
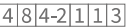
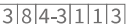





S3400.EHO

Surface mounted electro-magnetic hold open cam action door closer
EN 2-4 power adjustable by spring

Performance

- EN 2-4 adjustable power (1100mm maximum door width).
- CE marked (DOP-SHL-DC78).
- Certifire approved up to FD120 on timber doors. 
- Tested to BS EN 1154 - 
- Tested to BS EN 1155 - 

Specifications

- Efficient cam action mechanism provides easy operation.
- 38mm wide slide track and cover with matching arm and integrated 24v DC electro-magnetic hold open device with adjustable holding force from 25Nm to 78Nm.
- Adjustable hold open point from 80° to 140°.
- Requires 24vDC± 15% (0.058A / 1.4W) power supply from transformer and relay interface with Fire Alarm System.
- Adjustable closing power, speed, latch action and backcheck.
- Capable of meeting the opening force requirements of ADM and BS8300 (873mm minimum door width at EN3). 

Models

S3401.EHO - Door mount pull side with electro magnetic hold open track.

S3406.EHO - Door mount push side with electro magnetic hold open track.

S3400.EHOATP - Electro-magnetic hold open arm track pack only.

Add suffix **.SR** for semi radius cover version.

Add suffix **.RE** for rectangular cover version.

Add suffix **.MEC** for slide plate option.

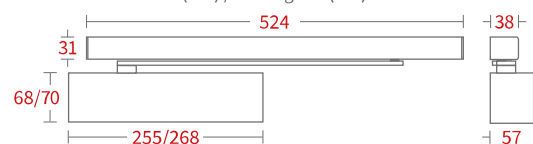
Finishes

SSN • SES • PSC • RAL • BRO

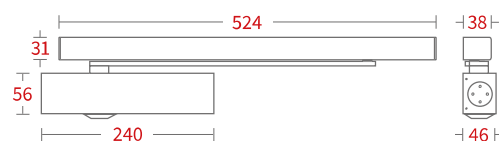
(Page 48-51 for further details).

Dimensions

Closer with semi-radius (.SR) / rectangular (.RE) cover



Closer with slide plate (.MEC)



Features

Pull side door mounting (S3401.EHO).	✓
Pull side door mounting (S3406.EHO).	✓
Closing power EN size.	2-4
Adjustable closing speed, latch action and backcheck.	✓
Minimum door width to meet ADM/BS8300 at EN3.	873mm
Optional 5mm closer mounting plate (Page 52).	S3400.MP
Optional angle bracket for deep reveal frame (Page 52).	S3406.EHO. AB
Warranty (Mechanical / Electrical).	10 years / 2 years



Construction Products Regulation 2011
DECLARATION OF PERFORMANCE

No. DOP-SHL-DC78
CE Certificate of Conformity number AE5019

In accordance with EU Nr.305/2011 (UK)

- Unique identification code of the product-type: **S3000.EHO, S3400.EHO & S3500.EHO series overhead door closers with electrically powered hold open track.**
- Intended use or uses: **For use on fire and smoke compartmentation doors when fitted in accordance with the manufacturers fitting instructions to fulfil the ability to release equipment.**
- Manufacturer name and address: **Synergy Hardware Ltd. Unit 2 Heath Mill Business Centre, Heath Mill Road, Wombourne, Wolverhampton, WV5 8AP.**
- System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V: **System 1.**
- Harmonised standard: **EN 1155: 1997 A1:2002/AC:2006.**
- Notified body: **2812 Element Materials Technology.**

Declared Performance, Frame-mounted pull side, frame-mounted push side.

Essential Characteristics	Performance	Harmonised Technical Specification
Ability to release	<ul style="list-style-type: none">• Category of use: Grade 3• Hold-open power size: EN 3-6• Suitability for fire/smoke doors use: Grade 1• Safety: Grade 1• Release from any angle: Pass• Not possible to inhibit the release: Pass• Supply voltage: Pass• External electrical connection: Pass• Inlet for external wiring: Pass	EN 1155: 1997/A1:2002/AC:2006
Durability of ability to release	<ul style="list-style-type: none">• Electrical release: Pass• 500,000 test cycles: Pass, Grade 8• Corrosion resistance: Pass Grade 3	
Durability of self-closing	<ul style="list-style-type: none">• Durability: EN1154 (See separate DoP for this element)	
Dangerous Substances Annex ZA3	The materials in the product(s) do not contain or release any dangerous substances in excess of the maximum levels specified in existing European material standards or any national regulations	

The performance of the product identified above is in conformity with the set of declared performance(s).

This declaration of performance is issued under the sole responsibility of the manufacturer listed above.

Signed for and on the behalf of the manufacturer:

A handwritten signature in black ink, appearing to read 'N. Morgan'. The signature is stylized, with a large, prominent 'O' at the end.

Mr Neil Morgan
Managing Director
Updated Issue: 16th November 2020



Construction Products Regulation 2011
DECLARATION OF PERFORMANCE

No. DOP-SHL-DC72
CE Certificate of Conformity number AD5198

In accordance with EU Nr.305/2011 (UK)

- Unique identification code of the product-type: **S3400 series Overhead Door closers.**
- Intended use or uses: **For use on fire and smoke compartmentation doors when fitted in accordance with the manufacturers fitting instructions to fulfil the self-closing requirements of such doors.**
- Manufacturer name and address: **Synergy Hardware Ltd. Unit 2 Heath Mill Business Centre, Heath Mill Road, Wombourne, Wolverhampton, WV5 8AP.**
- System or systems of assessment and verification of constancy of performance of the construction product as set out in CPR, Annex V: **System 1.**
- Harmonised standard: **EN 1154: 1996 A1:2002/AC:2006.**
- Notified body: **2812 Element Materials Technology Rotterdam BV.**

Declared Performance, Door-mounted & transom-mounted pull side

Essential Characteristics	Performance	Harmonised Technical Specification
Self-Closing	<ul style="list-style-type: none">• Closing door angle suitability: >=180° Grade 4• Door closer power size: EN 2-4• Efficiency: (>50% Size 2), (>60% Size 4)• Closing time: Pass• Suitability for fire/smoke door use: Pass, Grade 1• Safety: Pass, Grade 1• Temperature Dependence -15°C to +40°C: Pass• Fluid leakage: Pass• Latch control: Pass• Backcheck: Pass• Delayed action: N/A• Adjustable closing force: Pass	EN 1154: 1996/A1:2002/AC:2006
Durability of self-closing	<ul style="list-style-type: none">• 500,000 test cycles: Pass, Grade 8• Corrosion resistance: Pass Grade 3	
Dangerous Substances Annex ZA3	The materials in the product(s) do not contain or release any dangerous substances in excess of the maximum levels specified in existing European material standards or any national regulations	

Declared Performance, Door-mounted & transom mounted push side

Essential Characteristics	Performance	Harmonised Technical Specification
Self-Closing	<ul style="list-style-type: none">• Closing door angle suitability: >=105° Grade 3• Door closer power size: EN 2-4• Efficiency: (>50% Size 2), (>60% Size 4)• Closing time: Pass• Suitability for fire/smoke door use: Pass, Grade 1• Safety: Pass, Grade 1• Temperature Dependence -15°C to +40°C: Pass• Fluid leakage: Pass• Latch control: Pass• Backcheck: Pass• Delayed action: N/A• Adjustable closing force: Pass	EN 1154: 1996/A1:2002/AC:2006
Durability of self-closing	<ul style="list-style-type: none">• 500,000 test cycles: Pass, Grade 8• Corrosion resistance: Pass Grade 3	
Dangerous Substances Annex ZA3	The materials in the product(s) do not contain or release any dangerous substances in excess of the maximum levels specified in existing European material standards or any national regulations	

The performance of the product identified above is in conformity with the set of declared performance(s).

This declaration of performance is issued under the sole responsibility of the manufacturer listed above.

Signed for and on the behalf of the manufacturer:



Mr Neil Morgan
Managing Director
Updated Issue: 16th November 2020



CERTIFICATE OF APPROVAL

No CF 5312

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

SYNERGY HARDWARE LIMITED

Unit 2 Heath Mill Business Centre
Heath Mill Road, Wombourne
Wolverhampton WV5 8AP
Tel: 01902 893725

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCT

Synergy CAM Action Door
Surface Mounted Overhead
Closers

TECHNICAL SCHEDULE

TS 34 - The Contribution Of
Controlled Door Closing
Devices And Accessories To
Fire Resisting Doorsets

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager



Issued: 25th September 2015
Revised: 4th February 2021
Valid to: 26th January 2022





CERTIFICATE No CF 5312

SYNERGY HARDWARE LIMITED

SYNERGY SURFACE MOUNTED OVERHEAD DOOR CLOSERS

1. This approval relates to the following overhead mounted door closing devices and configurations:

	TABLE 1						
	Link-arms			Slide arms			
	Projecting arm (Fig. 1) Body door mounted on pull face	Projecting arm (Fig. 61) Body transom mounted on push face	Parallel arm (Fig. 6) Body door mounted on push face	Body door mounted on pull face	Body transom mounted on push face	Body door mounted on push face	Body transom mounted on pull face
S3001	✗	✗	✗	✓	✓	✗	✗
S3006	✗	✗	✗	✗	✗	✓	✓
S3401	✗	✗	✗	✓	✓	✗	✗
S3406	✗	✗	✗	✗	✗	✓	✓
S3501	✗	✗	✗	✓	✓	✗	✗
S3506	✗	✗	✗	✗	✗	✓	✓
S3001.EHO	✗	✗	✗	✓	✗	✗	✗
S3006.EHO	✗	✗	✗	✗	✗	✓	✗
S3401.EHO	✗	✗	✗	✓	✗	✗	✗
S3406.EHO	✗	✗	✗	✗	✗	✓	✗
S3501.EHO	✗	✗	✗	✓	✗	✗	✗
S3506.EHO	✗	✗	✗	✗	✗	✓	✗

Key: ✓ - approved ✗ - Not approved

Note: Where alternative arms for non-fire applications are included within the packaging, the use of these components on fire resisting door assemblies will invalidate the certification.

2. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
3. This approval relates to their use with the following door assemblies: -

Latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance of up to 120 minutes (Code ITT).



CERTIFICATE No CF 5312

SYNERGY HARDWARE LIMITED

SYNERGY SURFACE MOUNTED OVERHEAD DOOR CLOSERS

4. The closers are approved on the basis of:
- i) Initial type testing to BS EN 1154 and BS EN 1634-1
 - ii) An appraisal against TS34
 - iii) Certification of quality management system.
 - iv) Inspection and surveillance of factory production control
 - v) On-going audit testing in accordance with EN 1154 requirements
5. This approval is applicable only to the specified closers when mounted in the applications stated later under the classification codes section of this certificate and used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987) and having power ratings appropriate to the leaf sizes subject to a minimum size 3 (as specified in BS EN 1154).
6. The closers shall be fixed with screws supplied by the closer manufacturer. Bolt-through fixings shall not be used.
7. Where the closers are fitted to door leaves or frames that are manufactured from mineral-based materials, or low-density cellulosic-based material, the door assembly shall have previously been shown capable of accommodating the installation of closers at the head of the doorset, without detriment to the door assembly's performance.
8. Timber based doorset shall be installed in accordance with BS 8214.
9. The approval relates to on-going production. The product and/or its immediate packaging are identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.



CERTIFICATE No CF 5312 SYNERGY HARDWARE LIMITED

SYNERGY SURFACE MOUNTED OVERHEAD DOOR CLOSERS

7. The following table show acceptable doorset types and fire resistance periods:

TABLE 2					
Approved Door Type					
Class	IMM	MM	ITT	ITM	ITC
FD20	x	x	✓	x	x
FD30	x	x	✓	x	x
FD60	x	x	✓	x	x
FD90	x	x	✓	x	x
FD120	x	x	✓	x	x
FD240	x	x	x	x	x
E 20	x	x	✓	x	x
EI 20	x	x	✓	x	x
E 30	x	x	✓	x	x
EI 30	x	x	✓	x	x
E 60	x	x	✓	x	x
EI 60	x	x	✓	x	x
E 90	x	x	✓	x	x
EI 90	x	x	✓	x	x
E 120	x	x	✓	x	x
EI 120	x	x	✓	x	x
E 240	x	x	x	x	x
EI 240	x	x	x	x	x

Key:

- ✓ - approved
x - Not approved



CERTIFICATE No CF 5312

SYNERGY HARDWARE LIMITED

SYNERGY SURFACE MOUNTED OVERHEAD DOOR CLOSERS

8. Doors are classified as the following types:

Type MM - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that do not contain intumescent materials in the frame to leaf gap.

Type IMM - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that contain intumescent materials in the frame to leaf gap.

Type ITT - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in timber frames

Type ITM - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in metal frames.

Type ITC - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in proprietary composite frames, of which the principal material is other than timber or metal but which may include any other materials.

Scope of Approval:

- Doors may not include uninsulated glass above 20% of their total area. Uninsulated glass shall not be included directly beneath the door closer body
- The closers may not be fitted to timber doorsets without perimeter intumescent fire seals to the frame rebate or door edge.
- Mechanical Hold open option is not approved
- The use of the S3406AB angle bracket is approved for use with 'body door mounted on push face' variants of the S3006, S3406 and S3506 closers.



CERTIFICATE No CF 5312 SYNERGY HARDWARE LIMITED

SYNERGY SURFACE MOUNTED OVERHEAD DOOR CLOSERS

Scope of Approval Cont'd:

- The following functions are supported by this certification:

TABLE 3			
Closer Ref.	Application	Backcheck	Delayed-Action
S3001	All applications detailed in Table 1	No	No
S3006	All applications detailed in Table 1	No	No
S3401	All applications detailed in Table 1	Yes	No
S3406	All applications detailed in Table 1	Yes	No
S3501	All applications detailed in Table 1	Yes	Yes
S3506	All applications detailed in Table 1	Yes	Yes
S3001.EHO	Body door mounted on pull face	No	No
S3006.EHO	Body door mounted on push face	No	No
S3401.EHO	Body door mounted on pull face	Yes*	No
S3406.EHO	Body door mounted on push face	Yes*	No
S3501.EHO	Body door mounted on pull face	Yes*	Yes*
S3506.EHO	Body door mounted on push face	Yes*	Yes*

*Based on previous successful EN1154 testing

Classification codes:

S3001 (EN1154):

4	8	3	1	1	3
---	---	---	---	---	---

S3401 (EN1154):

4	8	4 2	1	1	3
---	---	--------	---	---	---

S3501 (EN1154):

4	8	5 2	1	1	3
---	---	--------	---	---	---

S3006 (EN1154):

3	8	3	1	1	3
---	---	---	---	---	---



CERTIFICATE No CF 5312 SYNERGY HARDWARE LIMITED

SYNERGY SURFACE MOUNTED OVERHEAD DOOR CLOSERS

Classification codes – Cont'd:

S3406 (EN1154):

3	8	4 2	1	1	3
---	---	--------	---	---	---

S3506 (EN1154):

3	8	5 2	1	1	3
---	---	--------	---	---	---

S3001.EHO and S3006.EHO (EN1155):

3	8	3	1	1	3
---	---	---	---	---	---

S3401.EHO and S3406.EHO (EN1155):

3	8	4 2	1	1	3
---	---	--------	---	---	---

S3501.EHO and S3506.EHO (EN1155):

3	8	5 2	1	1	3
---	---	--------	---	---	---

Further Information

Further information regarding the details contained in this certificate may be obtained from Synergy Hardware Limited (Tel: 01902 893725).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).