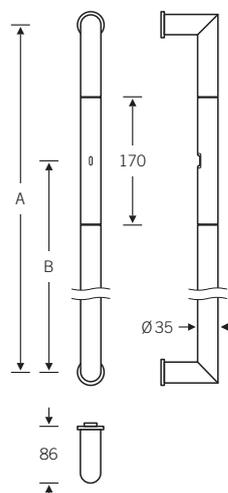
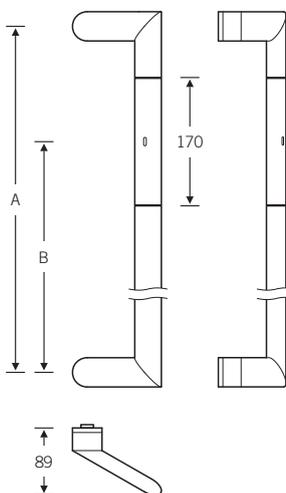
## 6607 ....

■ Stainless Steel  
■ Bronze

round

A Dimensions up to 1,500 mm

Safety clearance  
S = 57 mm  
(cf. Page 7)





## 6669 ....

■ Stainless Steel

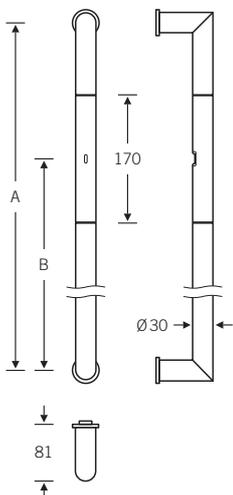
round

A Dimensions up to 1,300 mm

Safety clearance  
S = 55 mm  
(cf. Page 7)

## Getting it just right.

You can choose between three different handle designs: two classics 30 mm and 35 mm in diameter respectively and a handle with a 28 x 40mm oval cross-section. So your Fingerscan handle is exactly to the proportions of your main-entrance door, FSB offers you the option of customising both the length and position of the scanner for a small extra charge.



Product Code	A	B
6538 4524	450	
6538 9924	max. 1,500	min. 150 / max. 1,350
6538 4525	450	
6538 9925	max. 1,500	min. 150 / max. 1,350
6607 4523	450	
6607 9923	max. 1,500	min. 150 / max. 1,350
6669 4523	450	
6669 9923	max. 1,300	min. 150 / max. 1,150

The scanner is positioned centrally on models with A Dimension = 450 mm.

Control units	Unit	home integra	home2 integra	home3 Surface-mounted
Voltage supply	V AC	8–24	8–24	9–12
	V DC	8–30	8–30	9–12
Power uptake	W	approx. 1	approx. 1	approx. 2
Relay	number	1	2	3
Relay switching capacity	V DC/A	30/2	30/2	30/2
Service life of mechanical relay	switching cycles	10 million	10 million	10 million
Service life of electronic relay	switching cycles	100,000 at 250 V / 2 A	100,000 at 250 V / 2 A	100,000 at 250 V / 2 A
Temperature range	°C	-40 to +85	-40 to +85	-40 to +85
Memory	finger	99	99	99
Safety rating		IP 54	IP 54	IP 54
Digital inputs		1	1	1
Max. intensity of current at X6, Pin 1	A	3	3	3

Power packs	Unit	0458 0001 0000	0458 0034 0000
Rated voltage	V AC	90–260	100–240
	Hz	48–63	
Power range	W	24	24
Secondary voltage	V DC	24 ±3%	12
Rated output current	A	1	2
Output current limit	A	1.2	2.45
Safety rating		IP 00	IP 00
Efficiency factor	%	80	80
Ambient temperature	°C	-5 to +50	-5 to +50
Dimensions (L x W x H)	mm	93 x 52.5 x 68.5	93 x 52.5 x 68.5
		assembly on top-hat rail	assembly on top-hat rail

Cable	Type B	Type C
Type	8-pin, CP35/open	3-pin, open/open
Form	2 m: 8 x 0.25 mm <sup>2</sup> 8 m: 8 x 0.14 mm <sup>2</sup>	3 x 0.34 mm <sup>2</sup>
Product Code (length)	0458 0029 8000 (2 m) 0458 0030 8000 (8 m)	0458 0031 8000 (2 m) 0458 0032 8000 (4 m)

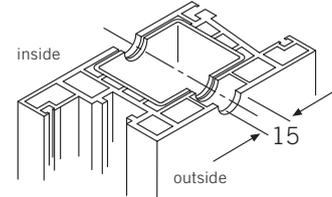
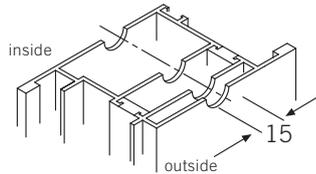
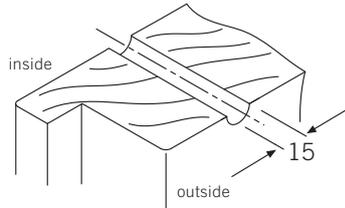
### Borehole dimensions

Timber doors

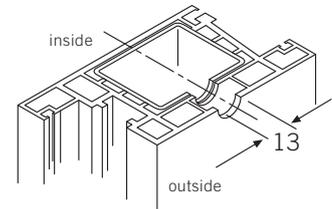
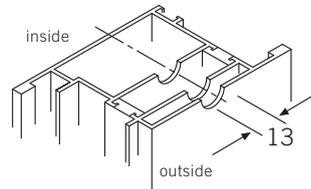
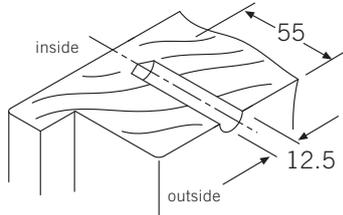
Metal doors

Doors in synthetic materials

#### bolt through fixing



#### plug face fixing



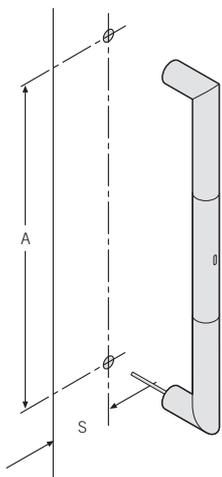
### Preparing the door

It is necessary to determine the position of the handle and borehole diameters to suit the type of door and the fixing method. The diameter and nature of the boreholes is as shown in the illustrations at the top of the page.

### Safety clearance (S)

When fitting a handle to the slamming face it is necessary to factor in a safety clearance (S) between the handle and the shutting edge/door jamb – as set out in the sketch below.

FSB recommends observing the safety clearances indicated – partly as a means of avoiding injury. Regardless of this, it is always necessary to check the conditions actually obtaining.



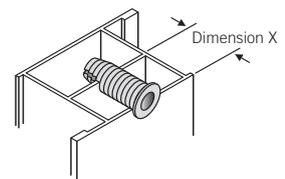
### Fastenings

for bolt through fixing:

door thickness	0589 ....
35–44 mm	.... 4435
45–54 mm	.... 4445
55–64 mm	.... 4455
65–74 mm	.... 4465
75–84 mm	.... 4475

for plug face fixing:

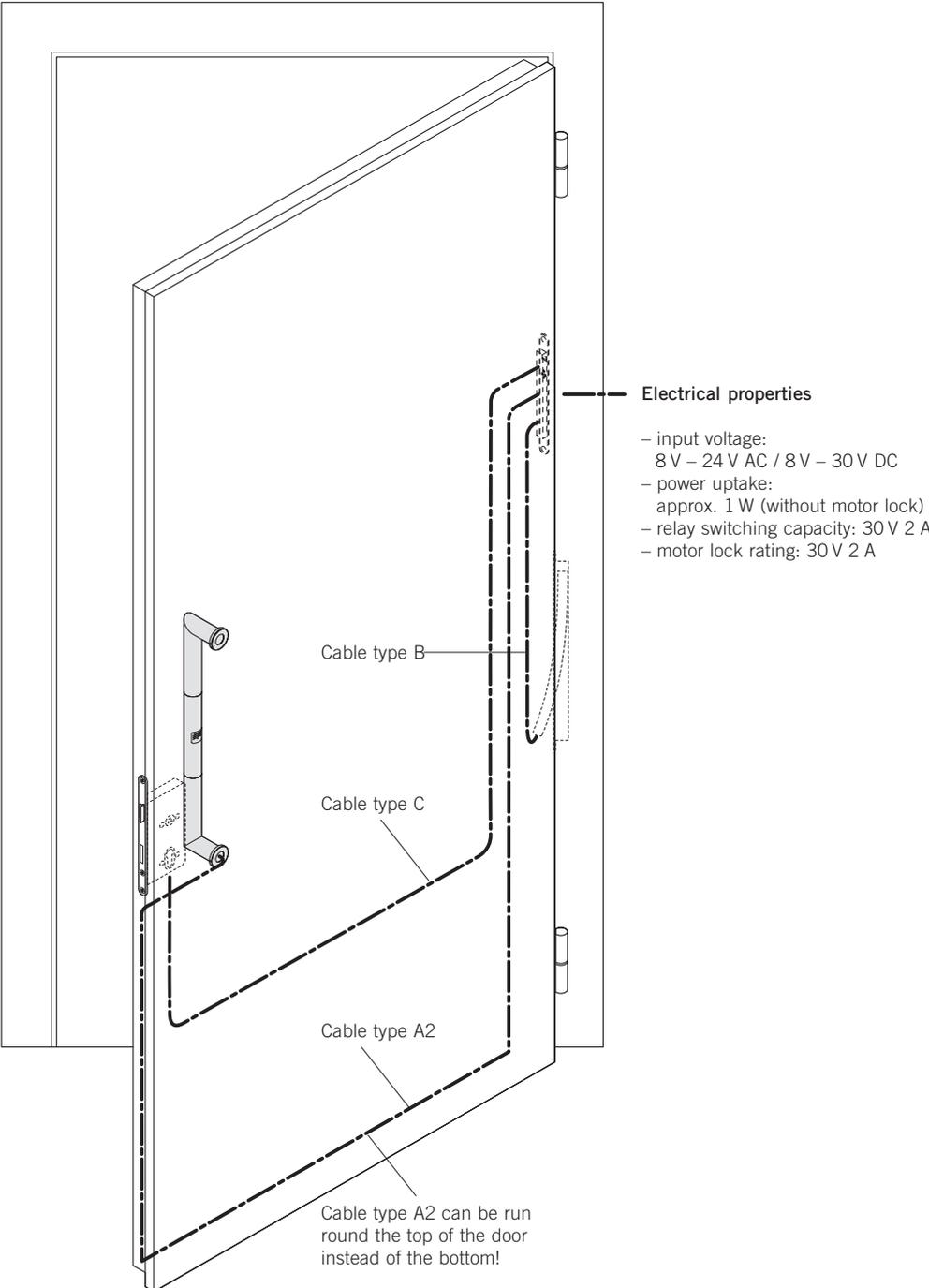
Dimension X	0589 ....
7–16 mm	.... 0011
17–26 mm	.... 0012
27–36 mm	.... 0013



Dimension X = cavity dimension

# Door plan

FSB Fingerscan 2.0 door pull with integra control unit



## Overview of Components

Product Code	<b>Fingerscan 2.0 packages</b> comprise door pull, scanner, control unit, A2 cable
6669 4523 6204	Dimension X 450 mm
6607 4523 6204	Dimension X 450 mm
6538 4524 6204	Dimension X 450 mm
6538 4525 6204	Dimension X 450 mm
6669 9923 6204	Dimension X max. 1,300 mm
6607 9923 6204	Dimension X max. 1,500 mm
6538 9924 6204	Dimension X max. 1,500 mm
6538 9925 6204	Dimension X max. 1,500 mm

Product Code	<b>Accessories</b>
	<b>Connector cables</b>
0458 0029 8000	Type B 2 m
0458 0030 8000	Type B 8 m
0458 0031 8000	Type C 2 m
0458 0032 8000	Type C 4 m
	<b>Power packs</b>
0458 0033 8100	Male connector 230 V AC -9 V AC, 800 mA
0458 0034 0000	AC/DC power pack 230 V / 12 V DC / 2 A Top-hat rail
0458 0001 0000	AC/DC power pack 230 V / 24 V DC / 1 A Top-hat rail
	<b>Cable crossovers</b>
0458 1001 5704	Coiled cable crossover KÜ M 1188
0458 1005 8800	Plug-in cable crossover Li YC 4 x 0.25
	<b>Fastenings</b>
0589 0011 5700	invisible face fixing 45 mm
0589 0012 5700	invisible face fixing 55 mm
0589 0013 5700	invisible face fixing 65 mm
0589 4435 6204	bolt through fixing 35–44 mm
0589 4445 6204	bolt through fixing 45–54 mm
0589 4455 6204	bolt through fixing 55–64 mm
0589 4465 6204	bolt through fixing 65–74 mm
0589 4475 6204	bolt through fixing 75–84 mm



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