Model 725 Heavy Duty
(Formerly 730 & 735 Series)

Features
- Standard Size 25 Package 63.50mm Diameter
- Up to 30,000 PPR
- Servo and Flange Mounting
- IP65 Sealing Available

Model 725, (Formerly 730 & 735 Series) is specifically designed for the challenges of an industrial environment. But don't let its tough, industrial package fool you; it still has the performance to reach resolutions up to 30,000 pulses per revolution. The Model 725 is available with both flange and servo mounting options. The rugged housing isolates the internal electronics from the shock and stress of the outer environment.

Common Applications
Motion Control Feedback, Conveyors, Elevator Controls, Machine Control, Food Processing, Process Control, Robotics, Material Handling, Textile Machines

Model 725 Ordering Guide
Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.

Model 725 PPR Options
0011* 0002* 0004* 0005* 0006* 0007* 0008* 0010* 0011*
0012* 0014* 0020 0021* 0024* 0025* 0028* 0030* 0032*
0033* 0034* 0035* 0038* 0040* 0042* 0045* 0050* 0060
0064* 0100 0120 0125 0128* 0144* 0150* 0160* 0200
0240* 0250 0254* 0256* 0300 0333* 0360 0400 0500
0512 0600 0625* 0635 0665* 0720 0768* 0800 0889
0900* 10,000 10,240 a 12,500 a 14,000 a 15,000 a 20,000 a 20,480 a 25,000 a
30,000 a

* Contact Customer Service for High Temperature Option.
* High Temperature Option (HT) limited to 85º C maximum for these PPR options.
New PPR values are periodically added to those listed. Contact Customer Service to determine all currently available PPR values. Special disk resolutions are available upon request.
A one-time NRE fee may apply.

For specification assistance call Customer Service at +44 (0)1978 262100

COMMON APPLICATIONS
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NOTES:
1 Contact Customer Service for index gating options.
2 24 VCC max for high temperature option.
3 For Non-Standard Cable Lengths Contact the sales office.
4 Marker not available with 6-pin or 7-pin MS connector & HV Output.
Model 725 Specifications

Electrical

Input Voltage ..............4.75 to 24 VCC max for temperatures up to 70º C
Input Current ..............100 mA max with no output load
Input Ripple ................100 mV peak-to-peak at 0 to 100 kHz
Output Format ............Incremental-  Two square waves in quadrature with
channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting
face. See Waveform Diagrams below.
Output Types..............Open Collector-  50 mA max per channel
Push-Pull-  20 mA max per channel (Meets RS
422 at 5 VCC supply)
Index ...........................Occurs once per revolution.  The index for units
>3000 PPR is 90º gated to Outputs A and B.
See Waveform Diagrams below.
Freq Response ..........Up to 200 Khz
Noise Immunity ..........Tested to BS EN61000-4-2; IEC801-3; BS
EN61000-4-4; DDENV 50141; DDENV 50204; BS
EN55022 (with European compliance option); BS
EN55022; BS EN50081-2; BS EN55022
Symmetry ............ 1 to 6000 PPR: 180º (±18º) electrical at 100 kHz
output
6001 to 20,480 PPR: 180º (±36º) electrical
Quad Phasing ............ 1 to 6000 PPR: 90º (±22.5º) electrical at 100 kHz
output
6001 to 20,480 PPR: 90º (±36º) electrical
Min Edge Sep ............ 1 to 6000 PPR: 67.5º electrical at 100 kHz output
6001 to 20,480 PPR: 54º electrical
6001 to 20,480 PPR: 50º electrical
Rise Time ...................Less than 1 microsecond
Accuracy ....................Instrument and Quadrature Error:  For 200 to 1999
PPR, 0.017º mechanical (1.0 arc minutes) from
one cycle to any other cycle.  For 2000 to 3000
PPR, 0.01º mechanical (0.6 arc minutes) from one
cycle to any other cycle.  Interpolation error (units
> 3000 PPR only) within 0.005º mechanical. (Total
Optical Encoder Error = Instrument + Quadrature +
Interpolation)

Mechanical

Max Shaft Speed ......6000 RPM.  Higher shaft speeds may be
achieved, contact Customer Service.
Shaft Size .............. See order code
Shaft Material ............303 stainless steel
Shaft Roration ............Bi-directional
Radial Shaft Load ..........10 g max (standard housing)
Axial Shaft Load ............18 kg max (standard housing)
Starting Torque ............7.06 x 10^-3 Nm typical with IP64 seal or
no seal
Max Acceleration ..........1 x 105 rad/sec2
Electrical Conn ..........6-, 7-, or 10-pin MS Style, 8-pin M12
(12 mm), 9-pin D-subminiature, or gland with
2M of cable (foil and braid shield, 24 AWG con-
ductors)
Housing .....................Black non-corrosive finish
Bearings .....................Precision ABEC ball bearings
Mounting ....................Flange, servo
Weight .......................570gms typical

Environmental

Operating Temp .............0º to 70º C for standard models
0º to 100º C for high temperature option (0º to 85º C for certain resolutions, see PPR Options.)
Storage Temp ..............-25º to +65º C
Humidity ....................95% RH non-condensing
Vibration ....................725.10 g @ 50 to 500 Hz
Shock ....................725.50 g @ 11 ms duration
Sealing ....................IP50 standard, IP64 and IP65 optional