

SQLITE

distinctcount(distinct x)

avg(x)	StringBLOB'HELLO'SQLite0avgNULLNULL avg()
count(x *)	count(x)xNULLcount(*) count()
group_concat(x[,y])	NULLxyx", " group_concat([distinct] [order by asc/desc] [separator ""])
max(x)	xNULLNULL
min(x)	xNULLNULL
sum(x)	xNULLNULLxNULL "integer overflow"
total(x)	SQLsumsumNULLsum0.0

abs(X)	XXNULLNULLX0XInteger"Integer Overflow" abx()
changes()	INSERTUPDATEDELETEC/C++sqlite3_changes()
coalesce(X,Y,...)	NULLNULLNULL2 coalesce()
ifnull(X,Y)	coalesce()NULLNULLNULL IFNULL(, expression NULL)
length(X)	XNULLNULL length
lower(X)	XASCII lower(text)

ltrim(X[,Y])	YXYXY ltrim(• • "\0" - NULL • "\t" - • "\n" - • "\x0B" - • "\r" - • " " -))
max(X,Y,...)	NULLNULL
min(X,Y,...)	NULLNULL
nullif(X,Y)	NULL
random()	
replace(X,Y,Z)	XYZX replace('abcdefabcdef', 'cd', 'XX')abXXefabXXef
round(X[,Y])	XY Y0 round(-6.6)—7/round(3.3,3)—3.33
rtrim(X[,Y])	YXYXY
substr(X,Y[,Z])	XY(X1)ZZYZYabs(Z)YXabs(Y) substr(,1,4)
total_changes()	INSERTUPDATEDELETEC/C++sqlite3_total_changes()
trim(x[,y])	YXYXY
upper(X)	XASCII Upper('aabbcc')'AABBCC'
typeof(X)	"Integertextrealnull"

- 1). date(timestring, modifier, modifier, ...)
 - 2). time(timestring, modifier, modifier, ...)
 - 3). datetime(timestring, modifier, modifier, ...)
 - 4). strftime(format, timestring, modifier, modifier, ...)
- 0strftime()strftime()Cdate"YYYY-MM-DD"time"HH:MM:SS"datetime"YYYY-MM-DD HH:MM:SS"

1. strftime

%d	day of month: 00
%f	fractional seconds: SS.SSS
%H	hour: 00-24
%j	day of year: 001-366

%J	Julian day number
%m	month: 01-12
%M	minute: 00-59
%s	seconds since 1970-01-01
%S	seconds: 00-59
%w	day of week 0-6 with Sunday==0
%W	week of year: 00-53
%Y	year: 0000-9999
%%	%

strftime

```
date(...)      strftime('%Y-%m-%d', ...)
time(...)      strftime('%H:%M:%S', ...)
datetime(...)  strftime('%Y-%m-%d %H:%M:%S', ...)
```

2.

- 1). YYYY-MM-DD
- 2). YYYY-MM-DD HH:MM
- 3). YYYY-MM-DD HH:MM:SS
- 4). YYYY-MM-DD HH:MM:SS.SSS
- 5). HH:MM
- 6). HH:MM:SS
- 7). HH:MM:SS.SSS
- 8). now
- 5)7)SQLite2000-01-018)

3.

- 1). NNN days
- 2). NNN hours
- 3). NNN minutes
- 4). NNN.NNNN seconds
- 5). NNN months
- 6). NNN years
- 7). start of month
- 8). start of year
- 9). start of day
- 10).weekday N
- 1)6)NNN7)9)10)N0SQLite

4.

```
--
sqlite> SELECT date('now');
2012-01-15
--
sqlite> SELECT date('now','start of month','1 month','1 day');
2012-01-31
--1970-01-01 00:00:00
sqlite> SELECT strftime('%s','now');
1326641166
--10
sqlite> SELECT date('now','start of year','+9 months','weekday 2');
2012-10-02
```