Phoenix Analysis & Design Technologies

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General

ACTIVE,0	INT	
"	IMME	
"	MENU	
"	PRKEY	
"	UNITS	
"	ROUT	
"	TIME	WALL,CPU
"	DBASE	LDATE
"	DBASE	LTIME
"	REV	
"	TITLE	see help files
"	JOBNAM	
"	PLATFORM	
"	NPROC	
PARM,0	MAX	
"	BASIC	
"	LOC	Num
PARM,name	TYPE	
"	DIM	X,Y,Z
CMD,0	STAT	
"	NARGS	
"	FIELD	2,3,…N
COMP,0	NCOMP	
COMP,n	NAME	
COMP,name	TYPE	
"	NSCOMP	
"	SNAME	N

Graphic

GRAPH,0	ACTIVE	
"	ANGLE	
"	CONTOUR	(1)
"	DIST	
"	DSCALE	DMULT
"	EDGE	
"	FOCUS	X, Y, Z
"	GLINE	
"	MODE	
"	NORMAL	
"	RANGE	(2)
"	RATIO	X, Y
"	SSCALE	SMULT
"	TYPE	
"	VCONE	ANGLE
"	VIEW	X, Y, Z
"	VSCALE	VRATIO
"	DISPLAY	
"	ERASE	
"	NDIST	
"	NUMBER	
"	PLOPTS	(3)
"	SEG	
"	SHRINK	

SECP,id	TYPE	
"	SUBTYPE	
"	NAME	
"	DATA	nnn
"	PROP	AREA
"	PROP	IYY,IYZ,IZZ
"	PROP	WARP
"	PROP	TORS
"	PROP	CGY,CGZ
"	PROP	SHCY,SHCZ
"	PROP	SCYY,SCYZ,SCZZ
"	PROP	OFFSET
SECP,num	COUNT	
"	MAX	
SHEL,n	TYPE	
"	NAME	
"	PROP	TTHK
"	"	NLAY
"	"	NSP
"	"	POS
"	"	OFFZ
"	"	TS11
"	"	TS22
"	"	TS12
"	"	HORC
"	"	FUNC
"	"	UT11
"	"	UT22
"	"	UT12
"	"	AMAS
"	"	MSCF
"	"	BSCF
"	"	DSTF
"	"	LDEN
"	LAYD	LayerNumber,THIC
"	"	LayerNumber,MAT
"	"	LayerNumber,ANGL
"	"	LayerNumber,NINT
SCTN,n	1	
"	2	
"	3	
"	4	CS#
"	5	CS#
"	6	CS#
"	7 OR 8	
"	9	
"	10	
"	11	
"	12	
"	13	
"	14 - 17	
"		
"		

PREP7

ACTIVE,0	SEG	
"	CSYS	
"	DSYS	
"	MAT	
"	TYPE	
"	REAL	
"	ESYS	
"	CP	
"	CE	
"	WFRONT	MAX, RMS
CDSY,cs#	LOC	X, Y, Z
"	ANG	XY, YZ, ZX
"	ATTR	(4)
"	NUM	MAXD
NODE,0	NUM	MAX, MIN
"	NUM	MAXD, MIND
"	COUNT	
"	MXLOC	X, Y, Z
"	MNLOC	X, Y, Z
NODE,n	LOC	X, Y, Z
"	ANG	XY, YZ, ZX
"	NSEL	
"	NXTH	
"	NXTL	
"	F	FX, MX, …
"	D	UX, ROTX, …
"	HGEN	
"	CPS	Lab
ELEM,0	NUM	MAX, MIN
"	NUM	MAXD, MIND
"	COUNT	
ELEM,n	NODE	1,2, …20
"	CENT	X, Y, Z
"	ADJ	1,2,…6
"	ATTR	(5)
"	LENG	
"	LPROJ	X, Y, Z
"	AREA	
"	APROJ	X, Y, Z
"	VOLU	
"	ESEL	
"	NXTH	
"	NXTL	
"	HGEN	
"	HCOE	face
"	TBULK	face
"	PRES	face
"	SHPAR	(6)
KP,0	NUM	MAX, MIN
"	NUM	MAXD, MIND
"	COUNT	
"	CENT	X, Y, Z
"	IOR	X,Y,Z,XY,YZ,ZX
"	IMC	X,Y,Z,XY,YZ,ZX
"	IPR	X, Y, Z
"	IXV	X, Y, Z
"	IYV	X, Y, Z
"	IZV	X, Y, Z
"	MXLOC	X, Y, Z
"	MNLOC	X, Y, Z
"	NRELM	element#
KP,n	LOC	X, Y, Z
"	ATTR	(7)
"	KSEL	
"	NXTH	

KP,n	NXTL	
"	DIV	
LINE,0	NUM	MAX, MIN
"	NUM	MIND, MAXD
"	COUNT	
"	LENG	
"	CENT	X, Y, Z
"	IOR	X,Y,Z,XY,YZ,ZX
"	IMC	X,Y,Z,XY,YZ,ZX
"	IPR	X, Y, Z
"	IXV	X, Y, Z
"	IYV	X, Y, Z
"	IZV	X, Y, Z
LINE,n	KP	1,2
"	ATTR	(8)
"	LSEL	
"	NXTH	
"	NXTL	
"	LENG	
AREA,0	NUM	MAX, MIN
"	NUM	MAXD, MIND
"	COUNT	
"	AREA	
"	VOLU	
"	CENT	X, Y, Z
"	IOR	X,Y,Z,XY,YZ,ZX
"	IMC	X,Y,Z,XY,YZ,ZX
"	IPR	X, Y, Z
"	IXV	X, Y, Z
"	IYV	X, Y, Z
"	IZV	X, Y, Z
AREA,n	ATTR	(9)
"	ASEL	
"	NXTH	
"	NXTL	
"	AREA	
"	LOOP	1,2,…,l
VOLU,0	NUM	MAX, MIN
"	NUM	MAXD, MIND
"	COUNT	
"	VOLU	
"	CENT	X, Y, Z
"	IOR	X,Y,Z,XY,YZ,ZX
"	IMC	X,Y,Z,XY,YZ,ZX
"	IPR	X, Y, Z
"	IXV	X, Y, Z
"	IYV	X, Y, Z
"	IZV	X, Y, Z
VOLU,n	ATTR	(10)
"	VSEL	
"	NXTH	
"	NXTL	
"	VOLU	
"	SHELL	1,2,…,m
ETYP,0	NUM	MAX
"	NUM	MAXC
"	NUM	MAXD
ETYP,n	ATTR	(11)
RCON,n	CONST	1,2,…,m
"	NUM	MAXD
MPLAB,n	TEMP	val
TBLAB, mat# -- see help files		
FLDAT,name -- see help files		
MSDAT,0	SPEC	
"	UGAS	

MSPROP,n	Lab	TYPE
"		NOMI
"		(14)
MSSPEC,n	NAME	
"	MOLW	
"	SCHM	
MSRELAX,n	CONC	
"	MDIF	
"	EMDI	
"	STAB	
MSSOLU,n	NSWE	
"	MAXI	
"	NSRC	
"	CONV	
"	DELT	
MSMETH,n		
MSCAP,n	KEY	
"	UPP	
"	LOW	
MSVARY,n	(13)	
MSNOMF,n		
PART,0	NUMP	
PART,n	TYPE	
"	MAT	
"	REAL	
WELD,0	NUM	MAX,MIN
"	COUNT	
WELD,n	NODE	1,2
"	NXTH	
EDCC,0	COUNT	
EDCC,n	COMP	1,2
"	PART	1,2

SOLU

ACTIVE,0	ANTY	
"	SOLU	DTIME
"	"	NCMLS
"	"	NCMSS
"	"	EQIT
"	"	NCMIT
"	"	CNVG
"	"	MXDVL
"	"	RESFRQ
"	"	RESEIG
"	"	DSPRM
"	"	FOCV
"	"	MOCV
"	"	HFCV
"	"	MFCV
"	"	CSCV
"	"	CUCV
"	"	FFCV
"	"	DICV
"	"	ROCV
"	"	TECV
"	"	VMCV
"	"	SMCV
"	"	VOCV
"	"	PRCV
"	"	VECV
"	"	NC48
"	"	NC49
"	"	CRPRAT
"	"	PSINC

POST1

ACTIVE,0	SET	LSTP	
"	SET	SBST	
"	SET	TIME	
"	SET	FREQ	
"	RSYS		
NODE,n	U	X,Y,Z,SUM	
"	ROT	X,Y,Z,SUM	
"	TEMP		
"	PRES		
"	VOLT		
"	MAG		
"	V	X,Y,Z,SUM	
"	A	X,Y,Z,SUM	
"	CURR		
"	EMF		
"	ENKE		
"	ENDS		
"	RF	FX,FY,FZ,MX	
"	S	X,Y,Z,XY,YZ	
"	EPTO	X,Y,Z,XY,YZ	
"	EPEL	X,Y,Z,XY,YZ	
"	EPPL	X,Y,Z,XY,YZ	
"	EPCR	X,Y,Z,XY,YZ	
"	EPTH	X,Y,Z,XY,YZ	
"	EPSW		
"	NL	SEPL	
"	NL	SRAT	
"	NL	HPRES	
"	NL	EPEQ	
"	NL	PSV	
"	NL	PLWK	
"	TG	X,Y,Z,SUM	
"	TF	X,Y,Z,SUM	
"	PG	X,Y,Z,SUM	
"	EF	X,Y,Z,SUM	
"	D	X,Y,Z,SUM	
"	H	X,Y,Z,SUM	
"	B	X,Y,Z,SUM	
"	FMAG	X,Y,Z,SUM	
"	HS	X,Y,Z	
"	BFE	TEMP	
"	TTOT		
"	HFLU		
"	HFLM		
"	COND		
"	PCOE		
"	PTOT		
"	MACH		
"	STRM		
"	DENS		
"	VISC		
"	EVIS		
"	CMUV		

SOLU, cont'd

ELEM,0	MTOT	X, Y, Z	
"	MC	X, Y, Z	
"	IOR	X, Y, Z, XY,	
"	IMC	X, Y, Z, XY,	
"	FMC	X, Y, Z	
"	MMOR	X, Y, Z	
"	MMMC	X, Y, Z	
MODE,num	FREQ	(IMAG)	
"	PFACT		
"	MCOEF		
"	DAMP		

NODE,n	ECON		
"	YPLU		
"	TAUW		
ELEM,n	SERR		
"	SDSG		
"	TERR		
"	TDSG		
"	SENE		
"	TENE		
"	KENE		
"	JHEAT		
"	JS	X,Y,Z	
"	HS	X,Y,Z	
"	VOLU		
"	ETAB	Lab	
"	SMISC	Snum	
"	NMISC	Snum	
ETAB,0	NCOL	MAX	
"	NLENG	MAX	
ETAB,column	LAB		
"	ELEM	elem.#	
SORT,0	MAX		
"	MIN		
"	IMAX		
"	IMIN		
SSUM,0	ITEM	Lab	
FSUM,0	ITEM	Lab	
PATH,0	MAX	Lab	
"	MAXPATH		
"	MIN	Lab	
"	LAST	Lab	
"	NODE		
"	ITEM	Lab	
"	POINT	n	
"	SET	n	
"	NUMPATH		
PATH,n	PATH	NAME	
KCALC,0	K	1,2,3	
INTSRF,0	PRES	Lab	
"	TAUW	Lab	
PLNSOL,0	MAX		
"	MIN		
"	BMAX		
"	BMIN		
PRERR,0	SEPC		
"	TEPC		
"	SERSM		
"	TERSM		
"	SENSM		
"	TENSM		
SECTION,(12)	INSIDE	SX,SY,SZ,SXY,SYZ,SXZ	
"	CENTER	SX,SY,SZ,SXY,SYZ,SXZ	
"	OUTSIDE	SX,SY,SZ,SXY,SYZ,SXZ	
SECR,,ALL	S	MAX,MIN	
"	EPTO	MAX,MIN	
"	EPTH	MAX,MIN	
"	EPPL	MAX,MIN	
"	PLWK	MAX,MIN	
"	EPCR	MAX,MIN	
SECR,elem#	S	X,XZ,XY	
"	EPTO	X,XZ,XY	
"	EPTH	X,XZ,XY	
"	EPPL	X,XZ,XY	
"	PLWK	X,XZ,XY	
"	EPCR	X,XZ,XY	

INTSRF,(15)	FORCE	X,Y,Z	
"	MOMENT	X,Y,Z	
TREF,0	ENER		
"	ENUM		
"	CEMIN		
"	CEMAX		
"	NTZN		
"	NSFN		
"	NSFE		

Post 26

VARI,0	NSETS	
VARI,num	EXTREM	VMAX
"	"	TMAX
"	"	VMIN
"	"	TMIN
"	"	VLAST
"	"	TLAST
"	"	CVAR
"	RTIME	t
"	ITIME	t
"	RSET	Snum
"	ISET	Snum

Misc.

OPT,0	TOTAL		PDS,0	NRSS	
"	ITER		"	NSOL	
"	FEAS	set#	PDS,n	METH	
"	TERM		"	NSIM	
"	BEST		"	PLVL	1,2,3,4,5
TOPO,0	ACT		"	SAMP	
"	TOELEM		"	RLAB	see help files
"	LOADS		RAD,0	VFAVG	
"	ITER		RUNST,0	RSPEED	MIPS
"	MXIT		"	"	SMFLOP
"	CONV		"	"	VMFLOP
"	DIM		RUNST,0	RFILSZ	TOTAL
"	KAXI		"	"	EMAT
"	POWP		"	"	EROT
"	NEV		"	"	ESAV
"	TOAC		"	"	FULL
"	LOWD		"	"	MODE
"	NTOC		"	"	RDSP
"	SFLAG		"	"	REDM
"	COMP		"	"	RFRQ
"	PORV		"	"	RGEOM
TOPO,elem#	DENS		"	"	RST
TOPO,freq#	FRQI		"	"	TRI
TOPO,cons#	TCBO	FLAG	RUNST,0	RTIMST	TOTAL
"	TCBF		"	"	TFIRST
TOPO,iter#	TOHO		"	"	TITER
"	TOHC	CID	"	"	EQPREP
PDS,0	ANLN		"	"	SOLVE
"	ANLX		"	"	BSUB
"	ANLD		"	"	EIGEN
"	ASTP	1,2,3,4	"	"	ELFORM
"	CORR	I,,,j	"	"	ELSTRS
"	METH		"	"	NELM
"	NSIM		RUNST,0	RMEMRY	WSREQ
"	NTRP		"	"	WSAVAIL
"	NTRV		"	"	DBPSIZE
"	PAR1	i	"	"	DBPDISK
"	PAR2	i	"	"	DBPMEM
"	PAR3	i	"	"	DBMEM
"	PAR4	i	"	"	SCRSIZE
"	PLVL	1,2,3,4,5	"	"	SCRAVAIL
"	RNAM	see help files	"	"	IOMEM
"	SAMP		"	"	IOPSIZ
"	VDIS	i	"	"	IOBUF
"	VNAM	see help files	"	"	SOLMEM
			RUNST,0	RWFRNT	MAX
			"	"	RMS
			"	"	MEAN

***GET, Parname, Column1, Column2, Column3**

(1) VMIN, VINC, NCONT
(2) XMIN, XMAX, YMIN, YMAX
(3) LEG1, LEG2, LEG3, INFO, FRAM, TITL, MINM, or VERS
(4) KCS, KTHET, KPHI, PAR1, PAR2
(5) MAT, TYPE, REAL, ESYS, PSTAT, LIVE, or SECN
(6) ANGD, ASPE, JACR, MAXA , PARA , WARP
(7) MAT, TYPE, REAL, ESYS, NODE, or ELEM
(8) MAT, TYPE, REAL, ESYS, NNOD, NELM, NDIV, NDNX, SPAC, SPNX, KYND, KYSP, LAY1, or LAY2.
(9) MAT, TYPE, REAL, ESYS, SECN, NNOD, NELM, or ESIZ
(10) MAT, TYPE, REAL, ESYS, NNOD,or NELM
(11) ENAM, KOP1, KOP2,..., KOP9, KO10, KO11
(12) MEMBRANE, BENDING, SUM, PEAK, and TOTAL
(13) DENS, VISC, COND, MDIF
(14) COF1, COF2, COF3
(15) PRES, TAUW, and BOTH

*VPUT, Parname, Column1, Column2, Column3
*VGET, Parname, Column1, Column2, Column3

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*VGET

/PREP7

NODE,n	LOC	X,Y,Z
"	ANG	XY,YZ,ZX,THXY,THYZ,THZX
"	NSEL	
ELEM,n	NODE	1,2,--20
"	CENT	X,Y,Z
"	ADJ	1,2,--6
"	ATTR	MAT,TYPE,REAL,ESYS,ENAM,SECN
"	GEOM	
"	ESEL	
"	SHPAR	ANGD,ASPE,JACR,MAXA,PARA,WARP
KP,n	LOC	X,Y,Z
"	ATTR	MAT,TYPE,REAL,ESYS,NODE,ELEM
"	DIV	
"	KSEL	
LINE,n	KP	1,2
"	ATTR	MAT,TYPE,REAL,ESYS,NNOD,NELM
"	AREA	
"	ASEL	
AREA,n	LOOP	1,2,. . .
"	LINE	1,2, …
"	ATTR	MAT,TYPE,REAL,ESYS,NNOD,NELM
"	AREA	
"	ASEL	
VOLU,n	SHELL	1,2, . .
"	AREA	1,2, . .
"	ATTR	MAT,TYPE,REAL,ESYS,NNOD,NELM
"	VOLU	
"	VSEL	
CDSY,cs#	LOC	X,Y,Z
"	ANG	XY,YZ,ZX,THXY,THYZ,THZX
"	ATTR	KCS,KTHET,KPHI,PAR1,PAR2
RCON,n	CONST	1,2,…

/POST1

TLAB -- See help files

NODE,n	U	X,Y,Z	"	H	X,Y,Z,SUM	
"	ROT	X,Y,Z	"	B	X,Y,Z,SUM	
"	TEMP		"	FMAG	X,Y,Z,SUM	
"	PRES		"	TTOT		
"	VOLT		"	HFLU		
"	MAG		"	HFLM		
"	V	X,Y,Z	"	COND		
"	A	X,Y,Z	"	PCOE		
"	CURR		"	PTOT		
"	EMF		"	MACH		
"	ENKE		"	STRM		
"	ENDS		"	DENS		
"	S	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	VISC		
"	EPTOP	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	EVIS		
"	EPEL	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	ECON		
"	EPPL	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	YPLU		
"	EPCR	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	"	TAUW		
"	EPTH	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV	ELEM,n	ETAB	Lable	
"	EPSW					
"	NL	SEPL				
"	"	SRAT				
"	"	HPRES				
"	"	EPEQ				
"	"	PSV				
"	"	PLWK				
"	TG	X,Y,Z				
"	TF	X,Y,Z				
"	PG	X,Y,Z				
"	EF	X,Y,Z,SUM				
"	D	X,Y,Z				
"	H	X,Y,Z				

*VPUT

/POST1

NODE,n	U	X,Y,Z	NODE,n	B	X,Y,Z
"	ROT	X,Y,Z	"	FMAG	X,Y,Z
"	TEMP		"	TTOT	
"	PRES		"	HFLU	
"	VOLT		"	HFLM	
"	MAG		"	COND	
"	V	X,Y,Z	"	PCOE	
"	A	X,Y,Z	"	PTOT	
"	CURR		"	MACH	
"	EMF		"	STRM	
"	ENKE		"	DENS	
"	ENDS		"	VISC	
"	S	X,Y,Z,XY,Y	"	EVIS	
"	EPTOP	X,Y,Z,XY,Y	"	ECON	
"	EPEL	X,Y,Z,XY,Y	"	YPLU	
"	EPPL	X,Y,Z,XY,Y	"	TAUW	
"	EPCR	X,Y,Z,XY,Y	ETAB,n	Lab	
"	EPTH	X,Y,Z,XY,YZ,XZ,1,2,3,INT,EQV			
"	EPSW				
"	NL	SEPL			
"	"	SRAT			
"	"	HPRES			
"	"	EPEQ			
"	"	PSV			
"	"	PLWK			
"	TG	X,Y,Z			
"	TF	X,Y,Z			
"	PG	X,Y,Z			
"	EF	X,Y,Z			
"	D	X,Y,Z			
"	H	X,Y,Z			

Other *V Functions

*VABS, KABSR, KABS1, KABS2, KABS3
— Applies the absolute value function to array parameters.

*VCOL, NCOL1, NCOL2
— Specifies the number of columns in matrix operations

*VCUM, KEY
— Allows array parameter results to add to existing results.

*VEDIT, Par
— Allows numerical array parameters to be graphically edited.

*VFACT, FACTR, FACT1, FACT2, FACT3
— Applies a scale factor to array parameters.

*VFILL, ParR, Func, CON1, CON2, CON3, CON4,…, CON10
— Fills an array parameter.

*VFUN, ParR, Func, Par1, CON1, CON2, CON3
— Performs a function on a single array parameter.

*VITRP, ParR, ParT, ParI, ParJ, ParK
— Forms an array parameter by interpolation of a table.

*VLEN, NROW, NINC
— Specifies the number of rows to be used in array parameter operations.

*VMASK, Par
— Specifies an array parameter as a masking vector.

*VOPER, ParR, Par1, Oper, Par2, CON1, CON2
— Operates on two array parameters.

*VPLOT, ParX, ParY, Y2, Y3, Y4, Y5, Y6, Y7, Y8
— Graphs columns (vectors) of array parameters.

*VREAD,ParR,Fname,Ext,Dir,Label,n1,n2,n3,NSKIP
— Reads data and produces an array parameter vector or matrix.

*VSCFUN, ParR, Func, Par1
— Determines properties of an array parameter.

*VSTAT
— Lists the current specifications for the array parameters.

*VWRITE, Par1, Par2, Par3, Par4, ..., Par10
— Writes data to a file in a formatted sequence.

ANSYS Training Classes

- Taught by Experienced Engineers
- Intro, Intermediate and Advanced
- Hard to Find Classes like Multiphysics, Customization and HFSS
- Onsite and Custom Classes

Arizona | Colorado | New Mexico
Southern California | Utah

Get Functions

Entity Status	**Locations**	**Locations, cont'd**	**Nearest Entity, cont'd**	**Connectivity**	**Results cont'd**	**Data base manager**	**Other, cont'd**	**Filenames**
NSEL(*N*)	CENTRX(*E*)	LSY(*L,LFRAC*)	KNEAR(*K*)	ENEXTN(*N,LOC*)	ROTZ(*N*)	VIRTINQR(1)	CHROCT (*dp*)	('directory','filename','extension')
ESEL(*E*)	CENTRY(*E*)	LSZ(*L,LFRAC*)	ENEARN(*N*)	NELEM(*E,NPOS*)	TEMP(*N*)	VIRTINQR(4)	CHRHEX(*dp*)	Path String = JOIN ('directory','filename')
KSEL(*K*)	CENTRZ(*E*)	**Nearest**	**Areas**	**Faces**	PRES(*N*)	VIRTINQR(7)	**Strings**	SPLIT('PathString', 'DIR')
LSEL(*L*)	NX(*N*)	NODE(*X,Y,Z*)	AREAND(*N1,N2,N3*)	ELADJ(*E,FACE*)	VX(*N*)	VIRTINQR(8)	StrOut = STRSUB (Str1, nLoc,nChar)	SPLIT('PathString', 'FILE')
ASEL(*A*)	NY(*N*)	KP(*X,Y,Z*)	AREAKP(*K1,K2,K3*)	NDFACE(*E,FACE,LOC*)	VY(*N*)	VIRTINQR(9)	StrOut = STRCAT(Str1,Str2)	SPLIT('PathString', 'NAME')
VSEL(*V*)	NZ(*N*)	**Distances**	ARNODE(*N*)	NMFACE(*E*)	VZ(*N*)	VIRTINQR(11)	StrOut = STRFILL(Str1,Str2,nLoc)	SPLIT('PathString', 'EXT')
Next Selected	KX(*K*)	DISTND(*N1,N2*)	**Normals**	ARFACE(*E*)	ENKE(*N*)	**Filtering keywords.**	StrOut = STRCOMP(Str1)	
NDNEXT(*N*)	KY(*K*)	DISTKP(*K1,K2*)	NORMNX(*N1,N2,N3*)	**Results**	ENDS(*N*)	KWGET(*KEYWORD*)	StrOut = STRLEFT(Str1)	
ELNEXT(*E*)	KZ(*K*)	DISTEN(*E,N*)	NORMNY(*N1,N2,N3*)	UX(*N*)	VOLT(*N*)	**Other**	nLoc = STRPOS(Str1,Str2)	
KPNEXT(*K*)	LX(*L,LFRAC*)	ANGLEN(*N1,N2,N3*)	NORMNZ(*N1,N2,N3*)	UY(*N*)	MAG(*N*)	VALCHR(*a8*)	nLoc = STRLENG(Str1)	
LSNEXT(*L*)	LY(*L,LFRAC*)	ANGLEK(*K1,K2,K3*)	NORMKX(*K1,K2,K3*)	UZ(*N*)	AX(*N*)	VALOCT (*a8*)	StrOut = UPCASE(Str1)	
ARNEXT(*A*)	LZ(*L,LFRAC*)	**Nearest Entity**	NORMKY(*K1,K2,K3*)	ROTX(*N*)	AY(*N*)	VALHEX(*a8*)	StrOut = LWCASE(Str1)	
VLNEXT(*V*)	LSX(*L,LFRAC*)	NNEAR(*N*)	NORMKZ(*K1,K2,K3*)	ROTY(*N*)	AZ(*N*)	CHRVAL (*dp*)		