

The GYSE-sensor is very easy to mount and install in cylinders. It offer strokes up to 7500 mm and analogue or digital output.

The sensor also offer the possibility to exchange the sensor part inside the housing and probe without removing the complete sensor. This mean the hydraulic system can be pressurized during the exchange process.

The GY-series from Regal offer sensors that meet the highest demands on the market from one of the leading suppliers in Japan. Decades of experience ensures you highest quality. The GY-series are designed for mount in hydraulic and pneumatic cylinders but can also be used in other applications such as liquid level detection. The magnetostrictive principle, non-contact, offers very high performance and linearity combined with extreme long lifetime.



- Non-contact technology
- Detachable probe head/element
- High quality

GYSE-series, also available in profile version for external measurement.

SPECIFICATIONS	GYSE-A (Analog)	GYSE-S (SSI)	GYSE-Q (Inkrementell)
Power supply	22-26 VDC (70 mA)	24 VDC $\pm$ 2 (70 mA)	24 VDC $\pm$ 2 (70 mA)
Output, position	0-10 V / 4-20 mA	SSI, 24 bit Binary or Gray code	A, /A and B, /B RS422 line driver
Output, velocity	$\pm$ 10 V or 4-20 mA	Not available	
Output alarm	Open drain 50 V 0.1 A (Alarm signal for lost magnet)		
Non-linearity	$< \pm 0.025\%$ FS*		
Resolution	16 bit (1/65536)*	0.01 mm std (0.05, 0.005, 0.002, 0.001 mm) *	
Repeatability	$< \pm 0.001\%$ FS *		
Temp. Drift	$< \pm 20$ ppm FS/ $^{\circ}$ C	$< \pm 15$ ppm FS/ $^{\circ}$ C	
Sampling frequense	1 kHz		
Stroke	50-7500 mm		
Temperature			
Operating temp.	-20 $^{\circ}$ C...+80 $^{\circ}$ C		
Storage temp.	-40 $^{\circ}$ C...+80 $^{\circ}$ C		
Material			
Probe head	Aluminum		
Probe rod	Stainless steel SS304		
Vibrations	15 G (10-2000 Hz)		
Shock	100G (2ms)		
IP grade	IP67		
Working pressure	350 bar		
Protection against polarity inversion	Yes		

The above mentioned accuracy applies to sensors with an effective stroke of 300 mm or more.

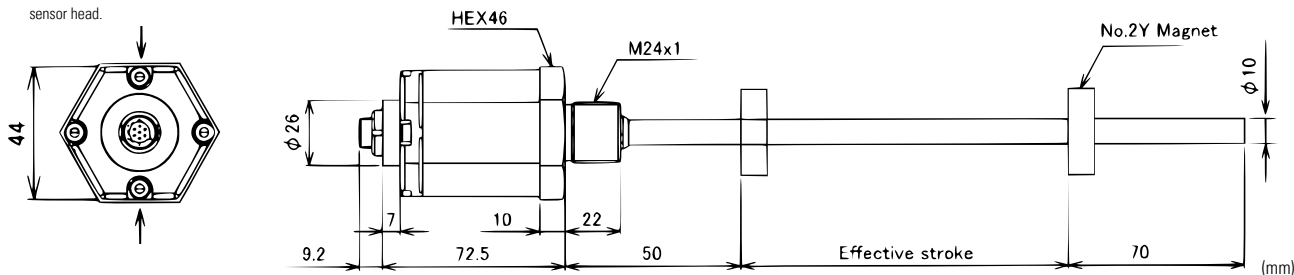
2016-04-22, specifications subject to change without notice

# GYSE

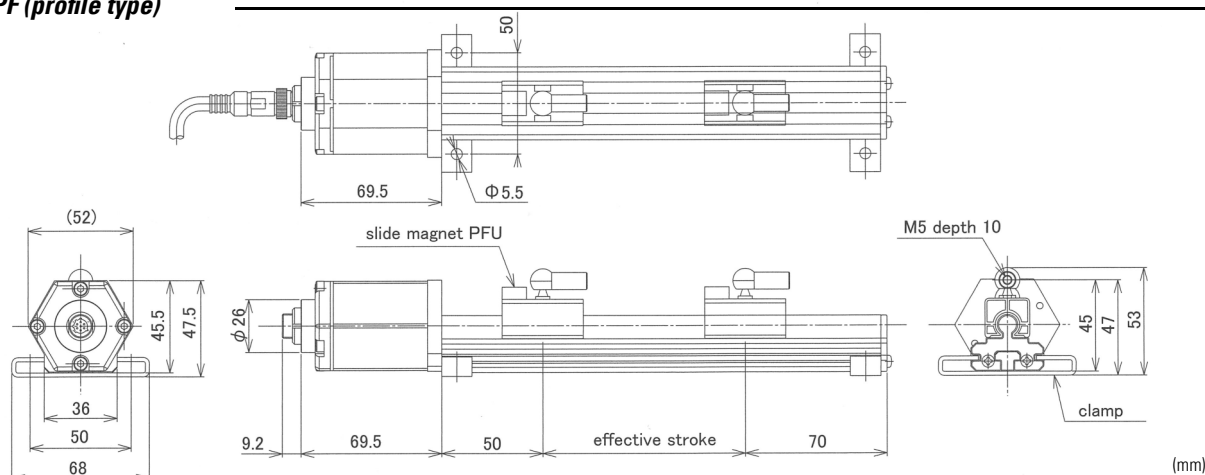
## Magnetostrictive linear sensor 15-7500mm

### GYSE, probe

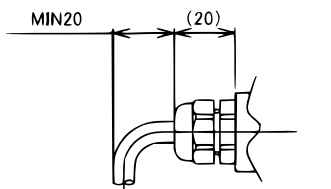
Losen two screws to dismount the sensor head.



### GYSE, PF (profile type)

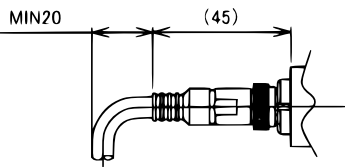


### Pigtail (option)



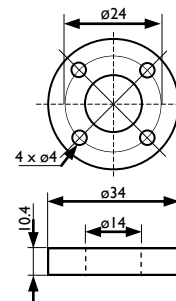
(mm)

### Connector (std)



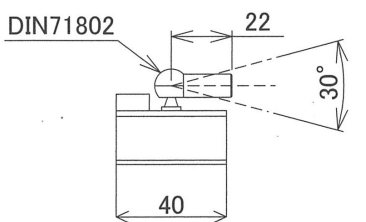
(mm)

### MAGNET M2PN



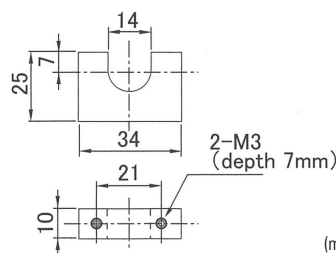
(mm)

### MAGNET PF TYPE Slide magnet, type PFU



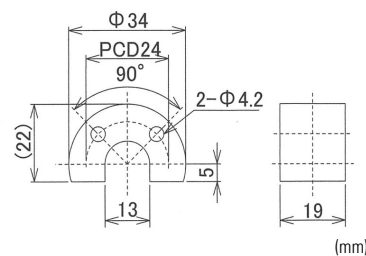
(mm)

### MAGNET PF TYPE Floating magnet, type No. 11N



(mm)

### MAGNET PF TYPE Floating magnet, type No. 5PFT-LG



(mm)

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ISO 9001  
BUREAU VERITAS  
Certification

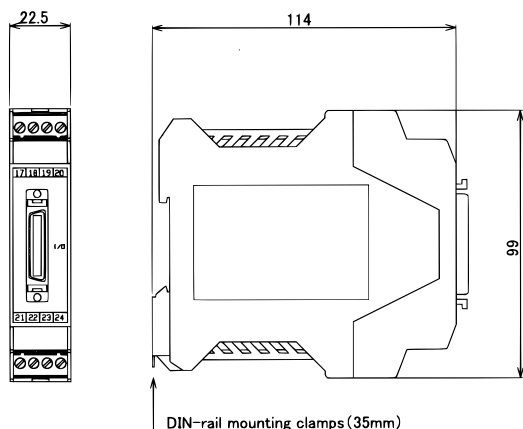


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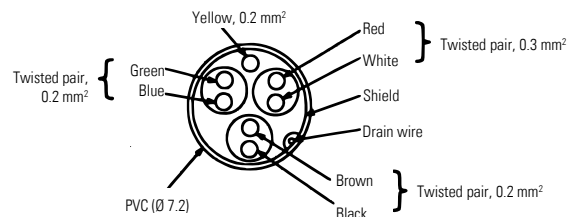
Regal

### Accessories, SSI-version

DIN-controller SSPC-01 converting from SSI to parallel.  
Standard: with mating connector 0136-3000PE.  
Option: connector with 3 m cable



### Connections



### CONNECTIONS

Cable color	Pin	GYSE-A	GYSE-S	GYSE-Q
Red	1	+24 VDC	+24 VDC	+24 VDC
White	2	0 V	0 V	0 V
Blue	3	OUT 1	Data+	A + pulse
Green	4	COM 1	Data-	A - pulse
Brown	5	OUT 2	CLK+	B + pulse
Black	6	COM 2	CLK-	B - pulse
Yellow	7	Alarm	Alarm	Alarm

### ORDER INFORMATION

**GYSE - A** - □□□□-□/□-□-□-□-□ (Analog)  
1 2 3 4 5 6 7 8

**GYSE - Q** - □□□□-□/□-□-□-□-□□□ (Incremental)  
1 2 3 4 5 6 9 10 11

**GYSE - S** - □□□□-□/□-□-□-□-□□□ (SSI)  
1 2 3 4 5 6 9 10 12

#### 1 Effective stroke (15-7500mm)

#### 2 Thread dead zone

S: 50 mm (std)

#### 3 Tip dead zone

S: 70 mm/90 mm/100 mm (std),

Depends on the magnet

#### 4 Thread / Rod diameter

M: M24x1.0, Ø 10 mm (std)

N: M18x1.5, Ø 10 mm

U: 3/4-16UNF-3A, Ø 10 mm

M8: M24xP1.0, Ø 8 mm

N8: M18xP1.5, Ø 8 mm

U8: 3/4-16UNF-3A, Ø 8 mm

M14: M24xP1.0, Ø 13.8 mm

#### 5 Magnet

M2PN: No.2PN (std)

Please see GY-magnets for more options, group GG

#### 6 Cable connection

CN: Connector M12 (std)

GnF: Cable (n=length in meter)

GnA: Cable with connector (n=length in meter)

#### 7 Position output (OUT 1), when magnet moves toward tip

AD: 0-10 V

AR: 10-0 V

BD: 4-20 mA

BR: 20-4 mA

CDxx: Bipolar output (-x V - +x V)

Example CD10: -10 V - +10 V

CRxx: Bipolar output (+x V - -x V)

Example CR05: +5 V - -5 V

#### 8 Optional analog output (OUT2)

N: without option (std)

Position output: select from 7

Velocity output

VAy: ± 10 V, Stop= 0 V, Movement= 10 V

Wby: 4-20 mA, Stop= 4 mA, Movement= 20 mA

y=max velocity(1-999 mm/sek)

#### 9 Resolution

D2: 0,1 mm

D3: 0,05 mm

D4: 0,01 mm (std)

D5: 0,005 mm

D7: 0,002 mm

D8: 0,001 mm

#### 10 Direction, when magnet moves toward tip

D: Increasing

R: Decreasing

#### 11 Pulse frequency

1: 1MHz

2: 500kHz (std if resolution D7, D8)

3: 250kHz (std if resolution D2-D5)

4: 125kHz

6: 31kHz

7: 15kHz

#### 12 Output code

B: Binary (std)

G: Gray

Other alternatives available. Please contact Regal Components for more information.

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