

# GYPS

## Magnetostrictive cylinder sensor

GYPS is a magnetostrictive cylinder sensor with integrated electronics and a diameter 48 mm header it's compact and compatible with many hydraulic cylinders within mobile hydraulics and more.

Measuring stroke between 30 and 2400 mm with a wide range of analog output signals and PWM output with high accuracy and excellent life-time.



### ORDER INFORMATION

GYPS - <sup>1</sup>□ - <sup>2</sup>□ / <sup>3</sup>□ - <sup>4</sup>P - <sup>5</sup>□ - <sup>6</sup>□ - <sup>7</sup>□

Example: GYPS-0300-S/S-P-M2PN-RG5F-BD

#### 1 Stroke length

Specify effective stroke length in [mm] between 30...2400    xxxx

#### 2 Dead zone header

Standard 15 mm    S

Other dead zone length, specify length in [mm] (min. 15mm)    xxx

#### 3 Dead zone rod tip

Standard 70 mm    S

Other dead zone length, specify length in [mm] (min. 70mm)    xxx

#### 4 Mount / Rod diameter

O-Ring / Rod Ø10 mm    P

#### 5 Magnet

No. 2Pn    M2PN

No. 3    M3

#### 6 Electrical connection

Pigtail / free cable end  
(Specify cable length in meters at [L], max. 10 m)    RG[L]F

Pigtail / free cable with connector for relay  
(Specify cable length in meters at [L], max. 10 m)    RG[L]A

M12 receptacle type: H-Pin assignment  
(Specify wire length in 0.01 meters at [L], max. 0.1 m)    KV[L]H

M12 receptacle type: G-Pin assignment  
(Specify wire length in 0.01 meters at [L], max. 0.1 m)    KV[L]G

#### 7 Output signal

0.25 - 4.75 VDC    A1

4.75 - 0.25 VDC    A2

0.5 - 4.5 VDC    A3

4.5 - 0.5 VDC    A4

0 - 10 VDC    AD

10 - 0 VDC    AR

4 - 20 mA    BD

20 - 4 mA    BR

PWM 1kHz 5V 5 - 95%    PWM1

PWM 1kHz 5V 95 - 5%    PWM2

- Diameter 48 mm header
- Intergrated electronics
- High accuracy
- Long life time

### SPECIFICATIONS

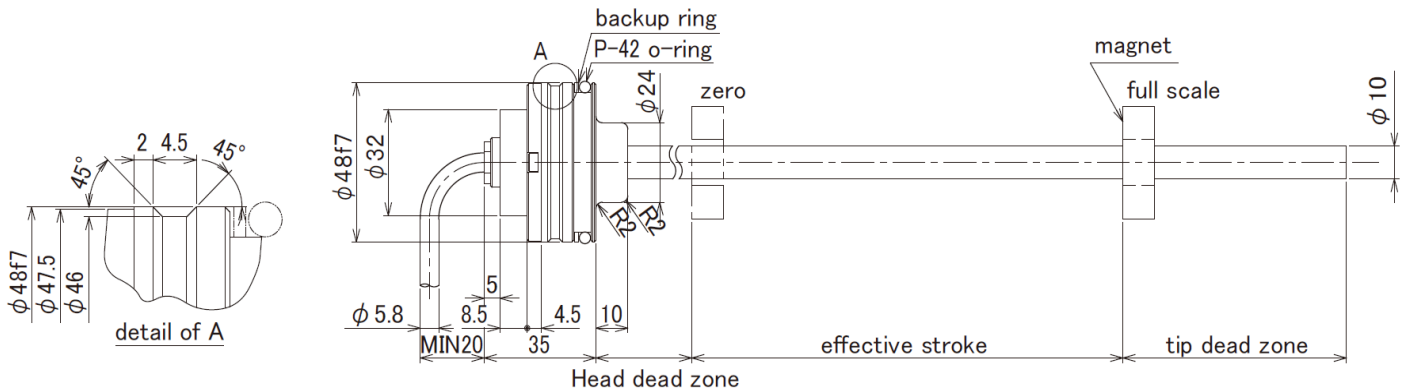
Supply voltage	8-36 VDC (< 0.8W) 0.25-4.75 VDC, 0.5-4.5 VDC or 0-10 VDC and the reverse equivalent. (load Min.2k Ω)
Output Analog	4-20 mA and 20-4 mA (load Max.250 Ω)
Output PWM	1 kHz, 5V, 95-5% or 5-95 % (load Min.5k Ω)
Linearity	≤ ± 0.1 mm (30...250 mm) ≤ ± 0.04 % FS (251...2000mm) ≤ ± 0.8 mm (2001...2400mm)
Resolution	≤ 0.06 mm
Repeatability	≤ ±0.06 mm
Temperature drift	≤ ±0.006 % FS/°C
Sampling frequency	Std 1 kHz (up to stroke 1000mm)
Stroke length	30...2400 mm
Operating pressure	450 bar/ 45 MPa
Operating temperature	-20°C...+85°C
Storage temperature	-20°C...+85°C
Vibrations	20G (5-2000 Hz)
Shock	100G (2ms)
Ingress protection housing	IP67
Material header	SS304
Material rod	SS304
Material magnets	See specification in drawing of respective magnet type.

# GYPS

Magnetostrictive cylinder sensor

## DIMENSIONS

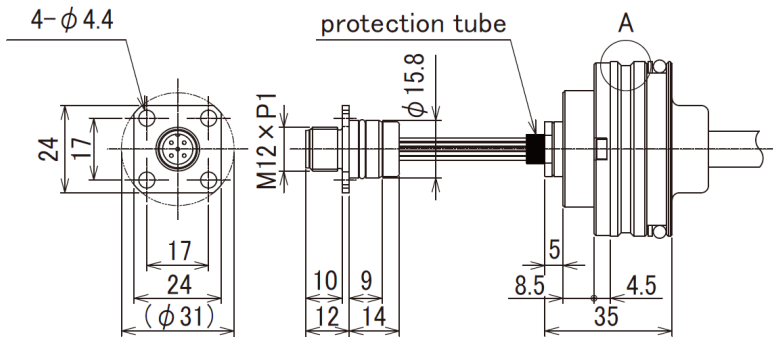
Probe with cable



## OUTPUT CONNECTIONS - Cable

Lead	Function
Red	+12/24VDC
Red/White	0V
Black	Output
Black/White	COM
Green	For parameter setting

## M12 Contact



## OUTPUT CONNECTIONS - M12

PIN	M12 H-PIN assignment	M12 G-PIN assignment
1	+12/24VDC	+12/24VDC
2	Output	COM
3	0V	0V
4	COM	Output
5	For parameter setting	For parameter setting

### NOTE: If extension cable is used:

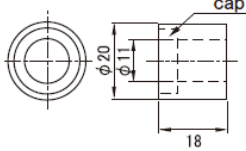
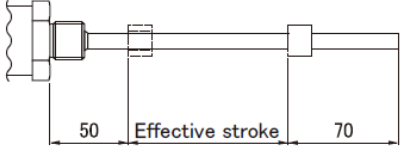
Voltage output : Sensor cable (m) + extension cable (m) < 10 m  
Current output : Sensor cable (m) + extension cable (m) < 100 m

# GYPS

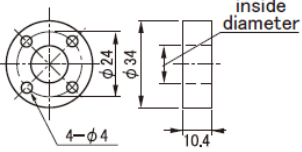
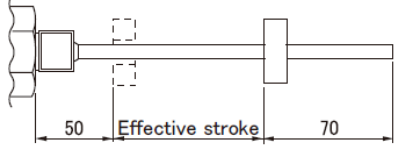
Magnetostrictive cylinder sensor

## MAGNETS

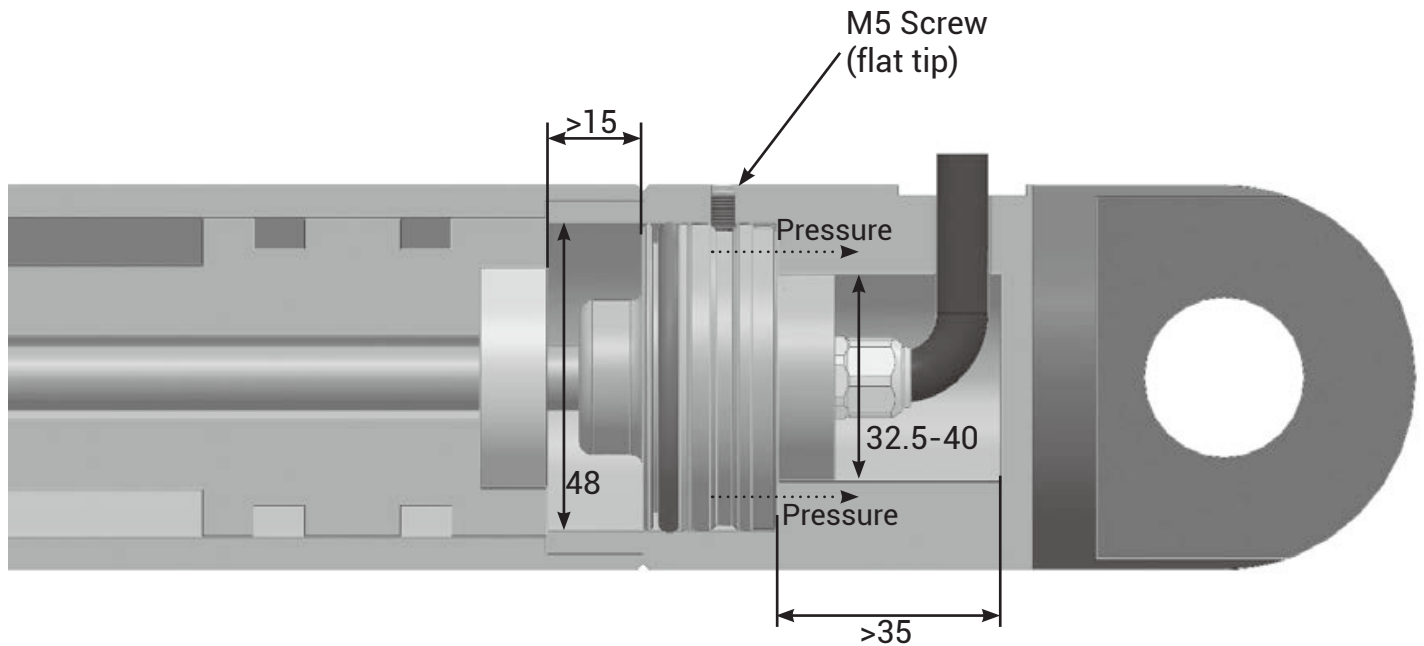
### Magnet No. 3

	Material	Polyacetal	
	Weight	approx 8g	
	Install direction	Nil	

### Magnet No. 2PN

	Material	Nylon 66	
	Weight	approx 10g	
	Install direction	Nil	

## INSTALLATION EXAMPLE



# GYPS

Magnetostrictive cylinder sensor

## CHANGE LOG

2023_01	First edition.
2023_02	Wire colors edit



Rev no.  
2023\_2 specifications subject to change without notice

REGAL COMPONENTS AB • LEFFLERSGATAN 1 • SE-754 50 UPPSALA • SWEDEN  
+46 (0)18-65 70 00 • WWW.REGAL.SE • INFO@REGAL.SE