

CODIFICATION FOR ST MOTORS

145 ST X M Y Z T K W W L H
 190 ST
 300 ST

Size

Flange

Shaft

Position feedback

Thermal sensor

Winding code

Cable length

Motor technology

1		B14
2		B5
Contact us!		

K	KTY 84
P	PTC
B	BOTH

H	High precision for 145 & 190 ST motors
S	Standard precision for 145 & 190 ST motors
X	High precision for 300 ST motors

		145ST	190ST	300ST	
1		HOLLOW SHAFT	Ø56	Ø72	Ø72
2		HOLLOW SHAFT	Ø30	Ø40	-
3		BLIND SHAFT	Ø56	Ø72	-
4		KEYED SHAFT	Ø24	Ø42	-
5		SOLID SHAFT	Ø24	Ø42	-
6		BLIND SHAFT	Ø60	Ø75	-
7		HOLLOW SHAFT	Ø60	Ø75	-
8		HOLLOW SHAFT	-	-	Ø40 Ø72
Contact us!					

1	RESOLVER ALXION ±1'
2	ENCODER ERN 180
3	ENCODER SCK KIT 101
4	ENCODER ERN 1387
5	ENCODER ERN 1381
6	RESOLVER STANDARD ±10'
7	ENCODER ECN 113
8	ENCODER ECN 1313
9	ENCODER EQN 1325
?	Contact us!

See position feedback descriptions

0	2 meters	Only for 145 & 190 ST motors
1	4 meters	
2	6 meters	
3	8 meters	
4	10 meters	
5	15 meters	
6	20 meters	
7	25 meters	
8	30 meters	
9	40 meters	
C	Connectors	Only for 300ST motors

H : Motor technology:

- H : High precision technology, cogging <1%
- S : Standard precision technology, cogging ≤2%
- X : High precision technology, cogging <2%

W : Winding code:

- 01 - Low speed in table of characteristics
- 02 - High speed in table of characteristics
- XX - Special windings, contact us

Resolvers table

	Number of poles	Rated Supply voltage (V)	Transformation ratio	Input impedance Z _{ro}	Output impedance Z _{ss}	Mechanical accuracy (arc min)	Phase shift (°)
Resolver #1	12	7	0.23	77 + j177	118 + j258	±1	7
Resolver #6	2	7	0.5	105 + j215	155 + j200	±10	4

Position feedback:

- 1 ALXION resolver 12 poles ±1' (See resolvers table)
- 2 HEIDENHAIN® ERN180 incremental 2048 sine waves 1v peak to peak encoder A, \bar{A} , B, \bar{B} , C, \bar{C}
- 3 SICK STEGMANN® SCK KIT 101 HIPERFACE encoder
- 4 HEIDENHAIN® ERN1387 incremental 2048 sine waves 1v peak peak encoder A, \bar{A} , B, \bar{B} , C, \bar{C} + 2 sine waves phased of 90° per revolution
- 5 HEIDENHAIN® ERN1381 incremental 2048 sine waves 1v peak peak encoder A, \bar{A} , B, \bar{B} , C, \bar{C}
- 6 Standard resolver 2 poles ± 10' (See resolvers table)
- 7 HEIDENHAIN® ECN113 absolute encoder over 1 revolution 2048 periods ENDAT
- 8 HEIDENHAIN® ECN1313 absolute encoder over 1 revolution 2048 periods ENDAT
- 9 HEIDENHAIN® EQN1325 absolute encoder over 4096 revolutions 2048 periods ENDAT

More information on different feedback systems on respective websites :

<http://www.heidenhain.de>
<http://www.sick.com>

Possible standard configurations :

Range	Shaft	Flange	Technology	Input power / output signal
145ST -190ST	1, 2, 3, 4, 5, 6 or 7	1 or 2	S or H	Class 6 shielded cables
300ST	1 or 8	Only 1	X	Connectors

Shaft	Possible position feedback:	Thermal sensor
Hollow shaft	1 or 7	Only resolver 1
	2	Resolver 1 Encoder 2, 3 or 7
	8	Encoder 2, 3 or 7
Blind shaft	3 or 6	Resolver 1 or 6 Encoder 3, 4, 5, 8 or 9
Solid shaft	4 or 5	Resolver 1 or 6 Encoder 3, 4, 5, 8 or 9