Fluidcontrolterminal FC-T-G1/2-NV77-XP-MA-DC

- Daimler Specification -

Fluidcontrol

IO-Link

Rapid filling and short oil change times require fixed connection points to connect factory standard circulation units quick and clean. Since hydraulic units are typically always crowded and to minimise installation for all of these functions, the Fluidcontrolterminal was designed. The flange with a connection bore pattern standardised for vent filters as per DIN 24557, Part 2 holds the vent filter, filling port as well as the levell and temperature monitor.

The configuration of the backside of the Fluidcontrolterminal FC-T-G1/2-NV77-XP-MA-DC is customised to the requirements of Daimler. It features two M12 plug bases, a temperature display and preset switching points. Please note, there are other Daimler specific versions of the Nivotemp and Nivovent series.

- Connecting flange as per DIN 24557, Part 2
- Combined, continuous liquid level and oil temperature monitoring
- Two adjustable alarm outputs each for level and temperature
- Alternatively one analogue output each (can be set to current or voltage) for level and temperature plus two parametrisable alarm outputs
- IO-Link interface built in
- In normal mode the LED display shows the actual temperature, with status of the switching outputs
- Standard menu structure based on VDMA standard sheet 24574 ff.
- Filling port G1/2
- Vent filter with filler cap
- Contamination indicator
- Low installation costs
- Modular design (filling port and level switch)

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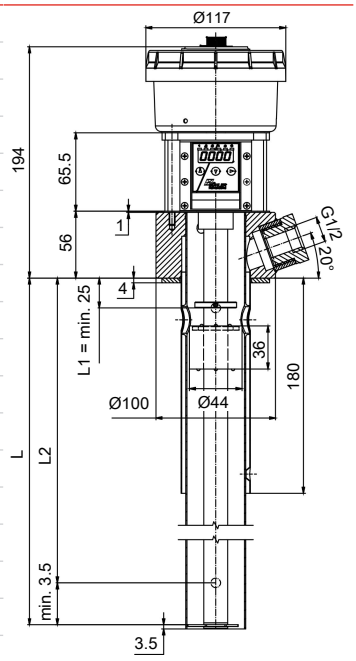
Technical Data

Basic Unit		
Operating pressure	max. 1 bar	
Operating temperature	-20 °C to +80 °C	
Fluid density	min. 0.8 kg/dm³	
Weight at L = 500 mm	approx. 5 kg	
Material		
Float SK 604	Hard PU	
Switching tube	Brass	
Stilling tube	Brass	
Flange	Galvanised steel	
Seals	Rubber cork/NBR/FKM	
Level switch housing	PA	
Filter housing/display	PA	
Filter element	SM-L (3 µm)	
Vent filter	**Filtration Group (Mahle) PI0125 (MA)**	
Filter element	SM-L (3 µm)	
Additional equipment	Contamination indicator	
Analysis display electronics		
Display	4 character 7 segment LED	
Operation	Via 3 keys	
Memory	Min./Max. data memory	
Starting current input	approx. 100 mA for 100 ms	
Current input during operation	approx. 50 mA (without current- and switching outputs)	
Supply voltage (UB)	10 - 30 VDC (nominal voltage 24 VDC)/with IO-Link 18 - 30 VDC	
Ambient temperature	-20 °C to +70°C	
Display units	Level %, cm, L, i, Gal	Temperature °C, °F
Display range	adjustable	-20 °C to +120 °C
Alarm setting range	e.g. 0 to 100 %	0 °C to 100 °C
Display accuracy	± 1 % from end value	± 1 % from end value
Input values	**Level**	**Temperature**
Display housing	Reed-contact Resolution 5mm	Pt100 Cl. B, DIN EN 60751 Tolerance ± 0.8 °C

Dimensions



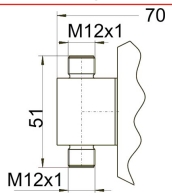
Fixing hole pattern as per DIN 24557, Part 2

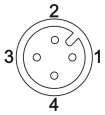
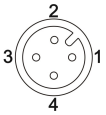
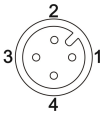
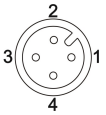
Optional switching outputs	1D3S	1D1S-KN-KT
Plug (base)	2 x M12 – 4-pin	2 x M12 – 4-pin
Switching outputs (preset per Ordering Instructions [▸ 3])	4 parametrisable switching outputs Assignment 2 x level/2 x temperature preset or 1 x programmable with assignment options plus IO-Link	2 parametrisable switching outputs with arbitrary assignment level/temperature or 1 x programmable with assignment options plus IO-Link
Alarm memory	with 1 x assignable to alarm logbook	with 1 x assignable to alarm logbook
max. switching current*	0.5 A per output continuous short-circuit protected	0.5 A per output continuous short-circuit protected
Contact load	max. 1 A total	max. 1 A total
Analogue outputs		1x level and 1x temperature
Programmable as		4 - 20 mA, 2 - 10 VDC, 0 - 10 VDC, 0 - 5 VDC
Max. burden Ω as current output		(U_B -8 V) / 0.02 A
Min. input load as voltage output		10 kΩ

**Output 1 max. 0.2 A.

Standard pin assignment

Plug connection

	2 x M12 (EBS) (galvanically isolated)
Dimensions	
Number of pins	4-pin / 4-pin
DIN EN	61076-2-101
Voltage max.	30 VDC
Contact load max.	0.5 A per output
total max.	1 A

Version	1D3S		1D1S-KN-KT	
Plug	**2x M12 4-pin**		**2x M12 4-pin**	
Connection schematic	Plug A 	Plug B 	Plug A 	Plug B 
Pin				
1	+24 VDC	+24 VDC	+24 VDC	+24 VDC
2	S2 (PNP)	S4 (PNP)	S2 (PNP)	Level (analogue)
3	GND	GND	GND	GND
4	S1 (PNP) *	S3 (PNP)	S1 (PNP)	Temp. (analogue)

* When used as IO-Link, PIN 4 on plug A = C/Q (switching and communications line). Plug B is then not required and must be sealed with a plug to maintain the IP rating (IP65)!

Ordering Instructions

Item no.	Type	Length (L)	Preset Level*	Preset Temperature**
101177900301	FCT-G1/2-NV77XP-MA-DC01/280-1D3S	280 mm	L1 = 150 mm NC (S1) L2 = 190 mm NO (S2)	T1 = 50 °C NC (S3) T2 = 60 °C NC (S4)
101177900302	FCT-G1/2-NV77XP-MA-DC02/370-1D3S	370 mm	L1 = 150 mm NC (S1) L2 = 200 mm NO (S2)	T1 = 50 °C NC (S3) T2 = 60 °C NC (S4)
101177900303	FCT-G1/2-NV77XP-MA-DC03/370-1D3S	370 mm	L1 = 200 mm NC (S1) L2 = 300 mm NO (S2)	T1 = 50 °C NC (S3) T2 = 60 °C NC (S4)
101177900304	FCT-G1/2-NV77XP-MA-DC04/500-1D3S	500 mm	L1 = 200 mm NC (S1) L2 = 300 mm NO (S2)	T1 = 50 °C NC (S3) T2 = 60 °C NC (S4)
			* Hysteresis 10 mm	** Hysteresis 5 K

with analogue outputs

Item no.	Type	Length (L)	Level (analogue)	Temp. (analogue)
101177900305	FCT-G1/2-NV77XP-MA-DC05/280-1D1S-KN-KT	280 mm	25 mm (20 mA) 245 mm-(4 mA)	0 °C = 4 mA 100 °C = 20 mA
101177900306	FCT-G1/2-NV77XP-MA-DC06/370-1D1S-KN-KT	370 mm	25 mm (20 mA) 335 mm-(4 mA))	0 °C = 4 mA 100 °C = 20 mA
101177900307	FCT-G1/2-NV77XP-MA-DC06/500-1D1S-KN-KT	500 mm	25 mm (20 mA) 465 mm-(4 mA)	0 °C = 4 mA 100 °C = 20 mA

*Function of level switching points NC = falling NO contact, NO = falling NC contact