



power contactor, AC-3e/AC-3 400 A, 200 kW / 400 V without operating mechanism  
3-pole, auxiliary contacts 2 NO + 2 NC main circuit: busbar control and auxiliary  
circuit: screw terminal

|  |                            |
|--|----------------------------|
| product brand name   | SIRIUS                     |
| product designation  | Power contactor            |
| product type designation   | 3RT1                       |
| <b>General technical data</b>  |                            |
| size of contactor  | S12                        |
| product extension  |                            |
| • function module for communication  | No                         |
| • auxiliary switch   | Yes                        |
| power loss [W] for rated value of the current  |                            |
| • at AC in hot operating state   | 105 W                      |
| • at AC in hot operating state per pole  | 35 W                       |
| type of calculation of power loss depending on pole  | quadratic                  |
| insulation voltage   |                            |
| • of main circuit with degree of pollution 3 rated value   | 1 000 V                    |
| • of auxiliary circuit with degree of pollution 3 rated value  | 500 V                      |
| surge voltage resistance   |                            |
| • of main circuit rated value  | 8 kV                       |
| • of auxiliary circuit rated value   | 6 kV                       |
| maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 | 690 V                      |
| shock resistance at rectangular impulse  |                            |
| • at AC  | 8,5g / 5 ms, 4,2g / 10 ms  |
| • at DC  | 8,5g / 5 ms, 4,2g / 10 ms  |
| shock resistance with sine pulse   |                            |
| • at AC  | 13,4g / 5 ms, 6,5g / 10 ms |
| • at DC  | 13,4g / 5 ms, 6,5g / 10 ms |
| mechanical service life (operating cycles)   |                            |
| • of contactor typical   | 10 000 000                 |
| • of the contactor with added electronically optimized auxiliary switch block typical                        | 5 000 000                  |
| • of the contactor with added auxiliary switch block typical   | 10 000 000                 |
| reference code according to IEC 81346-2  | Q                          |
| Substance Prohibition (Date)   | 05/01/2012                 |
| SVHC substance name  | Lead - 7439-92-1           |
| Weight   | 9.114 kg                   |
| <b>Ambient conditions</b>  |                            |
| installation altitude at height above sea level maximum  | 2 000 m                    |
| ambient temperature  |                            |
| • during operation   | -25 ... +60 °C             |
| • during storage   | -55 ... +80 °C             |
| relative humidity minimum  | 10 %                       |

|   |                     |
|---|---------------------|
| relative humidity at 55 °C according to IEC 60068-2-30 maximum    | 95 %                |
| <b>Main circuit</b>   |                     |
| number of poles for main current circuit                          | 3                   |
| number of NO contacts for main contacts                           | 3                   |
| operating voltage   |                     |
| • at AC-3 rated value maximum                                     | 1 000 V             |
| • at AC-3e rated value maximum                                    | 1 000 V             |
| operational current   |                     |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value       | 430 A               |
| • at AC-1   |                     |
| — up to 690 V at ambient temperature 40 °C rated value            | 430 A               |
| — up to 690 V at ambient temperature 60 °C rated value            | 400 A               |
| — up to 1000 V at ambient temperature 40 °C rated value           | 200 A               |
| — up to 1000 V at ambient temperature 60 °C rated value           | 200 A               |
| • at AC-3   |                     |
| — at 400 V rated value  | 400 A               |
| — at 500 V rated value  | 400 A               |
| — at 690 V rated value  | 400 A               |
| — at 1000 V rated value   | 180 A               |
| • at AC-3e  |                     |
| — at 400 V rated value  | 400 A               |
| — at 500 V rated value  | 400 A               |
| — at 690 V rated value  | 400 A               |
| — at 1000 V rated value   | 180 A               |
| • at AC-4 at 400 V rated value                                    | 350 A               |
| • at AC-5a up to 690 V rated value                                | 378 A               |
| • at AC-5b up to 400 V rated value                                | 332 A               |
| • at AC-6a  |                     |
| — up to 230 V for current peak value n=20 rated value             | 395 A               |
| — up to 400 V for current peak value n=20 rated value             | 395 A               |
| — up to 500 V for current peak value n=20 rated value             | 395 A               |
| — up to 690 V for current peak value n=20 rated value             | 395 A               |
| — up to 1000 V for current peak value n=20 rated value            | 180 A               |
| • at AC-6a  |                     |
| — up to 230 V for current peak value n=30 rated value             | 264 A               |
| — up to 400 V for current peak value n=30 rated value             | 264 A               |
| — up to 500 V for current peak value n=30 rated value             | 264 A               |
| — up to 690 V for current peak value n=30 rated value             | 264 A               |
| — up to 1000 V for current peak value n=30 rated value            | 180 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value | 300 mm <sup>2</sup> |
| operational current for approx. 200000 operating cycles at AC-4   |                     |
| • at 400 V rated value  | 150 A               |
| • at 690 V rated value  | 135 A               |
| operational current   |                     |
| • at 1 current path at DC-1                                       |                     |
| — at 24 V rated value   | 400 A               |
| — at 60 V rated value   | 330 A               |
| — at 110 V rated value  | 33 A                |
| — at 220 V rated value  | 3.8 A               |
| — at 440 V rated value  | 0.9 A               |
| — at 600 V rated value  | 0.6 A               |
| • with 2 current paths in series at DC-1                          |                     |
| — at 24 V rated value   | 400 A               |
| — at 60 V rated value   | 400 A               |

|  |             |
|--|-------------|
| — at 110 V rated value   | 400 A       |
| — at 220 V rated value   | 400 A       |
| — at 440 V rated value   | 4 A         |
| — at 600 V rated value   | 2 A         |
| ● with 3 current paths in series at DC-1                           |             |
| — at 24 V rated value  | 400 A       |
| — at 60 V rated value  | 400 A       |
| — at 110 V rated value   | 400 A       |
| — at 220 V rated value   | 400 A       |
| — at 440 V rated value   | 11 A        |
| — at 600 V rated value   | 5.2 A       |
| ● at 1 current path at DC-3 at DC-5                                |             |
| — at 24 V rated value  | 400 A       |
| — at 60 V rated value  | 11 A        |
| — at 220 V rated value   | 0.6 A       |
| — at 440 V rated value   | 0.18 A      |
| — at 600 V rated value   | 0.125 A     |
| ● with 2 current paths in series at DC-3 at DC-5                   |             |
| — at 24 V rated value  | 400 A       |
| — at 60 V rated value  | 400 A       |
| — at 110 V rated value   | 400 A       |
| — at 220 V rated value   | 2.5 A       |
| — at 440 V rated value   | 0.65 A      |
| — at 600 V rated value   | 0.37 A      |
| ● with 3 current paths in series at DC-3 at DC-5                   |             |
| — at 24 V rated value  | 400 A       |
| — at 60 V rated value  | 400 A       |
| — at 110 V rated value   | 400 A       |
| — at 220 V rated value   | 400 A       |
| — at 440 V rated value   | 1.4 A       |
| — at 600 V rated value   | 0.75 A      |
| <b>operating power</b>   |             |
| ● at AC-3  |             |
| — at 230 V rated value   | 132 kW      |
| — at 400 V rated value   | 200 kW      |
| — at 500 V rated value   | 250 kW      |
| — at 690 V rated value   | 400 kW      |
| — at 1000 V rated value  | 250 kW      |
| ● at AC-3e   |             |
| — at 230 V rated value   | 132 kW      |
| — at 400 V rated value   | 200 kW      |
| — at 500 V rated value   | 250 kW      |
| — at 690 V rated value   | 400 kW      |
| — at 1000 V rated value  | 250 kW      |
| <b>operating power for approx. 200000 operating cycles at AC-4</b> |             |
| ● at 400 V rated value   | 85 kW       |
| ● at 690 V rated value   | 133 kW      |
| <b>operating apparent power at AC-6a</b>                           |             |
| ● up to 230 V for current peak value n=20 rated value              | 150 000 kVA |
| ● up to 400 V for current peak value n=20 rated value              | 270 000 VA  |
| ● up to 500 V for current peak value n=20 rated value              | 340 000 VA  |
| ● up to 690 V for current peak value n=20 rated value              | 470 000 VA  |
| ● up to 1000 V for current peak value n=20 rated value             | 310 000 VA  |
| <b>operating apparent power at AC-6a</b>                           |             |
| ● up to 230 V for current peak value n=30 rated value              | 100 000 VA  |
| ● up to 400 V for current peak value n=30 rated value              | 180 000 VA  |
| ● up to 500 V for current peak value n=30 rated value              | 220 000 VA  |
| ● up to 690 V for current peak value n=30 rated value              | 310 000 VA  |
| ● up to 1000 V for current peak value n=30 rated value             | 310 000 VA  |
| <b>short-time withstand current in cold operating state up to</b>  |             |

|   |   |
|---|---|
| <b>40 °C</b>  |   |
| <ul style="list-style-type: none"> <li>• limited to 1 s switching at zero current maximum</li> <li>• limited to 5 s switching at zero current maximum</li> <li>• limited to 10 s switching at zero current maximum</li> <li>• limited to 30 s switching at zero current maximum</li> <li>• limited to 60 s switching at zero current maximum</li> </ul> | 6 600 A; Use minimum cross-section acc. to AC-1 rated value<br>5 761 A; Use minimum cross-section acc. to AC-1 rated value<br>4 143 A; Use minimum cross-section acc. to AC-1 rated value<br>2 635 A; Use minimum cross-section acc. to AC-1 rated value<br>2 088 A; Use minimum cross-section acc. to AC-1 rated value |
| <b>no-load switching frequency</b>  |   |
| <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>  | 2 000 1/h<br>2 000 1/h  |
| <b>operating frequency</b>  |   |
| <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-3e maximum</li> <li>• at AC-4 maximum</li> </ul>  | 700 1/h<br>200 1/h<br>500 1/h<br>500 1/h<br>130 1/h   |
| <b>Control circuit/ Control</b>   |   |
| <b>type of voltage of the control supply voltage</b>  | AC/DC   |
| <b>closing delay</b>  |   |
| <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>  | 45 ... 100 ms<br>45 ... 100 ms  |
| <b>opening delay</b>  |   |
| <ul style="list-style-type: none"> <li>• at AC</li> <li>• at DC</li> </ul>  | 60 ... 100 ms<br>60 ... 100 ms  |
| <b>arcing time</b>  | 10 ... 15 ms  |
| <b>control version of the switch operating mechanism</b>  | Without operating mechanism   |
| <b>Auxiliary circuit</b>  |   |
| number of NC contacts for auxiliary contacts instantaneous contact  | 2   |
| number of NO contacts for auxiliary contacts instantaneous contact  | 2   |
| operational current at AC-12 maximum  | 10 A  |
| <b>operational current at AC-15</b>   |   |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>  | 6 A<br>3 A<br>2 A<br>1 A  |
| <b>operational current at DC-12</b>   |   |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>   | 10 A<br>6 A<br>6 A<br>3 A<br>2 A<br>1 A<br>0.15 A   |
| <b>operational current at DC-13</b>   |   |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>   | 10 A<br>2 A<br>2 A<br>1 A<br>0.9 A<br>0.3 A<br>0.1 A  |
| <b>contact reliability of auxiliary contacts</b>  | 1 faulty switching per 100 million (17 V, 1 mA)   |
| <b>UL/CSA ratings</b>   |   |
| <b>full-load current (FLA) for 3-phase AC motor</b>   |   |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>  | 361 A<br>382 A  |
| <b>yielded mechanical performance [hp]</b>  |   |
| <ul style="list-style-type: none"> <li>• for 3-phase AC motor             <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> </ul> </li> </ul>  | 125 hp<br>150 hp  |



|   |  |
|---|--|
| — at 460/480 V rated value  | 300 hp   |
| — at 575/600 V rated value  | 400 hp   |
| <b>contact rating of auxiliary contacts according to UL</b>   | A600 / Q600  |
| <b>Short-circuit protection</b>   |  |
| <b>design of the fuse link</b>  |  |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>with type of coordination 1 required</li> <li>with type of assignment 2 required</li> </ul> </li> <li>for short-circuit protection of the auxiliary switch required</li> </ul>   | gG: 630 A (690 V, 100 kA)<br>gG: 500 A (690 V, 100 kA), aM: 400 A (690 V, 50 kA), BS88: 450 A (415 V, 50 kA)<br>gG: 10 A (500 V, 1 kA)   |
| <b>Installation/ mounting/ dimensions</b>   |  |
| <b>mounting position</b>  | with vertical mounting surface +/-90° rotatable, with vertical mounting surface +/- 22.5° tiltable to the front and back   |
| <b>fastening method side-by-side mounting</b>   | Yes  |
| <b>fastening method</b>   | screw fixing   |
| <b>height</b>   | 214 mm   |
| <b>width</b>  | 160 mm   |
| <b>depth</b>  | 225 mm   |
| <b>required spacing</b>   |  |
| <ul style="list-style-type: none"> <li>with side-by-side mounting <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>at the side</li> <li>downwards</li> </ul> </li> <li>for live parts <ul style="list-style-type: none"> <li>forwards</li> <li>upwards</li> <li>downwards</li> <li>at the side</li> </ul> </li> </ul> | 20 mm<br>10 mm<br>10 mm<br>0 mm<br><br>20 mm<br>10 mm<br>10 mm<br>10 mm<br><br>20 mm<br>10 mm<br>10 mm<br>10 mm  |
| <b>Connections/ Terminals</b>   |  |
| <b>type of electrical connection</b>  |  |
| <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> <li>at contactor for auxiliary contacts</li> <li>of magnet coil</li> </ul>  | Connection bar<br>screw-type terminals<br>Screw-type terminals<br>Screw-type terminals   |
| <b>width of connection bar</b>  | 25 mm  |
| <b>thickness of connection bar</b>  | 6 mm   |
| <b>diameter of holes</b>  | 11 mm  |
| <b>number of holes</b>  | 1  |
| <b>type of connectable conductor cross-sections</b>   |  |
| <ul style="list-style-type: none"> <li>for AWG cables for main contacts</li> </ul>  | 2/0 ... 500 kcmil  |
| <b>connectable conductor cross-section for main contacts</b>  |  |
| <ul style="list-style-type: none"> <li>stranded</li> </ul>  | 70 ... 240 mm²   |
| <b>connectable conductor cross-section for auxiliary contacts</b>   |  |
| <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul>   | 0.5 ... 4 mm²<br>0.5 ... 2.5 mm²   |
| <b>type of connectable conductor cross-sections</b>   |  |
| <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>solid</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>   | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>2x (20 ... 16), 2x (18 ... 14), 1x 12 |
| <b>AWG number as coded connectable conductor cross section</b>  |  |
| <ul style="list-style-type: none"> <li>for auxiliary contacts</li> </ul>  | 18 ... 14  |
| <b>Safety related data</b>  |  |

|  |  |
|--|--|
| <b>product function</b>  |  |
| • mirror contact according to IEC 60947-4-1                          | Yes  |
| • positively driven operation according to IEC 60947-5-1             | No   |
| • suitable for safety function                                       | Yes  |
| suitability for use safety-related switching OFF                     | Yes  |
| <b>service life maximum</b>  | 20 a   |
| <b>test wear-related service life necessary</b>                      | Yes  |
| <b>proportion of dangerous failures</b>                              |  |
| • with low demand rate according to SN 31920                         | 40 %   |
| • with high demand rate according to SN 31920                        | 73 %   |
| <b>B10 value with high demand rate according to SN 31920</b>         | 1 000 000  |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b> | 100 FIT  |
| <b>ISO 13849</b>   |  |
| <b>device type according to ISO 13849-1</b>                          | 3  |
| <b>overdimensioning according to ISO 13849-2 necessary</b>           | Yes  |
| <b>IEC 61508</b>   |  |
| <b>safety device type according to IEC 61508-2</b>                   | Type A   |
| <b>Electrical Safety</b>   |  |
| <b>protection class IP on the front according to IEC 60529</b>       | IP00; IP20 with box terminal/cover                                       |
| <b>touch protection on the front according to IEC 60529</b>          | finger-safe, for vertical contact from the front with box terminal/cover |
| <b>Approvals Certificates</b>  |  |
| <b>General Product Approval</b>                                      |  |



[Confirmation](#)



|   |  |  |   |
|---|--|--|---|
| <b>EMV</b>  | <b>Functional Safety</b>                     | <b>Test Certificates</b>                           | <b>Marine / Shipping</b>  |
|  | <a href="#">Type Examination Certificate</a> | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Special Test Certificate</a>  |
| RCM   |  |  |  |
|   |  |  |  |
| <b>Marine / Shipping</b>  |  | <b>other</b>                                       |   |



[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)

|  |   |
|--|---|
| <b>Railway</b>                           | <b>Environment</b>                          |
| <a href="#">Special Test Certificate</a> | <a href="#">Environmental Confirmations</a> |

#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

##### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1075-6LA06>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1075-6LA06>

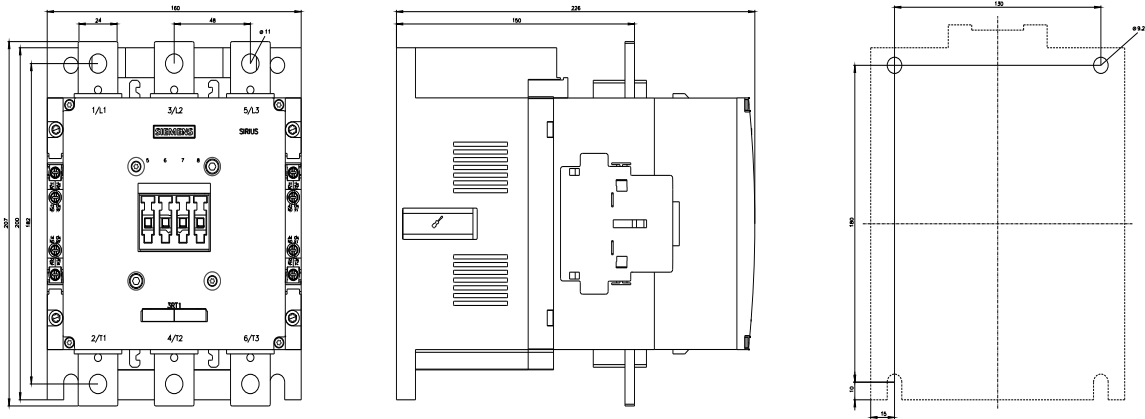
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

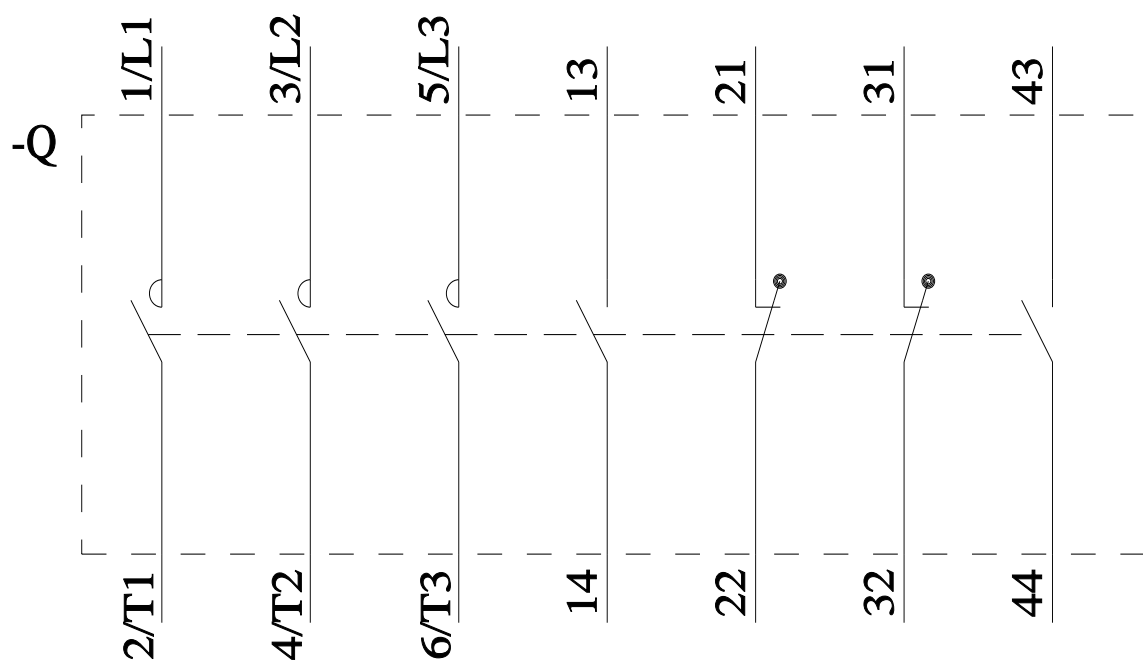
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6LA06>

##### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT1075-6LA06&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1075-6LA06&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current  
<https://support.industry.siemens.com/cs/ww/en/ps/3RT1075-6LA06/char>  
Further characteristics (e.g. electrical endurance, switching frequency)  
<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1075-6LA06&objecttype=14&gridview=view1>





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