



# S300

## Surface mounted rack & pinion door closer EN 2-4 power adjustable by template

### Performance

- EN 2-4 adjustable power.  
(Fig.1 EN 2-4 / 1100mm maximum door width).  
(Fig.6 EN 3 / 950mm maximum door width).

- CE marked (DOP-SHL-DC53).

- Certifire approved up to FD120 on timber doors. 

- Tested to BS EN 1154 - Fig.1 

3	8	4	2	1	1	3
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- Fig.6 

3	8	3	1	1	3
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### Specifications

- Rack & Pinion mechanism with matching flat form armset.
- Extruded body.
- Universal application (Fig.1, Fig.6 & Fig.61).
- Adjustable closing speed and independent latch action.

### Models

S300 - Universal mounting (Fig.1, Fig.6 & Fig.61).

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

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

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

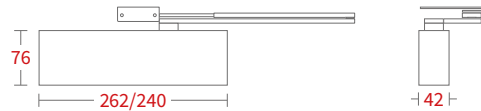
### Finishes

**SSN • SES • PSC • BRO**

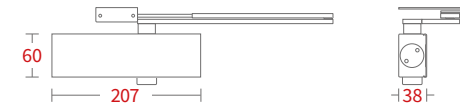
(Page 48-51 for further details).

### Dimensions

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



Closer with slide plate (.MEC)



### Features

Fig.1 mounting.	✓
Fig.6 / Fig.61 mounting.	✓
Closing power EN size (Fig.1/Fig.6).	2-4 / 3
Adjustable closing speed and latch action.	✓
Optional mechanical hold open arm - Page 52. (Not CE marked or suitable for fire door applications).	S800.SES. HOA
Warranty.	10 years



2. RACK & PINION CLOSERS

S300 SR in PBM Finish



Construction Products Regulation 2011  
DECLARATION OF PERFORMANCE

**No. DOP-SHL-DC53**  
**CE Certificate of Conformity number AD5193**

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

- Unique identification code of the product-type: **S300 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 pull side (Fig.1)**

Essential Characteristics	Performance	Harmonised Technical Specification
Self-Closing	<ul style="list-style-type: none"> <li>• Closing door angle suitability: <b>&gt;=105° Grade 3</b></li> <li>• Door closer power size: <b>EN 2-4</b></li> <li>• Efficiency: (<b>&gt;50% Size 2</b>), (<b>&gt;60% Size 4</b>)</li> <li>• Closing time: <b>Pass</b></li> <li>• Suitability for fire/smoke door use: <b>Pass, Grade 1</b></li> <li>• Safety: <b>Pass, Grade 1</b></li> <li>• Temperature Dependence -15°C to +40°C: <b>Pass</b></li> <li>• Fluid leakage: <b>Pass</b></li> <li>• Latch control: <b>Pass</b></li> <li>• Backcheck: <b>Pass</b></li> <li>• Delayed action: <b>N/A</b></li> <li>• Adjustable closing force: <b>Pass</b></li> </ul>	EN 1154: 1996/A1:2002/AC:2006
Durability of self-closing	<ul style="list-style-type: none"> <li>• 500,000 test cycles: <b>Pass, Grade 8</b></li> <li>• Corrosion resistance: <b>Pass Grade 3</b></li> </ul>	
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, Transom-mounted push side (Fig.61)**

Essential Characteristics	Performance	Harmonised Technical Specification
Self-Closing	<ul style="list-style-type: none"> <li>• Closing door angle suitability: <b>&gt;=105° Grade 3</b></li> <li>• Door closer power size: <b>EN 2-4</b></li> <li>• Efficiency: (<b>&gt;50% Size 2</b>), (<b>&gt;60% Size 4</b>)</li> <li>• Closing time: <b>Pass</b></li> <li>• Suitability for fire/smoke door use: <b>Pass, Grade 1</b></li> <li>• Safety: <b>Pass, Grade 1</b></li> <li>• Temperature Dependence -15°C to +40°C: <b>Pass</b></li> <li>• Fluid leakage: <b>Pass</b></li> <li>• Latch control: <b>Pass</b></li> <li>• Backcheck: <b>N/A</b></li> <li>• Delayed action: <b>N/A</b></li> <li>• Adjustable closing force: <b>Pass</b></li> </ul>	EN 1154: 1996/A1:2002/AC:2006
Durability of self-closing	<ul style="list-style-type: none"> <li>• 500,000 test cycles: <b>Pass, Grade 8</b></li> <li>• Corrosion resistance: <b>Pass Grade 3</b></li> </ul>	
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 push side (Fig.6)**

Essential Characteristics	Performance	Harmonised Technical Specification
Self-Closing	<ul style="list-style-type: none"> <li>• Closing door angle suitability: <b>&gt;=105° Grade 3</b></li> <li>• Door closer power size: <b>EN 3</b></li> <li>• Efficiency: (<b>&gt;55% Size 3</b>)</li> <li>• Closing time: <b>Pass</b></li> <li>• Suitability for fire/smoke door use: <b>Pass, Grade 1</b></li> <li>• Safety: <b>Pass, Grade 1</b></li> <li>• Temperature Dependence -15°C to +40°C: <b>Pass</b></li> <li>• Fluid leakage: <b>Pass</b></li> <li>• Latch control: <b>N/A</b></li> <li>• Backcheck: <b>N/A</b></li> <li>• Delayed action: <b>N/A</b></li> <li>• Adjustable closing force: <b>N/A</b></li> </ul>	EN 1154: 1996/A1:2002/AC:2006
Durability of self-closing	<ul style="list-style-type: none"> <li>• 500,000 test cycles: <b>Pass, Grade 8</b></li> <li>• Corrosion resistance: <b>Pass Grade 3</b></li> </ul>	
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 of the name.

Mr Neil Morgan  
Managing Director  
Updated Issue: 16<sup>th</sup> November 2020

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## CERTIFICATE OF APPROVAL

### No CF 5294

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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:

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#### CERTIFIED PRODUCT

Synergy S100, S150, S300, S500,  
S600, S700, S800 and S900  
Surface Mounted Overhead Door  
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 Exova (UK) Limited trading as  
Warrington Certification



Paul Duggan  
Certification Manager



Issued:  
Revised:  
Valid to:

29<sup>th</sup> September 2015  
22<sup>nd</sup> November 2017  
6<sup>th</sup> December 2021

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## CERTIFICATE No CF 5294

### SYNERGY HARDWARE LIMITED

#### SYNERGY OVERHEAD DOOR CLOSERS

1. This approval applies to the Synergy rack and pinion overhead door closer models, but excludes any mechanical hold open variants. The approval applies to the following models and configurations:

	Link-arms			Slide arms			
	Projecting arm (Fig. 1) <i>Body door mounted on pull face</i>	Projecting arm (Fig. 61) <i>Body transom mounted on push face</i>	Parallel arm (Fig. 6) <i>Body door mounted on push face</i>	Body door mounted on pull face	Body transom mounted on push face	Body door mounted on push face	Body transom mounted on pull face
<b>S100</b>	✓	✗	✓	✗	✗	✗	✗
<b>S150</b>	✓	✗	✓	✗	✗	✗	✗
<b>S300</b>	✓	✗	✓	✗	✗	✗	✗
<b>S500</b>	✓	✗	✓	✗	✗	✗	✗
<b>S600</b>	✓	✗	✓	✗	✗	✗	✗
<b>S700</b>	✗	✗	✗	✓	✗	✗	✓
<b>S800</b>	✓	✗	✓	✗	✗	✗	✗
<b>S900</b>	✓	✗	✓	✗	✗	✗	✗

**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 designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), the Technical Handbooks (Scotland) and Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.
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).**

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## CERTIFICATE No CF 5294

### SYNERGY HARDWARE LIMITED

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#### SYNERGY 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 composite-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. 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 5294 SYNERGY HARDWARE LIMITED

### SYNERGY OVERHEAD DOOR CLOSERS

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

Class	Approved Door Type				
	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 5294

## SYNERGY HARDWARE LIMITED

### SYNERGY OVERHEAD DOOR CLOSERS

10. 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:**

- All applications apply to unglazed doorsets and glazed doorsets incorporating an uninsulated glass panel size of less than 20% of the leaf area.
- Standard arm brackets only are approved.
- Hold open option is not approved.
- The closer may not be fitted to timber doorsets without intumescent protection.
- The closer application is as referenced in the Classification code section below in accordance with EN 1154.

**Classification codes:**

**S100 and S150 in Figure 1 projecting arm application:**

3	8	4 2	1	1	3
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**S100 and S150 in Figure 6 parallel arm application:**

3	8	3	1	1	3
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**SYNERGY HARDWARE LIMITED**

**SYNERGY OVERHEAD DOOR CLOSERS**

**Classification codes (continued):**

**S300 in Figure 1 projecting arm application:**

3	8	4 2	1	1	3
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**S300 in Figure 6 parallel arm application:**

3	8	3	1	1	3
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**S500 in Figure 1 projecting arm and Figure 6 parallel arm applications:**

3	8	4 2	1	1	4
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**S600 in Figure 1 projecting arm application:**

4	8	4 2	1	1	3
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**S600 in Figure 6 parallel arm application:**

3	8	4 3	1	1	3
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**S700 in slide arm body door mounted on pull face and transom mounted on pull face applications:**

4	8	4 2	1	1	3
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## CERTIFICATE No CF 5294 SYNERGY HARDWARE LIMITED

### SYNERGY OVERHEAD DOOR CLOSERS

#### Classification codes (continued):

**S700 in slide arm body transom mounted on push face applications:**

3	8	4 2	1	1	3
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**S800 in Figure 1 projecting arm application:**

4	8	5 2	1	1	4
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**S800 in Figure 6 parallel arm application:**

3	8	4 3	1	1	4
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**S900 in Figure 1 projecting arm applications:**

4	8	6 2	1	1	3
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**S900 in Figure 6 parallel arm applications:**

4	8	5 3	1	1	3
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*Note: power ratings shall be appropriate to the leaf sizes subject to a minimum size 3 (as specified in BS EN 1154).*

#### 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).