# Catalog of Carpenter's SAS Macro Programs

| Category | Name | Description |
|---|---|---|
| Character Variables | %COLONCMPR | Compare two text strings of unequal length. |
| Character Variables | %CSTR | Place commas between words in a macro variable. |
| Character Variables | %CSTR2 | Place commas between words in a macro variable. |
| Character Variables | %CSTR3 | Place commas between words in a macro variable. |
| Character Variables | %DB2DATE | Generate a DB2 compatible date string. |
| Character Variables | %INDEXW | Mimics the DATA step INDEXW function. |
| Character Variables | %KEYLIST | Break up a list into component words. |
| Character Variables | %QSTR | Surround words with quotation marks. |
| Character Variables | %REVSCAN | Return the word number (reverse of the %SCAN function). |
| Dataset/File Management | %CHKDSN | Check a data set for duplicate observations. |
| Dataset/File Management | %CHKDUP | Check a data set for duplicate observations. |
| Dataset/File Management | %CMBNSUBJ | Combine (append) a series of data sets. |
| Dataset/File Management | %COUNTER | Count the number of observations in a data set. |
| Dataset/File Management | %DELFILE | Delete a file. |
| Dataset/File Management | %DELIM | Create a comma-delimited flat file. |
| Dataset/File Management | %DUMPIT | Write the first N lines of a series o flat files. |
| Dataset/File Management | %EXIST | Does the data set exist? |
| Dataset/File Management | %MAKECSV | Create a comma-separated flat file. |
| Dataset/File Management | %NUMOBS | Count the number of observations in a data set. |
| Dataset/File Management | %OBSCNT | Count the number of observations in a data set. |
| Dataset/File Management | %SAS2RAW | Create a self-documenting flat file from a SAS data set. |
| Dataset/File Management | %SELPCNT | Select a percentage of a data set's observations. |
| Dataset/File Management | %SUMS | Totals of count data. |
| Dataset/File Management | %TOPPCNT | Select a percentage of a data set's observations. |
| Dataset/File Management | %VAREXIST | Check to see if a variable exists on the data set. |
| Date/Time Variables | %ADDYEARS | Increment a date by a specified number of years. |
| Date/Time Variables | %CURRDATE | Returns today's date as a text string. |
| Date/Time Variables | %EOW | Consolidate dates to the end of the week. |
| Library Tools | %CATCOPY | Copy members of a catalog. |
| Library Tools | %CHKCOPY | Check for write access and the success of a PROC COPY. |
| Library Tools | %ENGCHNG | Change the engine associated with a library. |
| Library Tools | %FMTSRCH | Determine the format search path. |
| Library Tools | %MAKEDIR | Create a directory. |
| Library Tools | %MKFMT | Create a format from a data set. |
| Library Tools | %MKLIB | Create a libref. |
| Library Tools | %NAMEONLY | Return the data set name, stripping off the libref. |
| Macro Variables | %DELVARS | Delete macro variables. |
| Macro Variables | %FINDOUTLIERS | Create a subset using a criteria passed into the macro. |
| Macro Variables | %ISITQUOTED | Determine if macro quoting has been used. |
| Macro Variables | %NW | Count the words within a macro variable. |
| Macro Variables | %STOREOPT | Determine, store, and reuse system options. |

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| Macro Variables | %SYMCHECK | Does the macro variable exist? |
| Macro Variables | %SYMCHK | Does the macro variable exist? |
| Macro Variables | %UPDATE | Store date and time values in macro variables. |
| Macro Variables | %UPDATE2 | Store date and time values in macro variables. |
| Macro Variables | %WORDCOUNT | Count the words within a macro variable. |
| Numeric Variables | %FACT | Calculates the factorial of a number. |
| Programming Technique | %COMB | Calculate the number of combinations. |
| Programming Technique | %COMMENT | Comment a block of code. |
| Programming Technique | %DEBUGNEW | Comment a block of code. |
| Programming Technique | %DISTINCTLIST | Remove duplicated words from a list. |
| Programming Technique | %DROP | Create a DROP statement. |
| Programming Technique | %FUZZRNGE | Creates a data range inclusion clause for an IF or WHERE statement. |
| Programming Technique | %GENPROC | A simple generalized call for either PROC MEANS or SUMMARY. |
| Programming Technique | %GETKEYS | Retrieve a list of BY variables from macro arrays. |
| Programming Technique | %GETVARS | Create a list of data set variables. |
| Programming Technique | %HOLDOPT | Determine, store, and reuse system options. |
| Programming Technique | %IN | Mimics the DATA step IN operator. |
| Programming Technique | %INDVAR | Build a matrix of indicator variables. |
| Programming Technique | %LISTLAST | Returns the last word in a list. |
| Programming Technique | %MAKERUNBAT | Execute a series of SAS programs through batch. |
| Programming Technique | %MAKERUNBAT2 | Execute a series of SAS programs through batch. |
| Programming Technique | %MAKEVARLIST | Build a list of data set variables that match a pattern. |
| Programming Technique | %MATRIXPRINT | Print a series of data sets using a control file. |
| Programming Technique | %MIXEDCASE | Returns a list of words with the first letter of each word capitalized. |
| Programming Technique | %ORLIST | Mimics the DATA step IN operator. |
| Programming Technique | %PATTERN | Builds gray-scale PATTERN statements for SAS/GRAPH. |
| Programming Technique | %PERM | Calculate the number of permutations. |
| Programming Technique | %PLOTIT | Automatically processes a DATA set by subsets. |
| Programming Technique | %RAND_W | Random data subset-selection with replacement. |
| Programming Technique | %RAND_WO | Random data subset-selection without replacement. |
| Programming Technique | %REPEAT | Mimics the DATA step REPEAT function. |
| Programming Technique | %REPORT | Renumbering listing pages. |
| Programming Technique | %RGBHEX | Create a hexadecimal RGB color specification. |
| Programming Technique | %SLEEP | Suspend SAS operations for a specified time. |
| Programming Technique | %SMARTPERM | Calculate the number of permutations. |
| Programming Technique | %SMARTPERM2 | Calculate the number of permutations. |
| Programming Technique | %SYMBOLSYNC | Coordinate chart legends. |
| Programming Technique | %SYMBOLSYNC2 | Coordinate chart legends. |
| Programming Technique | %TESTPRT | Control observations in PRINT listings. |
| Programming Technique | %TF | Combine and reorganize titles. |
| Programming Technique | %WAKEUPAT | Suspend SAS operations until a specified time. |