

# Mobile Hydraulic Pressure Transducers & Transmitters HT-SMO Series

- High accuracy & reliability
- Ranges 4 bar to 4,000 bar
- 2 or 3 wire mA & Voltage signals
- Huge choice of mechanical & electrical connectors
- Temperature -range 40°C + 125°C
- Compact and rugged design for demanding applications



Mobile hydraulics applications demand the most rugged mechanical and electronic protection due to extreme outdoor dynamic and remote operating conditions. This range of sensors provides the highest levels of shock, vibration and overload resistance, EMC compliance & environmental protection.

**Automotive**  
**Diesel Engines**  
**Industrial machinery**  
**Mobile Hydraulics**  
**Pneumatics**

# Mobile Hydraulics for Pressure Transducers & Transmitters HT-SMO Series

## TECHNICAL SPECIFICATIONS

### Standard pressure ranges & signal outputs

Measuring range *(bar)	4	6	10	16	20	25	40
Overload pressure	20	20	20	40	40	100	100
Burst pressure	30	30	30	60	60	150	150
Measuring range (bar)	60	100	160	200	250	400	600
Overload pressure	200	200	400	400	750	750	840
Burst pressure	300	300	600	600	1000	1000	1050
Measuring range (bar)	1000	1600	2000	2500	4000		
Overload pressure	1200	2400	2400	4500	4500		
Burst pressure	1500	3000	3000	5000	5000		

\*Gauge ranges shown - vacuum and absolute ranges available on request

Electrical Configuration	2 wire / 3 wire	3 wire	3 wire	ratiometric
Output signal	4-20mA	0-10Vdc	1-5Vdc	0.5-4.5Vdc
Supply voltage	9-32Vdc	12-32Vdc	8-32Vdc	5Vdc ± 10%

- Media temperature range: -40°C to +125°C
- Compensated temperature range: -20°C to +85°C
- Ambient temperature range: -40°C to +105°C

### Performance

- Accuracy: Combined non-linearity, hysteresis and non-repeatability at room temperature according to IEC 61298-2 (or BSFL/Best Fit Straight Line): <0.5% FS range (<0.25% BFSL)  
Optional <0.25% FS range (<0.15% BFSL)
- Temperature effects: Zero/Span typical thermal coefficients <0.15% FS range/ 10°C
- Total Error Band: Maximum 2% FS from room temperature to -40°C or +105°C
- Long term stability: <0.1% FS range/year
- Response time: <1mS (from 10% to 90% FS range)
- Vibration resistance: 20g (according to IEC 68-2-6 and IEC 68-2-36)
- Shock resistance: 1000g (according to IEC to 68-2-32)
- EMC protection: Ratiometric model tested up to 300 V/m

### Physical

- Material: body - stainless steel, pressure inlet port - stainless steel
- Process connection: G 1/4 A, 1/4NPT, M12 x 1.5, M14 x 1.5, 7/16-20UNF-2A, 9/16-18UNF-2A.  
*Other connections available on request*
- Electrical connection: integral cable, M12 x 1 male socket, 3/4 pin Deutsch-connector, round-connector DIN 72585, packard, superseal and junior-timer connectors  
*Other connections available on request*
- Weight: approximately 80-120g (dependent upon configuration)
- Ingress protection: IP65 (for connector versions with their mating plug fitted)

### Options

- (1) Improved accuracy <0.25% FS (<0.15% BFSL)
  - (2) additional cable (per metre - specify length)
- For further options or customised products please contact us.*

### Related products

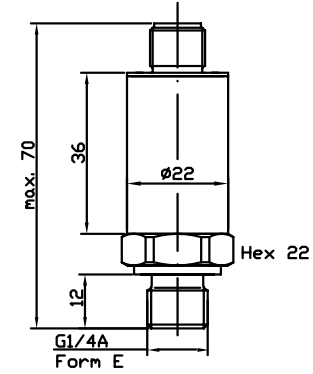
Hydrotechnik manufactures a wide range of sensors, test and measurement equipment.

Contact us for further information or visit [www.hydrotechnik.co.uk](http://www.hydrotechnik.co.uk)

*Continuing development can necessitate specification changes without notice*

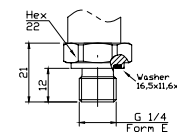
## Dimensions

HT-SMO with M12 connection

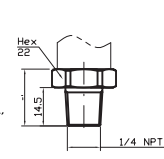


## Mechanical Connections

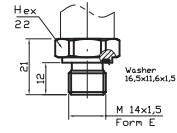
G 1/4 A;  
DIN 3852; Form E



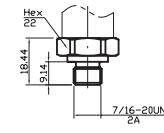
1/4 NPT



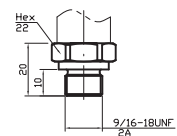
M14x1.5  
DIN 3852



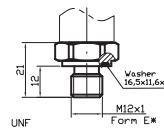
7/16"-20 UNF-2A  
SAE 514



9/16"-18 UNF-2A

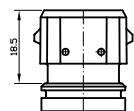


M12x1.5

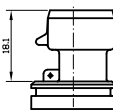


## Electrical Connections

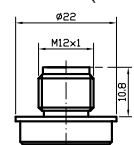
Junior-Timer  
connector



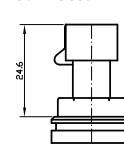
Packard  
connector



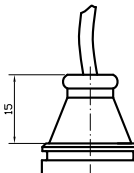
Male socket  
M12 x 1 (S763)



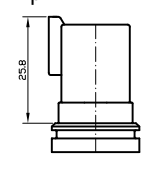
Superseal  
connector



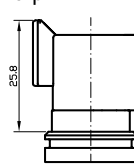
Integral  
1 metre cable



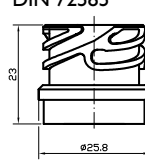
Deutsch-connector  
4-pin



Deutsch-connector  
3-pin



Round-connector  
DIN 72585



# HT-SMO Series ORDER CODES

Series	Output Signal	Pressure Range	Unit	Pressure Type	Process Connection	HEX	Electrical Connection	Extras
HT-SMO	37.0	0006000	MPa	(sr)	G14A	22	PAI	RXX

4 ... 20 mA / 2 wires	10.0
0 ... 20 mA / 3 wires	10.1
4 ... 20 mA / 3 wires	10.2
0 ... 10 V	20.0
1 ... 5 V	20.1
0 ... 6 V	20.2
0 ... 5 V	20.4
0.5 ... 4.5 V ratiom.	37.0
0.5 ... 4.5 V non rat.	40.0
Others	AAA

bar	BAR
kPa	KPA
MPa	MPA
PSI	PSI
kg/cm2	KGC
m WC	MWS
in WC	IWS
others	CCC

Relative Pressure	(g)
Sealed Reference	(sr)

0 ... 4	0000400		
0 ... 6	00006000		
0 ... 10	0001000	0 ... 25	0010000
0 ... 16	0001600	0 ... 160	0016000
0 ... 20	0002000	0 ... 200	0020000
0 ... 25	0002500	0 ... 250	0025000
0 ... 40	0004000	0 ... 400	0040000
		0 ... 1000	0100000
		0 ... 1600	0160000
		0 ... 2000	0200000
		0 ... 2500	0250000
		0 ... 3000	0300000
		0 ... 4000	0400000
		Others	BBB

G 1/8 A Shape A	G18A	22
G 1/4 A Shape A	G14A	22
G 1/4 A Shape E	G14E	22
G 1/2 A Shape E	G12E	27
1/8 NPT	I8NP	22
1/4 NPT	I4NP	22
9/16-18 UNF-2A	U98M	22
7/16-20 UNF-2A	U72M	22
7/16-20 UNF-2B	U72F	22
3/8-24 UNF-2A	U38M	22
3/8-24 UNF-2A/C	U38C	22
1/2-20 UNF-2A	U12M	22
M 10x1 Shape A	M10A	22
M 12x1 Shape E	M12E	22
M 12x1 Konical	M12C	22
M 12x1.5 CT-Ring	M12S	22
M 14x1.5 Shape A	M14A	22
M 14x1.5 Shape E	M14E	22
M 14x1.5 ISO	M140	22
M 16x1.5 Shape A	M16A	22
M 16x1.5 female	M16F	22
M 18x1.5 male	M18M	22
R 1/4 male	R14M	22
Others	DDDD	EE

MVC/A	MVA
MVC/C	MVC
Hirschmann Mini	HIM
LEMO EWB IS	LMS
IS9 Industrial Socket	IS9
Packard	PAI
Male Socket M 5 / S707	M05
Male Socket M 12 / S763	M12
Male Socket M 16 / S723	M16
Male Socket M 18 / S714	M18
Junior Timer	JTI
Bajonet DIN 72585	BJD
Bajonet VG 95234	BJV
Super Seal	SUS
Deutsch 3-poles	D03
Deutsch 4-poles	D04
QUICK ON	QON
Flying Leads 1.0*	FLI
Cable Gland Plastic	CPI
Cable Steel 1.0*	KSI
Cable Plastic 1.0 *	KPI

\* e.g. with cable length 1 metre

Restrictor 0.6 mm	RO6
Restrictor others	RXX
Total Error Other	FXX
Metal Cone	SC0
Others (see below).	GG