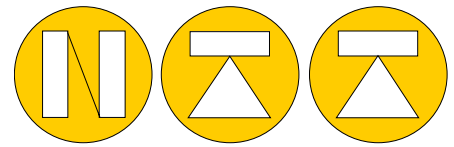


# HLS-M ENCODER SIGNAL OUTPUT

0-1000mm to 0-5000mm Measuring length



**NORDIC TRANSDUCER**



## **HLS-M** Wire-length transducer.

This type of length transducer are getting more and more popular for usage at industrial measuring jobs at length from 1000mm and up 5m.

It is easy to mount, do not require any kind of special guide or lining up, the wire must just go straight out of the guide, It is very interesting prices compared with other systems, robust and reliable.

**HLS-M** is equipped with a Nylon coated stainless steel wire, which inside the housing is laid side by side on a spool by means of 3 smaller supporting rollers, this give a minimum of ware on the wire + present it straight in front of the outlet all time, this do give the the possibility to have a high speed response at 10kHz, max. travel 1m sec.

## **ELECTRICAL SPECIFICATION**

Detection System:	Incremental
Full stroke	1000, 2000, 3000, 5000 mm
Standard Resolution (mm/pulse)	1, 0.5, 0.2, 0.1, *0.05 mm/pulse (*only for stroke 1000, 2000)
Accuracy: :	Stroke -1000mm +/-0.03% FS +/-1 count Stroke 2000 -5000mm +/-0.05% FS +/-1 count
Output Wave:	Square Wave
Wave Form Rise/ Fall:	2µ s or less
Current Consumption	< 60 mA
Supply voltage:	VDC 8-26 / DC 5V fixed / Line drive
Output Capacity:	Sync. Current: 20mA, Residual Voltage: 0.5V or less
Max. Response:	10 kHz - 50kHz
Phase Different:	A, B phase different 90° +/-45° (T/4+/-T/8), Z phase T+/-T/

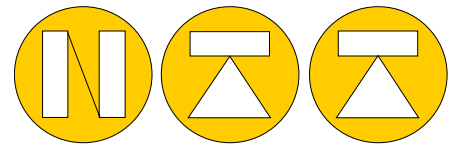
## **MECHANICAL SPECIFICATION**

Wire:	SUS304 stainless Steel, with Nylon coating diamter 0.7mm; Breaking load 23kg
Max. Travel speed:	Max. 1000 mm/sec ( come and go )
Vibration:	10g ( 10+/- 1.500 Hz )
Weight:	900 gram approx
Starting Torque on spring:	Stroke < 2m = max. 600gram, stroke>2mm = max. 900 gram
Life time:	Typical 1 x 10 <sup>6</sup> cycles
Electrical connection:	Fixed cable 1m or 5m, or MILL 7 pin connector

## **ENVIRONMENTAL SPEC.**

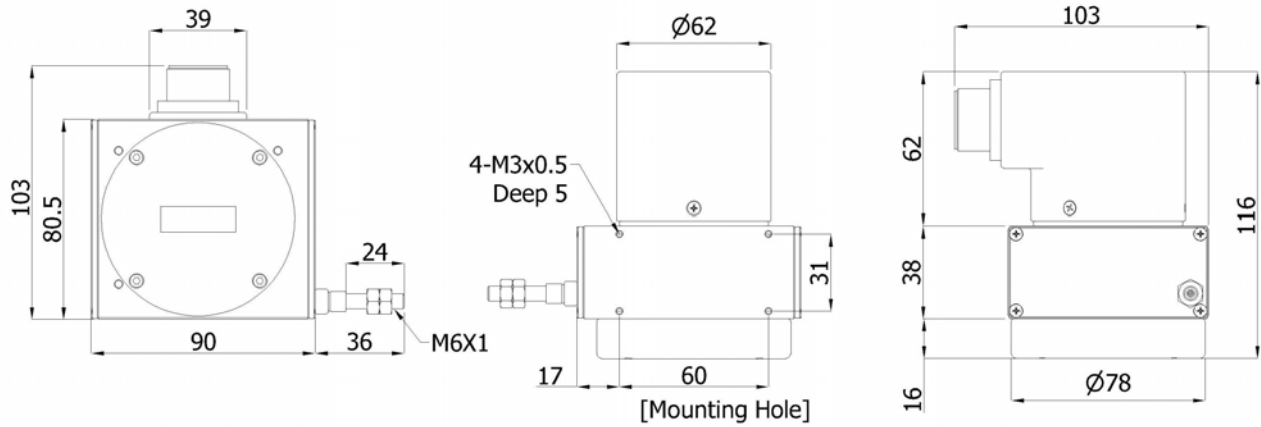
Operating Temp.	0°C to +50°C
Humidity:	/ RH 35..90% non Condensation
Protection:	IP64: Dust & Dripping proof ( only for encoder housing )

# HLS-M ENCODER SIGNAL OUTPUT



**NORDIC TRANSDUCER**

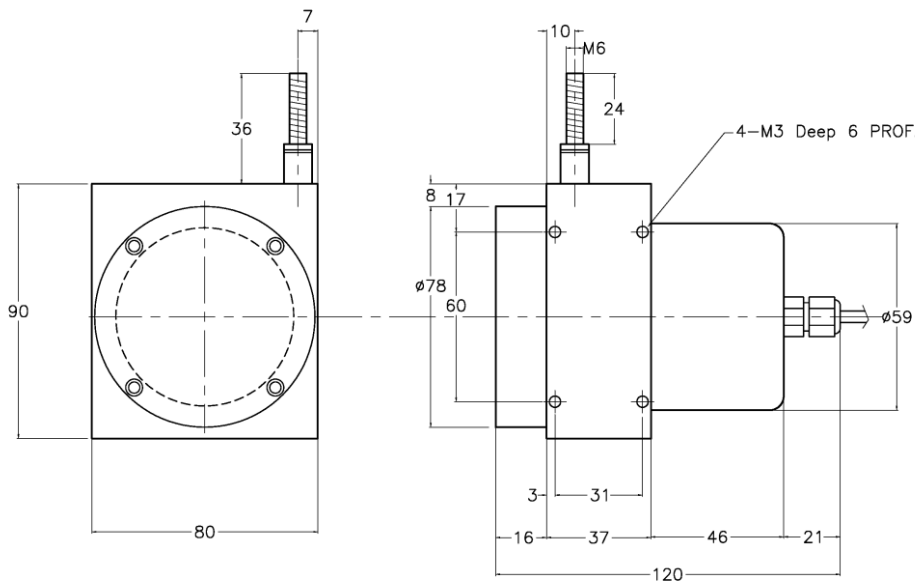
Dimensions mm with R7 connector:



## ORDERING INFORMATION

HLS-M-	Measuring Range	Resolution	A	Electronic	Connect	Supp.VDC
010:	1000mm	1: 1mm	ABZ	V : Voltage	Cable 1/5 m	5-26V
020:	2000mm	0.5: 0.5mm		P : Open Collector	Cable 1/5m	
030:	3000mm	0.2: 0.2mm		H : Line Drive	R10: Mill 10 pin	
050:	5000mm	0.1: 0.1mm		PP: Push-Pull	R7: Mill 7 pin	
		0.005: 0.05mm				
		0.004: 0.04mm				

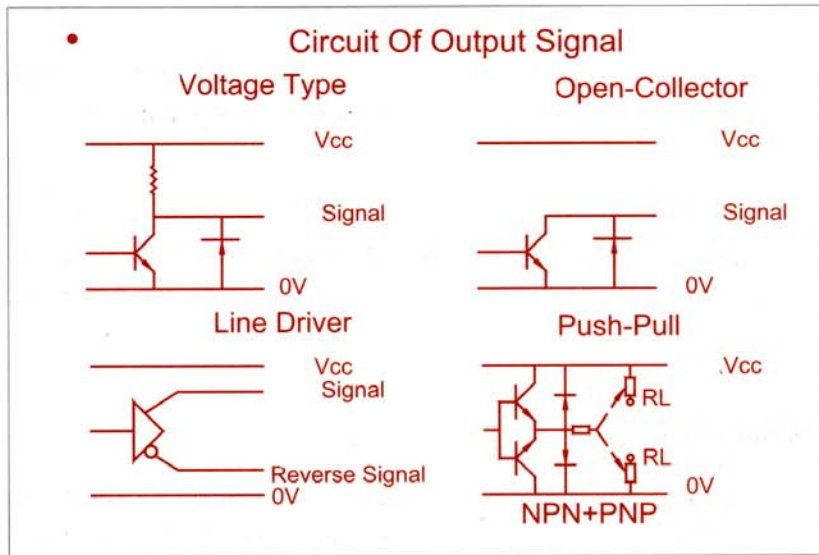
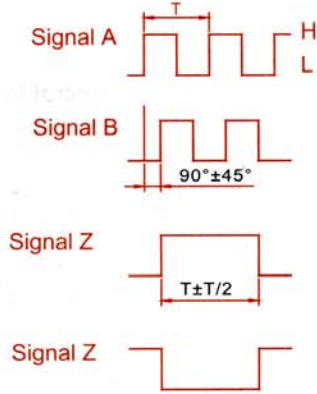
Dimensions mm with Cable connect



KDPC/Data/Hontko/HLS/HLS\_M\_2023/PMD

◀ INCREMENTAL ENCODER'S ELECTRICAL DATA ▶

Output Wave Form



Electrical Connections

Color wire function of cable

NORMAL CIRCUIT

LINE DRIVER CIRCUIT

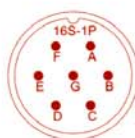
Color of wire	(pin)	Function	Color of wire	(pin)	Function
Red	1A	+V	Red	1A	+V
Black	2B	0V Common	Black	2B	0V Common
White	3C	A CH A	Blue	3C	A CH A
Green	4D	B CH B	Green	4D	B CH B
Yellow	5E	Z CH Z	Yellow	5E	Z CH Z
Shield		NC	Violet	6F	/A CH A (reverse)
			Orange	7G	/B CH B (reverse)
			Brown	8H	/Z CH Z (reverse)
			Shield	-	NC

Pin function of connector

TYPE:MS3102A16S-1P

(7pin connector)

\*for Voltage, Open Collector, Push Pull

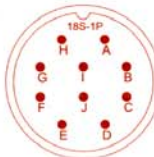


PIN A +V  
 PIN B 0V Common  
 PIN C CH A  
 PIN D CH B  
 PIN E CH Z  
 PIN F -  
 PIN G -

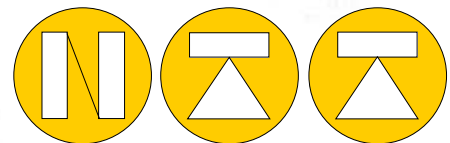
TYPE:MS3102A18S-1P

(10 pin connector)

\*for Line Driver

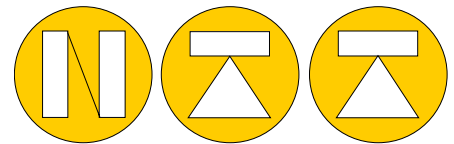


PIN A +V  
 PIN B 0V Common  
 PIN C CH A  
 PIN D CH B  
 PIN E CH Z  
 PIN F CH A reverse  
 PIN G CH B reverse  
 PIN H CH Z reverse  
 PIN I -  
 PIN J -



NORDIC TRANSDUCER

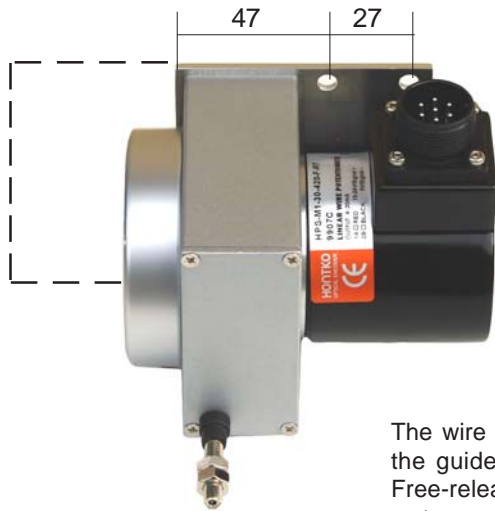
# HLS-M 10000mm to 5m Measuring length



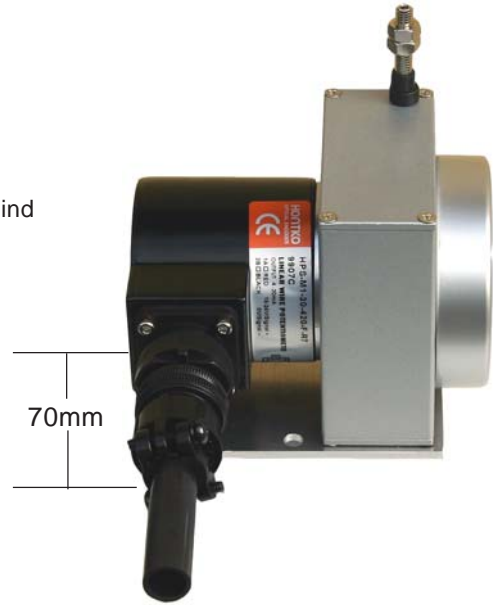
**NORDIC TRANSDUCER**

**OPTION MP**

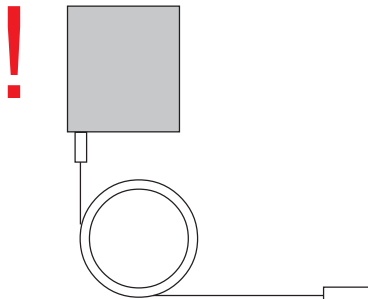
HLS-M can be delivered with an 3mm thick mounting plate made of aluminium. This can be mounted behind the wire outlet or under the wire outlet as shown here, both as right or left mounting, so there should be plenty of options how to mount these !



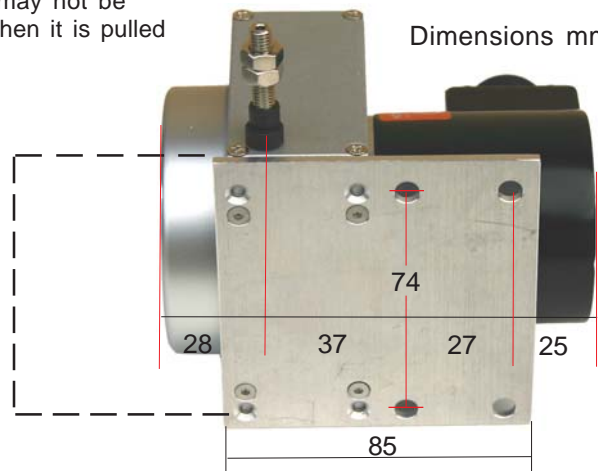
Mounting Plate behind the wire outlet, left or right side



The wire must go straight out of the guide, and may not be Free-released when it is pulled out



By means of a roller the unit can be used going around corners !



Dimensions mm:

Under the wire outlet left or right side.



HLS-M is standard supplied with 1m or 5m fixed cable ! OPTION is a MILL R7 connector as shown here and with female part for the customers connection. Mill 10 connect for Line drive