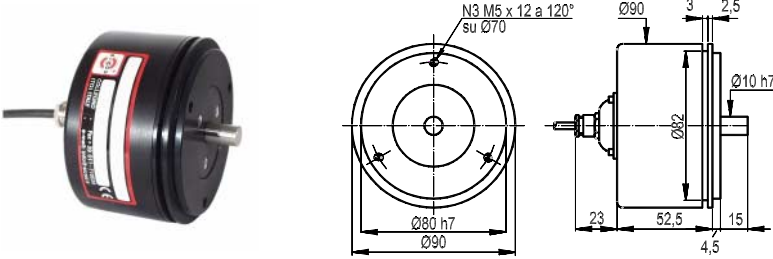
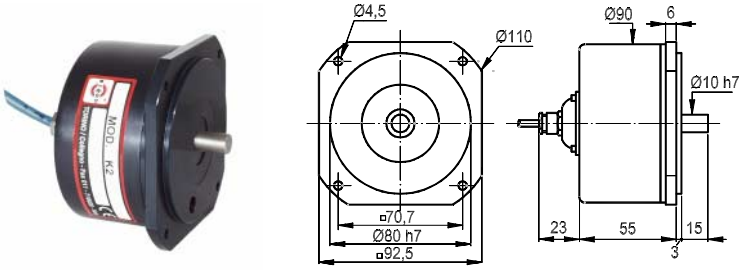
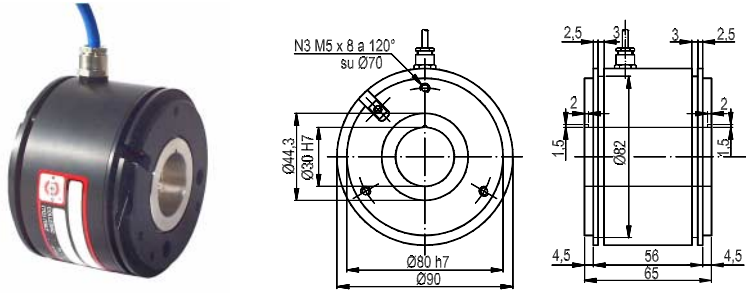
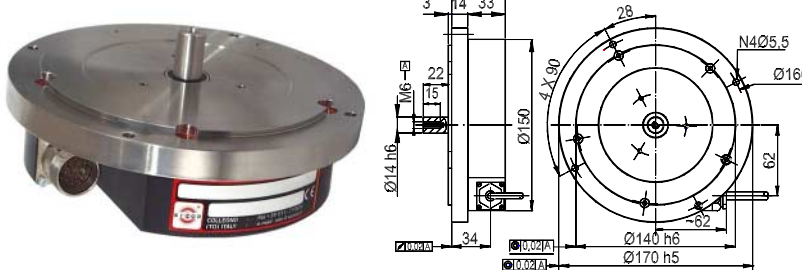
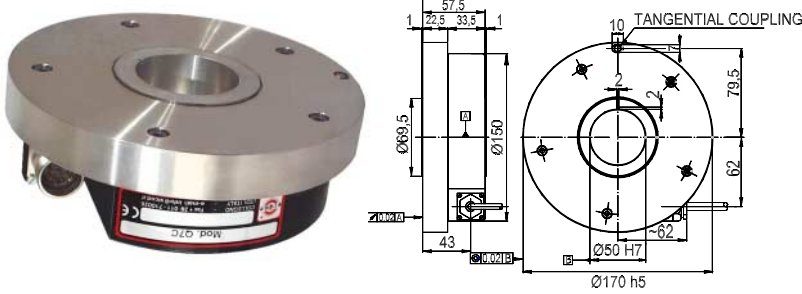




- Incremental encoders
- Absolute encoders
- Linear transducers
- Helical couplings



“ HIGH RESOLUTION “ INCREMENTAL ENCODERS

K9D	 <p>Technical drawings for K9D encoder showing front and side views with dimensions: $N3 M5 \times 12 \text{ a } 120^\circ \text{ su } \varnothing 70$, $\varnothing 90$, $\varnothing 80 \text{ h7}$, $\varnothing 90$, $\varnothing 10 \text{ h7}$, $\varnothing 82$, 23, 52.5, 15, 4.5, 3, 2.5.</p>	<p>Weight: about 600 g. Max rad./ax. load: 3 kg Protection: IP64 Axial connections: connector or cable Radial connections: connector or cable Electronics: all Power supply: 5V,8 ÷ 24V,18 ÷ 28V Max freq.: 500 KHz Max pulses/rev: 90000</p>
K2	 <p>Technical drawings for K2 encoder showing front and side views with dimensions: $\varnothing 4.5$, $\varnothing 110$, $\varnothing 90$, $\varnothing 110$, $\varnothing 80 \text{ h7}$, $\varnothing 92.5$, $\varnothing 70.7$, 23, 55, 15, 3, 6, $\varnothing 10 \text{ h7}$.</p>	<p>Weight: about 620 g. Max rad./ax. load: 3 kg Protection: IP64 Axial connections: connector or cable Radial connections: connector or cable Electronics: all Power supply: 5V,8 ÷ 24V,18 ÷ 28V Max freq.: 500 KHz Max pulses/rev: 90000</p>
K9Z	 <p>Technical drawings for K9Z encoder showing front and side views with dimensions: $N3 M5 \times 8 \text{ a } 120^\circ \text{ su } \varnothing 70$, $\varnothing 44.3$, $\varnothing 30 \text{ h7}$, $\varnothing 80 \text{ h7}$, $\varnothing 90$, 2.5, 3, 3, 2.5, 1.5, 1.5, 4.5, 56, 65, 4.5.</p>	<p>Weight: about 750 g. Protection: IP64 Axial connections: - Radial connections: cable Electronics: -,K,B,C,N,H,P,Q Power supply: 5V,8 ÷ 24V,18 ÷ 28V Max freq.: 500 KHz Max pulses/rev: 18000</p>
Q7	 <p>Technical drawings for Q7 encoder showing front and side views with dimensions: 47, 3, 14, 33, 22, 15, $\varnothing 14 \text{ h6}$, $M6$, 34, $\varnothing 150$, 28, 4×90, $N4 \varnothing 5.5$, $\varnothing 160$, 6.2, $\varnothing 140 \text{ h6}$, $\varnothing 170 \text{ h5}$, 3.2.</p>	<p>Weight: about 3000 g. Max rad./ax. load: 3 kg Protection: IP64 Axial connections: - Radial connections: connector or cable Electronics: all Power supply: 5V,8 ÷ 24V,18 ÷ 28V Max freq.: 500 KHz Max pulses/rev: 90000</p>
Q7C	 <p>Technical drawings for Q7C encoder showing front and side views with dimensions: 57.5, 1, 22.5, 33.5, 1, $\varnothing 69.5$, $\varnothing 150$, 10, TANGENTIAL COUPLING, 79.5, 6.2, $\varnothing 50 \text{ h7}$, $\varnothing 170 \text{ h5}$, 43, $M6$.</p>	<p>Weight: circa 3000 g. Max rad./ax. load: 3 kg Protection: IP64 Axial connections: - Radial connections: connector or cable Electronics: all Power supply: 5V,8 ÷ 24V,18 ÷ 28V Max freq.: 500 KHz Max pulses/rev: 90000</p>

ORDERING CODE



Shaft \varnothing with
H option

M - Monodirectional
B - Bidirectional
BZ - Bidirect.+Zero
MZ - Monodirec.+Zero

-- Axial
R -Radial

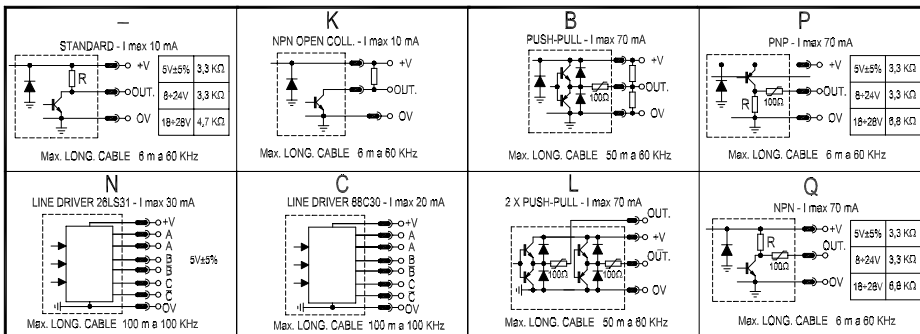
CV -Cable
CD -DE9P connector
CM -MS3102A16S-1P connector
CL - MS3102A18S-1P connector
CI - UTG014-12P connector
CH - Eml 121connector
MS -Terminal box
SM -Sealed CM connector
SL -Sealed CL connector
VM - MS3102A16S conn. at end cable
VL - MS3102A18 connector at end cable
VD - DE9P connector at end cable
VI - UTG06-12P connector at end cable
VK - MS3102A20 connector at end cable
VH - Pml121 connector at end cable
VN - RLK121MRV connector at end cable
VS -840-31-570 connector at end cable
TM -Sealed CM connector at end cable

L - Low Temperature
Z - Sealed ball bearings
B - Low torque ball bearings
H - Different shaft \varnothing
W - 500 kHz freq.
U - 1 MHz freq.
J - Zero logic combination
G - Tropicalization
M - Impregnated electronic
A - High temperature
X - Custom options

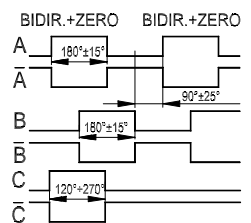
5 - 5V \pm 5%
824 - da 8 a 24 V
1828 - da 18 a 28 V
815 - da 8 a 15 V
1230 - da 12 a 30V output 12V
8245 - da 8 a 24V output 5V
18285 - da 18 a 28V output 5V
1030 - da 10 a 30 V

-- Standard
K - Open collector 10 mA
C - Line Driver 88C30
N - Line driver 26LS31
B - Push-pull with protection
L - 2x Push-Pull with protection
H - Push_Pull without protection
Q - NPN 70 mA with protection
R - NPN 70 mA without protection
M - 2x Push-Pull without prot.
P - PNP 70 mA with protection
U - PNP 70 mA without protection
X - Custom options

OUTPUT ELECTRONICS



OUTPUT SIGNALS



COMMON SPECIFICATIONS

SHOCK RESISTANCE: 50 G (11 mS)
VIBRATION RESISTANCE: 12 G (10 ÷ 2000 Hz)
STAINLESS STEEL BALL BEARINGS (ABEC 5) AND SHAFT (h7)
BALL BEARINGS LIFE: 1,5 X 10 ⁹ revolutions
LIGHT SOURCE LED WITH LIFE > 100000 h
OPERATING TEMPERATURE : 0 ÷ +70 °C <i>other on request</i>
STORAGE TEMPERATURE: - 30 ÷ +85 °C
DETECTORS: PUSH-PULL PHOTOTRANSISTORS
CONSUMPTION: ~100 mA, ~ 130 mA WITH LINE DRIVER
BURN-IN: 72 h
PULSES PER REVOLUTION
Please see specifications of each model for max pulses number. -1 ÷ 500 (all) - 504 - 508 -512 - 520 - 525 - 528 - 534 - 540 - 544- 545 -550 -576 -594 -600 -619 -620 -625 -635 -640 -700 -710 -720 -722 -750 -762 -800 -810 -816 -890 -900 -942 -960 -980 -1000 - 1005 - 1008 -1021 -1024 -1036 -1044 -1068 -1180 -1185 -1200 -1215 -1250 -1270 - 1440 -1500 -1600 -1602 -1800 -1920 -1950 -1979 -2000 -2042 -2048 -2136 -1160 -2200 -2250 -2304 -2356 - 2400 -2500 -2540 -2600 -2618 -2700 -2880 -3000 -3600 -4000 -4096 -5000 -5400 -6000 - 6350 -7200 -7500 - 8192- 9000 -10000 - 10800 -12700 -14400 -15000 -18000 - other on request -