

# SR & Intelligent Digital (CAN) sensors and accessories for use with HPM Series

Up to

- 750 lpm, 200 US gpm flow measurement
- 1000 bar, 14500 psi pressure measurement

## Wide range of cables and accessories

All Intelligent Digital (ID) sensors use the CAN protocol and feature a LED to enable easy identification. The SR sensors also have identification built in so the handsets can recognise the type and size of sensor being used.

There is a wide range of cables and connectors to suit all applications. The ID sensors are connected in-line with one another, by way of a Y cable, often resulting in shorter cable lengths.

The CT and CTR series of turbine flow meters, provide a complete solution to the flow and temperature measurement of hydraulic systems on test stands, machine tools and other fixed or mobile applications. The flow meter can be installed anywhere in the hydraulic circuit for production testing, commissioning, development testing and control systems. The compact design allows the flow meters to be installed where space is limited.

The integral loading valve built into the CTR series provides smooth progressive pressure control in both flow directions allowing components such as cylinders or motors to be tested without re-plumbing the test connections.

The pressure sensors are available in six different ranges up to 1000 bar and all measure temperature as well. The whole unit is housed in a stainless steel body, sealed to IP67.

600 bar ID pressure transducer

ID connection cable

ID Y cable

ID termination resistor



Hydraulic measurement and control



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## Features

### Flowmeters

- **FLOW:** – 1 -750 lpm  
0.25 - 200 US gpm
- **PRESSURE:** Upto  
480 bar, 7000 psi
- **PORTING:** BSPP or SAE  
BI directional operation

### Flowmeters with Loading Valve

- **FLOW:** – 1 -750 lpm  
0.25 - 200 US gpm
- **PRESSURE:** Upto  
480 bar, 7000 psi
- **PORTING:** BSPP or SAE
- **BI DIRECTIONAL**  
operation 'INTERPASS™'  
safety system, bypasses  
oil internally in the event  
of valve being over  
pressurised
- **FLOWMETER**  
**TEMPERATURE:**  
-25 to 125°C (-13 to 257 °F)

### Pressure transducers

- **PRESSURE:** -1 to 1000  
bar (-14.5 to 14500 psi)
- **TEMPERATURE:** -25 to  
105 °C (-13 - 221 °F)

### Accessories

- **CABLES:** 0.5 to 20 meter  
long



HPMACC-BU-ENG-2699.pdf 06/14  
(Issue 13)

# Flowmeters

## Specifications

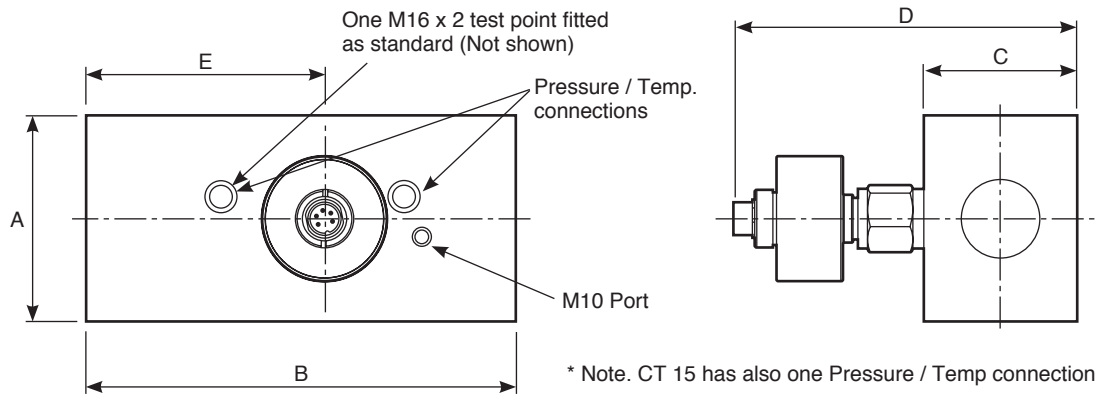
Model Number	Main ports	Top ports*	Flow range	Max. pressure
CT15-***-B-B-6	1/2" BSPP	1/4" BSPP	1 - 15 lpm	420 bar
CT15-***-S-S-6	3/4" -16UN #8 SAE ORB	7/16" -20UN #4 SAE ORB	0.25 - 4 US gpm	6000 psi
CT60-***-B-B-6	3/4" BSPP	1/4" BSPP	3 - 60 lpm	420 bar
CT60-***-S-S-6	1-1/16" -12UN #12 SAE ORB	7/16" -20UN #4 SAE ORB	0.8 - 16 US gpm	6000 psi
CT150-***-B-B-6	3/4" BSPP	1/4" BSPP	5 - 150 lpm	420 bar
CT150-***-S-S-6	1-1/16" -12UN #12 SAE ORB	7/16" -20UN #4 SAE ORB	1.3 - 40 US gpm	6000 psi
CT300-***-B-B-6	1" BSPP	1/4" BSPP	8 - 300 lpm	420 bar
CT300-***-S-S-6	1-5/16" -12UN #16 SAE ORB	7/16" -20UN #4 SAE ORB	2 - 80 US gpm	6000 psi
CT600-***-B-B-5	1-1/4" BSPP	1/4" BSPP	15 - 600 lpm	350 bar
CT600-***-S-S-5	1-5/8" -12UN #20 SAE ORB	7/16" -20UN #4 SAE ORB	4 - 160 US gpm	5000 psi
CT750-***-S-B-7	1-7/8" -12UN #24 SAE ORB	1/4" BSPP	20 - 750 lpm	480 bar
CT750-***-S-S-7	1-7/8" -12UN #24 SAE ORB	7/16" -20UN #4 SAE ORB	5 - 200 US gpm	7000 psi
CT750-SR-F-B-3 SR	1-1/2" #24 SAE Code 61 4-bolt flange	1/4" BSPP	20 - 750 lpm	210 bar
CT750-SR-F-S-3 SR	1-1/2" #24 SAE Code 61 4-bolt flange	7/16" -20UN #4 SAE ORB	5 - 200 US gpm	3000 psi

Replace \*\*\* with CAN or SR to give complete model number. \*CT 15 has one of the specified top ports.

Dimensions in mm (inches)

Model Number	A	B	C	D	E	Weight kg (lbs)
CT15	37 (1-1/2")	136 (5-3/8")	37 (1-1/2")	123 (5")	69.5 (2-3/4")	0.7 (1.5)
CT60	62 (2-1/2")	190 (7-1/2")	50 (2")	136 (5-3/8")	103 (4")	1.6 (3.5)
CT150	62 (2-1/2")	190 (7-1/2")	50 (2")	136 (5-3/8")	103 (4")	1.6 (3.5)
CT300	62 (2-1/2")	190 (7-1/2")	50 (2")	140 (5-1/2")	103 (4")	1.7 (3.7)
CT400	62 (2-1/2")	190 (7-1/2")	50 (2")	140 (5-1/2")	103 (4")	1.7 (3.7)
CT600	62 (2-1/2")	212 (8-3/8")	75 (3")	156 (6")	127 (5")	2.7 (6)
CT600-**-F-**-*	100 (4")	212 (8-3/8")	75 (3")	160 (6-1/4")	126 (5")	5.0 (11)
CT750	100 (4")	212 (8-3/8")	75 (3")	160 (6-1/4")	126 (5")	5.0 (11)

SR version is 9mm (3/8") shorter on the D dimensions



# Flowmeters with loading valve

## Specifications

Model Number	Main ports	Top ports	Flow range	Max. pressure
CT300R-***-B-B-6	1" BSPP	1/4" BSPP	8 - 300 lpm	420 bar
CT300R-***-S-S-6	1-5/16" -12UN #16 SAE ORB	7/16" -20UN #4 SAE ORB	2 - 80 US gpm	6000 psi
CT600R-SR-F-B-3	1-1/2" #24 SAE Code 61 4-bolt flange	1/4" BSPP	20 - 600 lpm	210 bar
CT600R-SR-F-S-3	1-1/2" #24 SAE Code 61 4-bolt flange	7/16" -20UN #4 SAE ORB	5 - 160 US gpm	3000 psi
CT600R-SR-S-B-7	1-7/8" -12UN #24 SAE ORB	1/4" BSPP	20 - 600 lpm	480 bar
CT600R-SR-S-S-7	1-7/8" -12UN #24 SAE ORB	7/16" -20UN #4 SAE ORB	5 - 160 US gpm	7000 psi
CT750R-***-S-B-7	1-7/8" -12UN #24 SAE ORB	1/4" BSPP	20 - 750 lpm	480 bar
CT750R-***-S-S-7	1-7/8" -12UN #24 SAE ORB	7/16" -20UN #4 SAE ORB	5 - 200 US gpm	7000 psi
CT750R-SR-F-B-3	1-1/2" #24 SAE Code 61 4-bolt flange	1/4" BSPP	20 - 750 lpm	210 bar
CT750R-SR-F-S-3	1-1/2" #24 SAE Code 61 4-bolt flange	7/16" -20UN #4 SAE ORB	5 - 200 US gpm	3000 psi

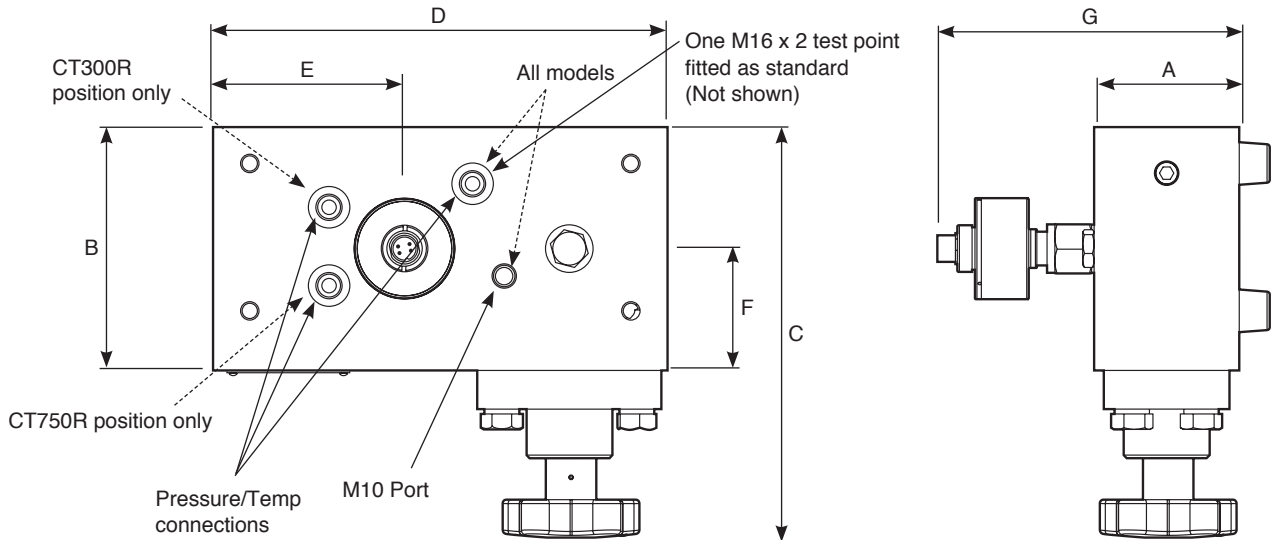
Replace \*\*\* with CAN or SR to give complete model number.

Dimensions in mm (inches)

Model No	A	B	C	D	E	F	G	Weight kg (lbs)
CT300R	49 (2")	100 (4")	182 (7-1/8")	222 (8-3/4")	102.5 (4")	47.6 (1-7/8")	138 (5-1/2")	3.7 (8.1)
CT400R	49 (2")	100 (4")	182 (7-1/8")	222 (8-3/4")	102.5 (4")	47.6 (1-7/8")	138 (5-1/2")	3.7 (8.1)
CT600R	75 (3")	125 (5")	211 (8-3/8")	235 (9-3/4")	99 (3-7/8")	63 (2-1/2")	157 (6-1/8")	7.5 (16.5)
CT750R	75 (3")	125 (5")	211 (8-3/8")	235 (9-3/4")	99 (3-7/8")	63 (2-1/2")	157 (6-1/8")	7.5 (16.5)

Add 20mm (3/4") to G for full height including feet.

SR version is 9mm (3/8") shorter on the G dimensions



### Functional specification

#### CT and CTR flow meters

**Ambient temperature:**

-10 to 50 °C (14 - 122 °F)

**Fluid type:** Oil, fuels, water glycol, water oil emulsions

**Fluid temperature:**

-20 to 90 °C (-4 - 194 °F) continuous use.

**Filtration**

25 µm (10 µm for CT15-CAN)

**Viscosity range**

10...100 cSt

**Temperature display:**

-25 to +125 °C (-13 to +257 °F). NB. CAN flow transducers only.

**Accuracy:**

15 to 100% of range - 1% of indicated reading

Below 15% fixed accuracy of 1% of 15% of full scale (CT15 is 1% of full scale)

Temperature ± 2 °C (CAN only).

**Repeatability:**

Better than ± 0.2%

**Degree of protection\*:**

CT-SR – IP54 (EN60529)

CT-CAN – IP66 (EN60529) \*With cable connected

### Electrical specification

**Power supply:**

CAN: 8 - 40 VDC, SR: 7-15 VDC

**Response Time:**

50 ms

### Construction material

**Flow body:**

600/750 High tensile Aluminium 2014A T6

15/60/150/300/400 High tensile Aluminium 2011 T6

Aluminium, Steel, Stainless Steel.

**Internal parts:**

**Transducer:**

Body and nut - steel 212A42 electroless nickel plated, Housing and Lid - Aluminium 2011 T3

**Seals:**

Viton seals as standard EPDM are available - please consult sales office.

## Pressure Transducers

### CAN (ID)

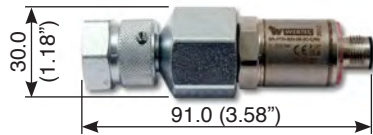
Model Number	Pressure range
SR-PT*-016-05-0C-CAN	-1 - 16 bar
SR-PT*-060-05-0C-CAN	0 - 60 bar
SR-PT*-160-05-0C-CAN	0 - 160 bar
SR-PT*-400-05-0C-CAN	0 - 400 bar
SR-PT*-600-05-0C-CAN	0 - 600 bar
SR-PT*-1K0-05-0C-CAN	0 - 1000 bar

### SR

Model Number	Pressure range
SR-PT*-015-05-0C	-1 - 15 bar
SR-PT*-060-05-0C	0 - 60 bar
SR-PT*-150-05-0C	0 - 150 bar
SR-PT*-400-05-0C	0 - 400 bar
SR-PT*-600-05-0C	0 - 600 bar
SR-PT*-1K0-05-0C	0 - 1000 bar

Replace \* with 'N' for no temperature and with 'T' for unit with temperature. Supplied with M16 x 2 test point connector

#### SR-PTN-\*\*\*-0C-CAN



#### SR-PTN-\*\*\*-05-0C



#### SR-PTT-\*\*\*-0C-CAN



#### SR-PTT-\*\*\*-05-0C



### Functional specification

<b>Ambient temperature:</b>	-25 to 85 °C (-13 - 185 °F)
<b>Fluid type:</b>	Oils, fuels, water glycol, water oil emulsions
<b>Fluid temperature:</b>	-25 to 105 °C (-13 - 221 °F)
<b>Accuracy:</b>	Pressure: ± 0.5% full scale Temperature: ± 3 °C (SR-PTT-* ONLY)

### Electrical specification

<b>Power supply:</b>	CAN: 8 - 40 VDC SR: 7-15 VDC SR
<b>Response Time:</b>	1 ms

### Construction material

<b>Main body:</b>	Stainless steel 1.4301
<b>Sealing:</b>	Viton® (FKM)
<b>Degree of protection*:</b>	SR – IP54 (EN60529) CAN – IP66 (EN60529) *With cable connected

<b>Wetted parts:</b>	Stainless steel 1.4301, Viton® (FKM)
<b>Dimensions:</b>	95.6 mm x 26.9 mm
<b>Weight approx.:</b>	170 g

### CAN (ID) Connection cables

Model Number	Length
SR-CBL-0.5-MF-CAN	0.5m
SR-CBL-02-MF-CAN	2m
SR-CBL-05-MF-CAN	5m
SR-CBL-10-MF-CAN	10m
SR-CBL-20-MF-CAN	20m
SR-CBL-0.05-Y-CAN	Splitter no cable
SR-CBL-0.3-Y-CAN	CAN Y splitter, including 0.3 m cable
SR-CBL-000-R-CAN	CAN terminating resistor
SR-CONN-ADPT-M8	Cable adapter M8x1 4pol Digital IN/OUT
SR-CONN-ADPT-M12	Cable adapter M12x1 5pol analog

### SR Cables

Model Number	Length	Type
SR-CBL-003-55-MM	3m	Connecting
SR-CBL-005-55-MM	5m	Extension
SR-CBL-002-54-MM	2m	Adaptor 5 to 4 pin

### Accessories / spares

Model Number	Description
SR-PSU-HPM6000	HPM6000 power pack
SR-HPM6000-00-0C-STP	HPM6000 neck strap
SR-CAB-540-PC-USB	HPM540 PC Cable to USB
SR-USB-HPM6000	USB cable type A to B
SR-LAN-HPM6000	LAN cable
SR-HPM-PSU-MC-1C	Power supply for HPM540
SR-HPM-CHG-03-0C	In car charger adaptor
SR-HAND-HPM6000	Replacement handle for HPM6000

### Other sensors & accessories

Model Number	Description
SR-RPM-300-05-3C	SR Tach with 5 pin fixed cable
SR-RPM-WHL-00-0C	Tach contact wheel
SR-RPM-ADP-00-0C	Focus adaptor
SR-EXT-TRG-05-1C	External trigger box
SR-VADC-1C	SR Sensor input box and cable
SR-FQC	SR frequency converter
SR-TTP-190-05-0C	SR Temperature transducer -40 to 150 °C 1/4" BSPP
SR-TTP-190-05-0C	CAN Temperature transducer -40 to 150 °C 1/4" BSPP



APPROVED



## Innovative solutions tailored to your requirements:

- Hydraulics, power units and valves
- Pressure test units, high pressure hydraulics
- Production aids, machines

## A wide range of excellent products:

- Proportional valves, emergency shut off valves, as well for hazardous areas
- Test couplings, check valves, pressure gauges
- Miniature-air/oil-coolers

## Hydraulic components from well-known manufacturers,

- chosen by our high demands
- on quality and delivery reliability!

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