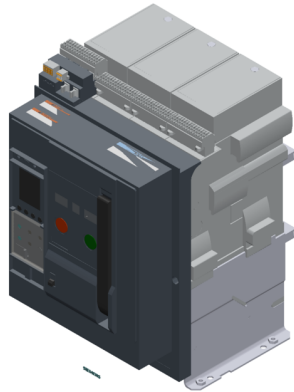


Siemens
EcoTech



Fixed-mounted circuit breaker IEC 60947-2, frame size 1, 3-poles, $I_n=1600A$, breaking capacity E, up to 1000V AC 50/60Hz, $I_{cu}=85/50kA$ at 690/1000V, Trip unit ETU600 LSI upgrade ready, colordisplay, bluetooth and USB interface, Protection LT, ST, INST, N-protection required an external N-sensor, incl. trip alarm switch (1xCO), rear connection horizontal, with internal voltage tap on lower stab of circuit breaker and voltage tap module VTM640, U_e max. 1000 V, AC 50/60Hz, able to communication, integrated metering type PMF-3 Advanced Power Monitor., Voltage, Energy, Power, Power factor, Frequency, Unbalance, Temperature, Power quality, with manual and motorized operating mechanism (M) 208-240 V AC / 220-250 V DC, Storage status and ready-to-close signaling switches, Auxiliary switches 2NO+2NC, Closing coil (CC) 100% OP 208-240 V AC / 220-250 V DC, applicable for continuous duty, without Remote trip alarm reset coil (RR), Undervoltage release (UVR) instantaneous (0,08 s) and short-delay (0,2 s), 208-240 V AC / 220-250 V DC, without 1st Shunt trip Option F19 = COM190 COM module PROFINET IO Modbus TCP 2 switched Ethernet ports circuit breaker internal Option S07 = Locking provision against unauthorized closing Secured Open; for padlock device Padlocks are not included. Option T40 = Door sealing frame IP41

Model	
product brand name	SENTRON
product designation	Air circuit breaker
suitability for use	circuit breaker
size of the circuit-breaker	I
number of poles	3
position / of neutral conductor	no internal N-conductor
fastening method	fixed-mounted circuit breakers
design of the product	AC application
type of the driving mechanism	manual operating mechanism/spring charging motor with spring charge signaling switch
design of the electronic trip unit	ETU600 LSI
Weight	48.745 kg
Net Weight	33.745 kg
General technical data	
insulation voltage / rated value	1000 V
operating voltage / at AC / at 50/60 Hz / rated value	1000 V
power loss [W] / maximum	135 W
Current	
continuous current / rated value / maximum	1600 A
continuous current / rated value	1600 A
operational current	
• at 40 °C / rated value	1600 A
• at 45 °C / rated value	1600 A
• at 50 °C / rated value	1600 A
• at 55 °C / rated value	1600 A
• at 60 °C / rated value	1600 A
• at 65 °C / rated value	1600 A
• at 70 °C / rated value	1600 A
Switching capacity and short-time withstand current, according to IEC 60947-2	
switching capacity class of the circuit breaker	E
maximum short-circuit current breaking capacity (I_{cu})	
• at 500 V / rated value	85 kA
• at 690 V / rated value	85 kA
• at 1000 V / rated value	50 kA
operating short-circuit current breaking capacity (I_{cs})	
• at 500 V / rated value	85 kA

<ul style="list-style-type: none"> • at 690 V / rated value • at 1000 V / rated value 	85 kA 50 kA
short-circuit current making capacity (I _{cm})	
<ul style="list-style-type: none"> • at 690 V / rated value • at 1000 V / rated value 	187 kA 105 kA
short-time withstand current (I _{cw}) / at 690 V AC	
<ul style="list-style-type: none"> • for 0.5 s / rated value • for 1 s / rated value • for 2 s / rated value • for 3 s / rated value 	85 kA 85 kA 70 kA 60 kA
short-time withstand current (I _{cw}) / at 1000 V AC	
<ul style="list-style-type: none"> • for 0.5 s / rated value • for 1 s / rated value • for 2 s / rated value • for 3 s / rated value 	50 kA 50 kA 50 kA 50 kA








Electronic release unit

product feature	
<ul style="list-style-type: none"> • upgradable • Bluetooth and USB interface • decoder for basic protection functions • display and function keys • SENTRON powerconfig configuration software 	Yes Yes Yes Yes Yes
position / for voltage tap	bottom

Basic protection functions

product feature / for L-tripping	
<ul style="list-style-type: none"> • can be switched on/off • selectable characteristic function • decoder and infinite adjustability are selectable with eSet 	Yes Yes Yes
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic	0.5; 0.6; 0.7; 0.75; 0.8; 0.85; 0.9; 0.95; 1
reference value setting current (I _r) / for L-tripping / with I _{2t} characteristic	x I _n
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic	1;2;5;8;10;14;17;21;25
reference value delay time (t _r) / for L-tripping / with I _{2t} characteristic	s
set values setting current (I _r) / for L-tripping / with I _{2t} characteristic / for eSet	0.4-1;0.001
adjustable absolute value setting current (I _r) / for L-tripping / with I _{2t} characteristic / for eSet	
<ul style="list-style-type: none"> • minimum • maximum 	640 A 1600 A
set values delay time (t _r) / for L-tripping / with I _{2t} characteristic / for eSet	0.5-30;0.001
set values setting current (I _r) / for L-tripping / with I _{4t} characteristic / for eSet	0.4-1;0.001
set values delay time (t _r) / for L-tripping / with I _{4t} characteristic / for eSet	0.5-5;0.001
adjustable absolute value setting current (I _r) / for L-tripping / with I _{4t} characteristic / for eSet	
<ul style="list-style-type: none"> • minimum • maximum 	640 A 1600 A
L: Overload protection N-conductor	
product feature / with neutral conductor protection / can be switched on/off	Yes
setting values setting current (I _{nN}) / for N-tripping	0.2-2;0.001
reference value setting current (I _{nN}) / for N-tripping	x I _n
adjustable setting current (I _{nN}) / for N-tripping	
<ul style="list-style-type: none"> • minimum • maximum 	320 A 3200 A
S: delayed short-circuit protection ST	
product feature / for S-tripping	
<ul style="list-style-type: none"> • independent of direction / can be switched on/off • independent of direction / selectable characteristic function 	Yes Yes

<ul style="list-style-type: none"> decoder and infinite adjustability are selectable with eSet 	Yes
S: delayed short-circuit protection ST, settings values I0t	
set values setting current (I _{sd}) / for S-tripping / with I0t characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I _{sd}) / for S-tripping / with I0t characteristic	x I _r
set values delay time (tsd) / for S-tripping / with I0t characteristic	0.08;0.15;0.22;0.3;0.4
reference value delay time (tsd) / for S-tripping / with I0t characteristic	s
set values setting current (I _{sd}) / for S-tripping / with I0t characteristic / for eSet / independent of direction	0.6-10;0.001
adjustable absolute value setting current (I _{sd})	
<ul style="list-style-type: none"> at 690 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum 	68 kA
<ul style="list-style-type: none"> at 1000 V / for S-tripping / with I0t characteristic / for eSet / independent of direction / maximum 	40 kA
set values delay time (tsd) / for S-tripping / with I0t characteristic / for eSet / independent of direction	0.02-0.4;0.001
S: delayed short-circuit protection ST, settings values I2t	
set values setting current (I _{sd}) / for S-tripping / with I2t characteristic	1.5;2;2.5;3;4;5;6;8;10
reference value setting current (I _{sd}) / for S-tripping / with I2t characteristic	x I _r
set values delay time (tsd) / for S-tripping / with I2t characteristic	0.1;0.2;0.3;0.4
set values setting current (I _{sd}) / for S-tripping / with I2t characteristic / for eSet / independent of direction	0.6-10;0.001
adjustable absolute value setting current (I _{sd})	
<ul style="list-style-type: none"> at 690 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum 	68 kA
<ul style="list-style-type: none"> at 1000 V / for S-tripping / with I2t characteristic / for eSet / independent of direction / maximum 	40 kA
set values delay time (tsd) / for S-tripping / with I2t characteristic / for eSet / independent of direction	0.02-0.4; 0.001
product feature / for I-tripping	
<ul style="list-style-type: none"> can be switched on/off 	Yes
<ul style="list-style-type: none"> decoder and infinite adjustability are selectable (with eSet) 	Yes
set values setting current (I _i) / for I-tripping	1.5;2;3;4;6;8;10;12;15
reference value setting current (I _i) / for I-tripping	x I _n
tripping factor setting current (I _{imax}) / for I-tripping	0.8
reference value setting current (I _{imax}) / for I-tripping	x I _{cs}
set values setting current (I _i) / for I-tripping / for eSet	1.5-15;0.001
adjustable absolute value setting current (I _i)	
<ul style="list-style-type: none"> at 690 V / for I-tripping / for eSet / maximum 	68 kA
<ul style="list-style-type: none"> at 1000 V / for I-tripping / for eSet / maximum 	40 kA
G: ground fault GF	
product feature / for G-tripping	
<ul style="list-style-type: none"> selectable characteristic function 	No
Further protective functions	
protection function	
<ul style="list-style-type: none"> maintenance mode DAS+ 	Yes
<ul style="list-style-type: none"> second protection parameter set 	Yes
<ul style="list-style-type: none"> directional short-circuit protection dST 	Yes
<ul style="list-style-type: none"> reverse power protection RP 	Yes
<ul style="list-style-type: none"> expanded protection function EPF 	Yes
Measuring functions	
type of measurement function	PMF-III
measurement function	
<ul style="list-style-type: none"> type according to IEC 61557-12 	Yes
<ul style="list-style-type: none"> current measurement 	Yes
<ul style="list-style-type: none"> measurement of voltage and active energy 	Yes
<ul style="list-style-type: none"> measurement of energy, performance, power factor, frequency 	Yes
<ul style="list-style-type: none"> measurement of total harmonic distortion THD-U, THD-I 	Yes
Communication	

communication function / prepared for communication (Ready4COM)	Yes
communication function	Yes
Service Life	
mechanical service life (operating cycles)	
• without support / typical	10000
• with support / typical	20000
electrical endurance (operating cycles)	
• at 690 V / without support / typical	10000
• at 690 V / with support / typical	20000
• at 1000 V / without support / typical	1000
Dimensions	
height	462 mm
width	320 mm
depth	357 mm
Main connection	
arrangement of electrical connectors / for main current circuit	main connection on the rear, horizontal
Auxiliary circuit	
design of the auxiliary switch	2 NO + 2 NC
number of NC contacts / for auxiliary contacts	2
number of NO contacts / for auxiliary contacts	2
number of CO contacts / for auxiliary contacts	0
Internal accessories	
product component	
• undervoltage release	Yes
• voltage trigger	No
• trip indicator	Yes
• motor drive	Yes
Electronic Accessories	
product component	
• communication module	COM190
Environmental conditions	
protection class IP / on the front	IP41
ambient temperature / during operation	
• minimum	-40 °C
• maximum	70 °C
ambient temperature / during storage	
• minimum	-40 °C
• maximum	80 °C
Environmental footprint	
Siemens Eco Profile (SEP)	Siemens EcoTech
Certificates	
reference code	
• according to IEC 81346-2	Q
General Product Approval	EMV
     	
Radio Equipment Type Approval Certificate	Test Certificates
Miscellaneous 	Miscellaneous FCC Special Test Certificate Miscellaneous
Maritime application	other



other	Dangerous goods	Environment
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[Confirmation](#)

[Manufacturer Declaration](#)

[Transport Information](#)

[Dangerous goods information](#)



Siemens EcoTech



Environment



Further information

Information on the packaging

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

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3WA1116-8SE02-4EQ0-Z F19+S07+T40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3WA1116-8SE02-4EQ0-Z F19+S07+T40>

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

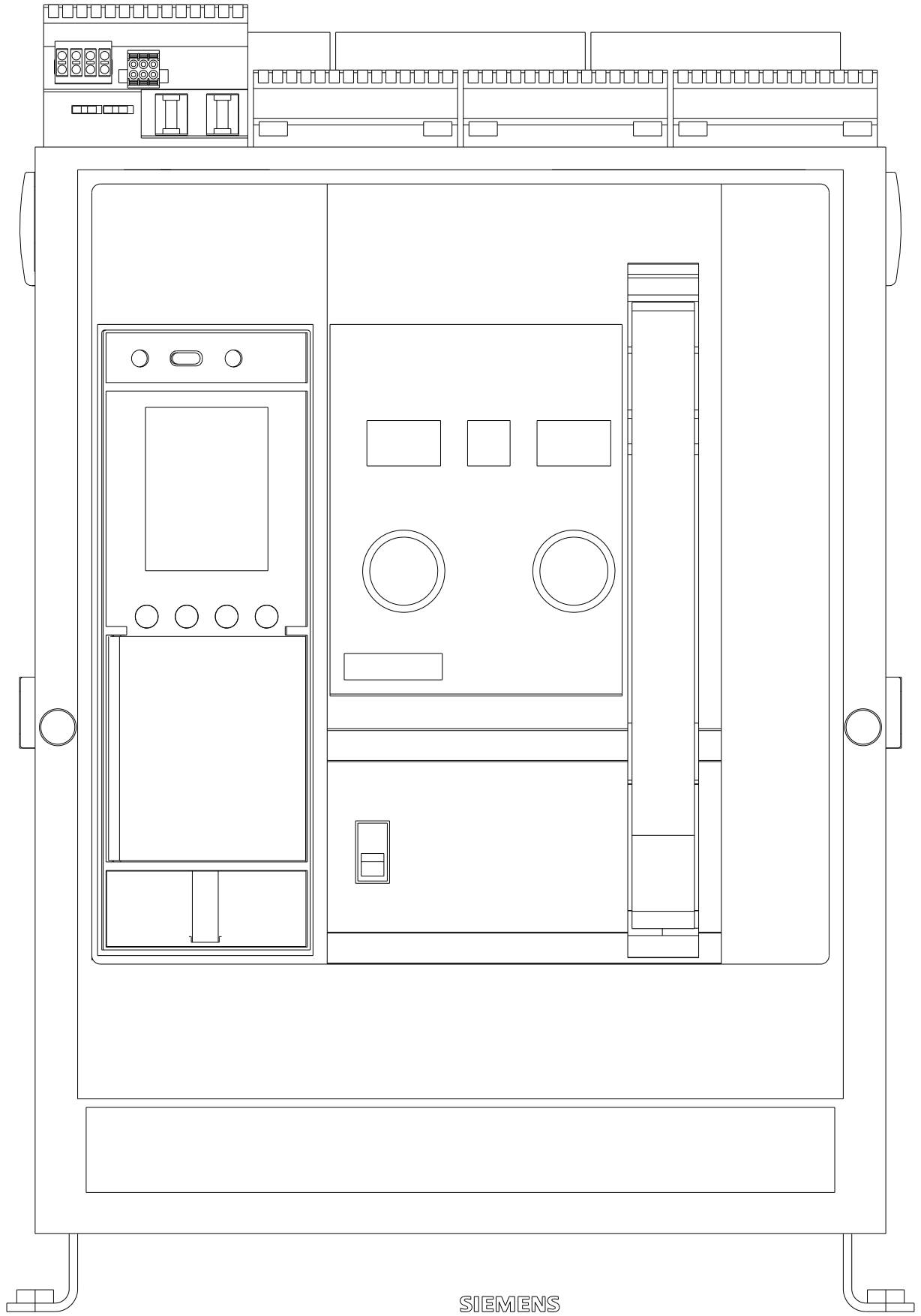
http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3WA1116-8SE02-4EQ0-Z F19+S07+T40

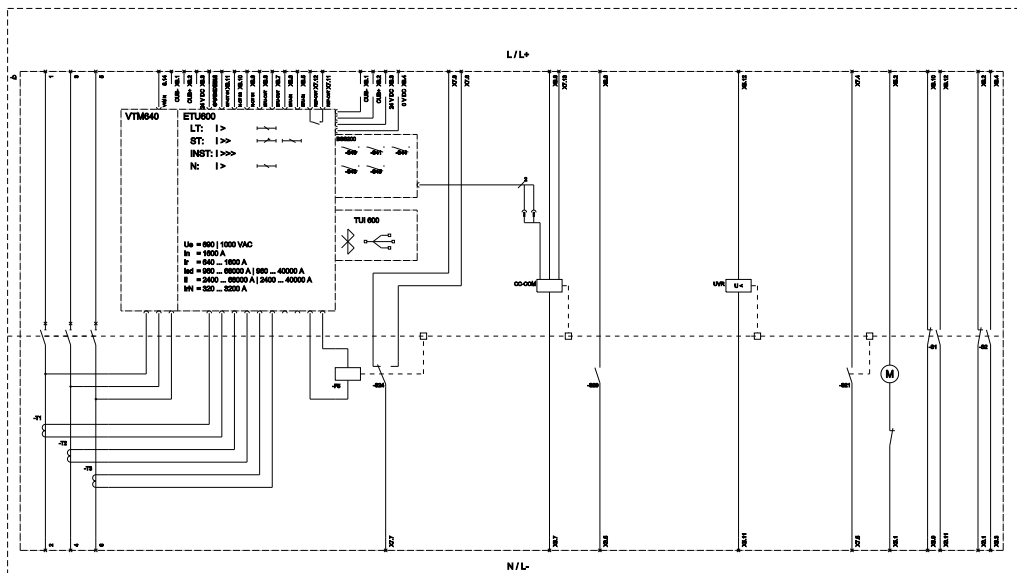
CAX-Online-Generator

<http://www.siemens.com/cax>

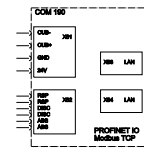
Information- and Downloadcenter (catalogues, leaflets,...)

<http://www.siemens.com/energy-automation>





24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000



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