# **GYDAD** INTERNATIONAL

# Accessories for measuring instruments, display and service units

### Sensors with automatic sensor recognition

The pressure, temperature and flow rate transmitters with HSI sensor recognition have been specially developed for use in conjunction with HYDAC measuring instruments HMG 5x0, 2500 and 4000 as well as the Condition Monitoring Unit CMU 1000.

For data transmission, these sensors have an HSI interface (HYDAC Sensor Interface). This interface enables the above-mentioned HYDAC measuring instruments to automatically recognise the HSI sensor and then automatically apply all the necessary basic device settings.

To extend the number of sensors on the HMG 4000, the special HCSI sensors, based on the CAN protocol, were developed.

These HCSI sensors, easily identified with their red type label, are automatically recognised along with all their characteristics by the HMG 4000.

Up to 28 HCSI sensors can be connected to the HMG 4000 simultaneously via the Y-distributor (available as an accessory) to set up an HMG-internal bus system.

The data is transferred via a CAN-based bus protocol.

13

# **INTERNATIONAL**



## **Description:**

The pressure transmitter HDA 4700-H with HSI sensor recognition was specially developed for use in conjunction with the HYDAC measuring instruments HMG 5X0, HMG 2500, HMG 4000 and CMU 1000.

For data transmission, the HDA 4700-H has an HSI interface (HYDAC Sensor Interface).

The HSI sensors are automatically recognised via the HSI interface by the above-mentioned HYDAC measuring instruments and all necessary basic device settings are taken from each sensor.

Like all pressure transmitters of the HDA 4700 series, the HDA 4700-H also has a very accurate and robust sensor cell with a thin-film strain gauge on a stainless steel membrane. It combines excellent technical data with a very compact design.

# **Pressure Transmitter** HDA 4700-H

Relative pressure Accuracy 0.25 %

# With HSI sensor recognition

# **Technical data:**

Input data														
Measuring ranges <sup>1)</sup>	bar	-19	16	60	100	250	400	600	1000	1600	2000			
Overload pressures	bar	20	32	120	200	500	800	1000	1600	2400	3000			
Burst pressure	bar	100	200	300	500	1000	2000	2000	3000	3000	4000			
Mechanical connection					G1/4 A ISO 1179-2									
					G1/2 B DIN EN 837									
Tightening torque, recommended					20 Nm (G1/4); 40 Nm (G1/2)									
Parts in contact with flu	Id				Mech. connection: Stainless steel									
Output data														
							Sensor	Interfa						
Output signal					Automa	tic sen	isor rec	ognitio	n					
Accuracy acc. to DIN 16	086,				≤ ± 0.2	5 % FS	typ.	0						
terminal based					≤±0.5	% FS I	max.							
Accuracy, B.F.S.L.				:	≤ ± 0.1	5 % FS	typ.							
<del></del>					$\leq \pm 0.2$		max.							
Temperature compensation	tion			:	≤ ± 0.00 < + 0.0°	J8 % F 15 % F	S/°Ct S/°Cr	yp. nav						
Temperature compensat	tion				< + 0.008 % FS / °C typ									
Span					$\leq \pm 0.0$	15 % F	S/°Cr	nax.						
Non-linearity at max. set	tting a	acc. to D	IN 1608	86	≤ ± 0.3	% FS I	max.							
terminal based	-													
Hysteresis					≤ ± 0.1	% FS I	max.							
Repeatability					$\leq \pm 0.0$	5 % FS								
Rise time					<u>≤ 1 ms</u>									
Long-term drift					≤±0.1	% FS 1	typ. / ye	ear						
Environmental conditi	ons													
Compensated temperate	ure ra	inge			-25 +	85 °C	~-							
Operating temperature r	ange	1)			-40 +	85 °C /	-25 +	-85 °C						
Storage temperature rar	nge				-40 +	<u>100 °C</u>	/ 05	. 100 0						
Fluid temperature range 1)					-40 +	100 °C	/ -25	+100 °	C					
					EN 01000-0-1/2/3/4									
Vibration resistance acc. to DIN EN 60068-2-6 at 10 500 Hz					≤ 20 g									
Shock resistance acc. to DIN EN 60068-2-27					≤ 100 g / 6 ms									
Protection class acc. to DIN EN 60529 <sup>2)</sup>					IP 67									
Other data														
Voltage supply					Via HYDAC measuring instruments HMG 5X0, HMG 2500, HMG 4000 or CMU 1000									
Life expectancy					> 10 mi	llion cy	cles (0	100	% FS)					
Weight					~ 150 c	1								
						14								

Reverse polarity protection of the supply voltage, overvoltage, override and short circuit Note: FS (Full Scale) = relative to complete measuring range

B.F.S.L. = Best Fit Straight Line

<sup>1)</sup> -25 °C with FKM seal, -40 °C on request
<sup>2)</sup> With mounted mating connector in corresponding protection class



### Note:

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not

described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC ELECTRONIC GMBH

Telephone +49 (0)6897 509-01 Fax +49 (0)6897 509-1726 e-mail: electronic@hydac.com Internet: www.hydac.com

Germany

Hauptstr. 27, 66128 Saarbrücken

13

# **DAD** INTERNATIONAL



# **Description:**

The electronic temperature transmitter ETS 4100-H with HSI sensor recognition has been specially developed for use in conjunction with HYDAC measuring instruments HMG 5X0, HMG 2500, HMG 4000 and CMU 1000.

For data transmission, the ETS 4100-H has an HSI interface (HYDAC Sensor Interface).

The HSI sensors are automatically recognised via the HSI interface by the above-mentioned HYDAC measuring instruments and all necessary basic device settings are taken from each sensor.

Like all temperature transmitters of the ETS 4000 series, the ETS 4100-H features a robust design and excellent EMC properties. Based on corresponding evaluation electronics, the temperature sensor is designed to measure temperatures in the range -25 °C .. +100 °C.

# **Temperature Transmitter** ETS 4100-H

Integrated temperature probe Accuracy 0.4 %

# With HSI sensor recognition

# **Technical data:**

Input data	
Measuring range	-25 +100 °C
Probe length	6 mm
Probe diameter	4.5 mm
Pressure resistance	600 bar
Overload pressure	900 bar
Mechanical connection	G¼ A ISO 1179-2
Tightening torque, recommended	20 Nm
Parts in contact with fluid <sup>1)</sup>	Mech. connection: Stainless steel Seal: FKM
Output data	
Output signal	HSI (HYDAC Sensor Interface) Automatic sensor recognition
Accuracy (at room temperature)	≤ ± 0.4 % FS typ. ≤ ± 0.8 % FS max.
Temperature drift (environment)	≤ ± 0.01 % FS / °C
Response time acc. to DIN EN 60751	t <sub>50</sub> : ~ 4 s t <sub>90</sub> : ~ 8 s
Environmental conditions	
Operating temperature range <sup>2)</sup>	-40 +85 °C / -25 +85 °C
Storage temperature range	-40 +100 °C
Fluid temperature range 2)	-40 +125 °C / -25 +125 °C
C E mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance acc. to DIN EN 60068-2-6 at 10 500 Hz	≤ 20 g
Shock resistance acc. to DIN EN 60068-2-27	≤ 20 g
Protection class acc. to DIN EN 60529 3)	IP 67
Other data	
Voltage supply	Via HYDAC measuring instruments HMG 5X0, HMG 2500, HMG 4000 or CMU 1000
Weight	~ 150 g

Reverse polarity protection of the supply voltage, overvoltage, override and short circuit protection are provided. FS (Full Scale) = relative to complete measuring range Note:

 $^{1)}$  Other seal materials on request  $^{2)}$  -25 °C with FKM seal, -40 °C on request

<sup>3)</sup> With mounted mating connector in corresponding protection class

## Male connector M12x1 5 pole 7 56 max. Ø**30** max. Ø**27** ±0.3 +0.3 2 Hex AF width 27 12 Elastomer profile seal ring DIN 3869 Q Ø**4.5** G1/4A Ø18.9 Ø**29.5**

# Model code: ETS 4 1 4 8 - H - 006 - 000 Mechanical connection 4 = G1/4 A ISO 1179-2 Electrical connection 8 = male M12x1, 5 pole (mating connector not supplied) Output signal H = HSI (automatic sensor recognition) Probe length 006 = 6 mm Modification number

000 = standard

### Accessories:

Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

13

### Note:

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not

described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC ELECTRONIC GMBH Hauptstr. 27, 66128 Saarbrücken Germany Telephone +49 (0)6897 509-01 Fax +49 (0)6897 509-1726 e-mail: electronic@hydac.com Internet: www.hydac.com

486 **HYDAC** 

# 



# **Description:**

The flow rate transmitters of the EVS 3100-H and EVS 3110-H series with HSI sensor recognition were specially developed for use in conjunction with the HYDAC measuring instruments HMG 5x0, HMG 2500, HMG 4000 and CMU 1000.

For data transmission, the EVS 31x0-H has an HSI interface (HYDAC Sensor Interface).

The HSI sensors are recognised automatically via the HSI interface by the above-mentioned HYDAC measuring instruments, and all the necessary basic settings are taken from each instrument.

As is the case with all flow rate measurement transmitters of the EVS 3100 and EVS 3110 series, the EVS 31x0-H also operates in accordance with the turbine principle. The speed of an impeller turning in the fluid flow is measured and converted into an electronic signal.

# **Flow Rate Transmitter** EVS 3100-H / EVS 3110-H

Turbine

Accuracy 2 %

# With HSI sensor recognition

# **Technical data:**

Input data	
Measuring ranges <sup>1)</sup> and operating pressure	
EVS 3108-H-0020 EVS 3118-H-0020	1.2 20.0 l/min 400 bar
EVS 3108-H-0060 EVS 3118-H-0060	6.0 60.0 l/min 400 bar
EVS 3108-H-0300 EVS 3118-H-0300	15.0 300.0 l/min 400 bar
EVS 3108-H-0600	40.0 600.0 l/min 315 bar
EVS 3118-H-0600	40.0 600.0 l/min 400 bar
Additional connection options	2 x G1/4 female threads for pressure and/or temperature sensors
Housing material	EVS 3100-H: aluminium EVS 3110-H: stainless steel
Output data	
Output signal	HSI (HYDAC Sensor Interface) Automatic sensor recognition
Accuracy	≤ 2 % of the actual value
Environmental conditions	
Compensated temperature range	-20 +70 °C
Operating temperature range	-20 +70 °C
Storage temperature range	-40 +100 °C
Fluid temperature range	-20 +90 °C
( e mark	EN 61000-6-1 / 2 / 3 / 4
Protection class acc. to DIN EN 60529 <sup>2)</sup>	IP 67
Other data	
Measuring medium <sup>3)</sup>	EVS 3100-H: hydraulic oils EVS 3110-H: water-based media
Viscosity range	1 100 cSt
Calibration viscosity	EVS 3100-H: 30 cSt EVS 3110-H: 5 cSt
Supply voltage	Via HYDAC measuring instruments HMG 5x0, HMG 2500, HMG 4000 or CMU 1000

Note:

Other measuring ranges on request
With mounted mating connector in corresponding protection class
Other measuring media on request



Model     Meas. range     L     H     D / SW     G     Torque value recommended     DN recommended       [l/min]     [mm]     [mm]     [mm]     [mm]     [mm]     [mm]     [mm]       EVS 3108-H-0020     1.2     .20     117     135     47 / 46     G¼"     60     7       EVS 3108-H-0060     6     .60     144     135     48.5 / 46     G½"     130     11       EVS 3108-H-0300     15     .300     155     150     63.5 / 60     G1¼"     500     22       EVS 3108-H-0600     40     .600     181     150     63.5 / 60     G1½"     600     30       EVS 3118-H-0020     1.2     .20     117     135     47 / 46     G¼"     60     7       EVS 3118-H-0020     1.2     .20     117     135     47 / 46     G¼"     60     7
[l/min]     [mm]     [mm]
EVS 3108-H-0020     1.2     .20     117     135     47 / 46     G¼"     60     7       EVS 3108-H-0060     6     .60     144     135     48.5 / 46     G½"     130     11       EVS 3108-H-0300     15     .300     155     150     63.5 / 60     G1¼"     500     22       EVS 3108-H-0600     40     .600     181     150     63.5 / 60     G1¼"     600     30       EVS 3118-H-0200     1.2     .20     117     135     47 / 46     G¼"     60     7       EVS 3118-H-0200     6     .60     144     135     48.5 / 46     G¼"     60     7
EVS 3108-H-0060     660     144     135     48.5 / 46     G½"     130     11       EVS 3108-H-0300     15300     155     150     63.5 / 60     G1¼"     500     22       EVS 3108-H-0600     40600     181     150     63.5 / 60     G1¼"     600     30       EVS 3118-H-0200     1.220     117     135     47 / 46     G¼"     60     7       EVS 3118-H-0060     660     144     135     48.5 / 46     G¼"     130     11
EVS 3108-H-0300     15300     155     150     63.5 / 60     G1¼"     500     22       EVS 3108-H-0600     40600     181     150     63.5 / 60     G1½"     600     30       EVS 3118-H-0020     1.220     117     135     47 / 46     G¼"     60     7       EVS 3118-H-0060     660     144     135     48.5 / 46     G¼"     130     11
EVS 3108-H-0600     40 600     181     150     63.5 / 60     G1½"     600     30       EVS 3118-H-0020     1.2 20     117     135     47 / 46     G1¼"     60     7       EVS 3118-H-0060     6 60     144     135     48.5 / 46     G1¼"     130     11
EVS 3118-H-0020     1.2     .20     117     135     47 / 46     G¼"     60     7       EVS 3118-H-0060     6     .60     144     135     48.5 / 46     G¼"     130     11
EVS 3118-H-0060 6 60 144 135 48.5 / 46 G½" 130 11
EVS 3118-H-0300 15 300 155 150 63.5 / 60 G1¼" 500 22
EVS 3118-H-0600 40 600 181 150 63.5 / 60 G1½" 600 30

Model code:	
EVS 3 1 <u>X</u> <u>8</u> – <u>H</u> – <u>XX</u>	<u>xx – 000</u>
Housing material	
0 = aluminium	
1 = stainless steel	
Electrical connection	
8 = male M12x1, 5 pole	
(mating connector not supplied)	
Output signal	
H = HSI (automatic sensor recognition)	
Measuring range	
0020 = 1.2 20 l/min	
0060 = 6.0 60 l/min	
0300 = 15.0300 l/min	
0600 = 40.0 600 l/min	
Modification number	
000 = standard	

Accessories: Appropriate accessories, such as mating connectors, can be found in the Accessories brochure.

## Note:

The information in this brochure relates to the operating conditions and applications described.

For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

13

### 488 **HYDAC**

# **DAD** INTERNATIONAL



# **Description:**

To extend the number of sensors on the HMG 4000, the special CAN-based HCSI sensors were developed.

The HCSI sensors, easily identified by their red type label, are automatically recognised along with all their characteristics by the HMG 4000.

Up to 28 HCSI sensors can be connected to the HMG 4000 via the Y-distributor (available as an accessory) to set up an HMG-internal bus system. The data are transmitted using CAN-based bus protocol.

Like all pressure transmitters of the HDA 4700 series, the HDA 4700-HC also has a very accurate and robust sensor cell with a thin-film strain gauge on a stainless steel membrane.

Due to their outstanding temperature and EMC characteristics, together with their compact dimensions, these instruments can be used in a wide field of applications in the mobile and industrial sectors.

# **Pressure Transmitter** HDA 4700-HC (for HMG 4000)

Relative pressure

Accuracy 0.25 %



# With HCSI sensor recognition

# | Technical data:

Input data			,					,		,			
Measuring ranges 1)	bar	-1 9	16	600	1000	1600	2000						
Overload pressures	bar	20	32	120	200	500	800	1000	1600	2400	3000		
Burst pressure	bar	100	200	300	500	1000	2000	2000	3000	3000	4000		
Mechanical connection					G1/4 A	ISO 11	79-2						
					G1/2 B DIN EN 837								
Lightening torque, recor	nmen	ded			20 Nm	(G1/4);	; 40 Nm	(G1/2)	)				
Parts in contact with flu	Id				Mech. Seal: F	connec KM	ction: Si	tainless	s steel				
Output data													
Output signal					HCSI (I	HYDAC	C CAN \$	Sensor	Interfa	ce)			
					Automa	atic sen	isor rec	ognitio	n				
Accuracy acc. to DIN 16	6086,				$\leq \pm 0.2$	5 % FS	s typ.						
					$\geq \pm 0.5$		tunax.						
Accuracy, D.F.S.L.					$\leq \pm 0.1$ $\leq \pm 0.2$	5 % FS	s typ. 5 max.						
Temperature compensa	tion				≤ ± 0.00	08 % F	S/°Ct	vp.					
Zero point					≤ ± 0.0	15 % F	S / °C r	nax.					
Temperature compensa	tion				≤ ± 0.00	08 % F	S / °C t	ур.					
Span					≤ ± 0.0	15 % F	S / °C r	nax.					
Non-linearity at max. setting acc. to DIN 16086 $\leq \pm 0.3$ % FS max. terminal based													
Hysteresis ≤ ± 0.1 % FS max.													
Repeatability					≤ ± 0.08	8 % FS	5						
Rise time					≤ 1 ms								
Long-term drift					≤ ± 0.1	% FS 1	typ. / ye	ar					
Environmental conditi	ons												
Compensated temperate	ure ra	nge			-25 +	85 °C							
Operating temperature r	ange	1)			-40 +	85 °C /	-25 +	-85 °C					
Storage temperature range -40						100 °C							
Fluid temperature range <sup>1)</sup>						100 °C	/ -25	+100 °	С				
<b>(                                    </b>					EN 61000-6-1 / 2 / 3 / 4								
Vibration resistance acc DIN EN 60068-2-6 at 10	. to ) 500	) Hz			≤ 20 g								
Shock resistance acc. to DIN EN 60068-2-27					≤ 100 g / 6 ms								
Protection class acc. to DIN EN 60529 2)					IP 67								
Other data													
Voltage supply						Via HYDAC measuring instrument HMG 4000							
Life expectancy					> 10 million cycles (0 100 % FS)								
Weight					~ 150 c	<u> </u>							
Note: Reverse polarity	Note: Reverse polarity protection of the supply voltage, overvoltage, override and short circuit												
protection are pr	ovideo	1. ve to co	mnlete	measi	irina rai	nae							

ete measuring range B.F.S.L. = Best Fit Straight Line

<sup>1)</sup> -25 °C with FKM seal, -40 °C on request
<sup>2)</sup> With mounted mating connector in corresponding protection class



### Model code:



Sensor 1

Sensor 2

### Note:

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not

described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC ELECTRONIC GMBH

Telephone +49 (0)6897 509-01 Fax +49 (0)6897 509-1726 e-mail: electronic@hydac.com Internet: www.hydac.com

Germany

Sensor 28

Hauptstr. 27, 66128 Saarbrücken

# **INTERNATIONAL**



## **Description:**

To extend the number of sensors on the HMG 4000, the special CAN-based HCSI sensors were developed.

The HCSI sensors, easily identified by their red type label, are automatically recognised along with all their characteristics by the HMG 4000.

Up to 28 HCSI sensors can be connected to the HMG 4000 via the Y-distributor (available as an accessory) to set up an HMG-internal bus system. The data are transmitted using CAN-based bus protocol.

Like all temperature transmitters of the ETS 4000 series, the ETS 4100-HC features a robust design and excellent EMC properties. The temperature sensor is designed to measure temperatures in the range -25 °C .. +100 °C.

Due to their compact dimensions, these instruments can be used in a wide field of applications in the mobile and industrial sectors.

# **Temperature Transmitter** ETS 4100-HC (for HMG 4000)

Integrated temperature probe

Accuracy 0.4 %



# With HCSI sensor recognition

# **Technical data:**

Input data	
Measuring range	-25 +100 °C
Probe length	6 mm
Probe diameter	4.5 mm
Pressure resistance	600 bar
Mechanical connection	G¼ A ISO 1179-2
Tightening torque, recommended	20 Nm
Parts in contact with fluid 1)	Mech. connection: Stainless steel Seal: FKM
Output data	
Output signal	HCSI (HYDAC CAN Sensor Interface) Automatic sensor recognition
Accuracy (at room temperature)	≤ ± 0.4 % FS typ. ≤ ± 0.8 % FS max.
Temperature drift (environment)	≤ ± 0.01 % FS / °C
Response time acc. to DIN EN 60751	t <sub>50</sub> : ~ 4 s t <sub>90</sub> : ~ 8 s
Environmental conditions	
Operating temperature range <sup>2)</sup>	-40 +85 °C / -25 +85 °C
Storage temperature range	-40 +100 °C
Fluid temperature range <sup>2)</sup>	-40 +125 °C / -25 +125 °C
( E mark	EN 61000-6-1 / 2 / 3 / 4
Vibration resistance acc. to DIN EN 60068-2-6 at 10 500 Hz	≤ 20 g
Shock resistance acc. to DIN EN 60068-2-27	≤ 20 g
Protection class acc. to DIN EN 60529 3)	IP 67
Other data	
Voltage supply	Via HYDAC measuring instrument HMG 4000
Weight	~ 150 a

eigr Note: Reverse polarity protection of the supply voltage, overvoltage, override and short circuit

FS (Full Scale) = relative to complete measuring range

 $^{1)}$  Other seal materials on request  $^{2)}$  -25 °C with FKM seal, -40 °C on request

<sup>3)</sup> With mounted mating connector in corresponding protection class



## Model code:

	ETS 4	41	<u>4</u> <u>8</u>	– <u>H</u>	<u>IC</u> -	- <u>006</u>	<u>i</u> –	<u>000</u>
Mechanical connection								
4 = G1/4 A ISO 1179-2								
Electrical connection								
8 = male M12x1, 5 pole								
(mating connector not supplied)								
Output signal								
HC = HCSI (HYDAC CAN Sensor Interfac	e)							
Probe length								
006 = 6 mm								
Modification number								
000 = Standard								

### Accessories:



### Note:

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC ELECTRONIC GMBH Hauptstr. 27, 66128 Saarbrücken Germany Telephone +49 (0)6897 509-01 Fax +49 (0)6897 509-1726 e-mail: electronic@hydac.com Internet: www.hydac.com

# Further accessories for HMG 500 / 510 / 2500 and 4000

Plastic case

Part no.: 6043006

Magnetic holder

Part no.: 4227226

Bag with carrying strap

for HMG 2500/30X0 Part no.: 909795

Power supply unit

Part no.: 6054296

Power supply unit

for HMG 500/510

Part no.: 6043562

Car charger for HMG 2500/30X0/4000

Connection adapter for

third-party sensors

Part no.: 909752

HMG 30X0/4000 for connecting

Part no.: 909739

UVM 3000

**ZBE 31** 

for HMG 2500/30X0/4000

for HMG 4000

















Case for HMG 2500/4000 and accessories Part no.: 6179836

for HMG 500/510 and accessories

Handle can be rotated 360°, three

magnets on back with approx. 80 N holding force

















### ZBE 11-000

Current measurement adapter for galvanically isolated current measurement up to  $\pm 4$  A for connection to HMG 5x0/2500/30x0/4000. Part no.: 926543

ZBE 26 Y-adapter (blue) for connecting a HYDACLAB® HLB 1400 Part no.: 3304374

ZBE 38 Y-adapter (black) for HMG 4000 for the digital input socket Part no.: 3224436

ZBE 41 Y-adapter (yellow) for HMG 2500/30X0/4000 for connecting a ContaminationSensor CS 1000 Part no.: 910000

ZBE 46 Pin adapter for HMG 2500/30X0/4000 for 3-conductor signals and AquaSensor AS 1000 Part no.: 925725

ZBE 100 Connection adapter for HMG 4000 for temperature probe TFP 100 Part no.: 925726

HCSI Y-distributor Adapter for HMG 4000 for connecting HCSI sensors Part no.: 6178196

HCSI bus termination Termination resistor for HCSI bus line (120 Ω) Part no.: 6178198

EN 18.130.0/02.18













ZBE 30-02 (5 pole) Connection cable, 2 m length, male/ female M12x1, screw connection Part no.: 6040851

ZBE 30-05 (5 pole) Connection cable, 5 m length, male/ female M12x1, screw connection Part no.: 6040852

ZBE 40-02 (5 pole) Connection cable, 2 m length, male/ female M12x1, push-pull connection on male side, screw connection on female side Part no.: 6177158



ZBE 40-10 (5 pole) Connection cable, 10 m length, male/female M12x1. push-pull connection on male side, screw connection on female side Part no.: 6177160

HDS 1000 RPM probe for HMG 2500/30X0/4000 including reflective foil set Part no.: 909436

HDS 1000 reflective foil set Spare Part, Quantity: 25 Part no.: 904812













SSH 1000

Sensor simulator for HMG 2500/30X0/4000 to simulate 2 HSI sensors, ideal for training purposes Part no.: 909414

USB cable (HMG 2X/3X/4X) (1x plug A - 1x plug B) Part no.: 6040585

USB cable (HMG 500) (1x plug A - Mini USB) Part no.: 6049553

Carrying strap for HMG 4000

Part no.: 4070365

Rechargeable battery pack for HMG 4000

Part no.: 3956715

Hydraulic adapter kit

- for HMG, 2 pcs. each of Adapter hose DN 2-1620/1620 (400 mm and 1000 mm) Pressure gauge connection 1620/

G1/4 - Bulkhead coupling 1620/1620 Part no.: 903083

EN 18.130.0/02.18

# Note:

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.

HYDAC ELECTRONIC GMBH Hauptstr. 27, 66128 Saarbrücken Germany Telephone +49 (0)6897 509-01 Fax +49 (0)6897 509-1726 e-mail: electronic@hydac.com Internet: www.hydac.com