

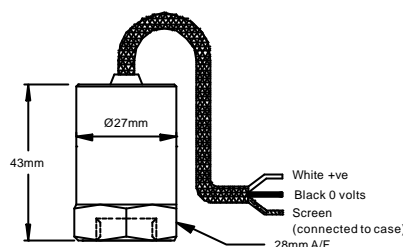


## MTN/1185C Series

4-20 mA Velocity Transducer for PLC interface

### Applications

- Air handling units
- Building services
- Fans



### Technical Specification

Output Current	4-20mA DC proportional to RMS velocity (mm/s)
Velocity Range	See table below
Frequency Response	2 Hz to 1 kHz $\pm 10\%$
Dynamic Range	50 g peak
Mounted Resonance	5 kHz min
Isolation	Base isolated
Operating Temp Range	-25 to 90 °C
Temperature Sensitivity	0.08 %/°C
Transverse Sensitivity	Less than 5%
Supply Voltage	12-32 Volts DC (for 4-20mA)
Standard Cable	5 metres armoured PTFE
Maximum Cable Length	1000 metres
Case Material	Stainless steel
Weight	150 gms (nominal)
Sealing	IP67
Mounting Torque	8 Nm
Options	Ranges, connector, side exit cable, filters, mounting threads, other cable lengths, intrinsically safe, high temperature.

ORDER CODE PART No	MOUNTING	xx =VELOCITY RANGE AVAILABLE (+/- 10%)
MTN/1185C-xx MTN/1185CQ-xx	¼ UNF FEMALE QUICK FIT FEMALE	0-10 mm/sec RMS 0-20 mm/sec RMS 0-25 mm/sec RMS 0-50 mm/sec RMS 0-100 mm/sec RMS
FOR OTHER MOUNTINGS SEE OVER PAGE.		

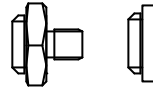
# Mounting Adapters and Studs

## Studs and Grub Screws



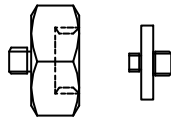
Male Studs		
Product Code	From	To
MS036	1/4" - 28 UNF	M6
MS039	1/4" - 28 UNF	10 - 32 UNF
MS067	1/4" - 28 UNF	M8
MS068	1/4" - 28 UNF	1/4" - 28 UNF
MS124	1/4" - 28 UNF	M10
MS132	1/4" - 28 UNF	M12

## Quick Fit Adapters



Quick Fit (Q/F)		
Product Code	From	To
MS001	Q/F Male	Glue Base
MS002	Q/F Male	M8 Male
MS003	Q/F Male	M10 Male
MS004	Q/F Male	1/4" - 28 UNF Male
MS006	Q/F Male	M6 Male

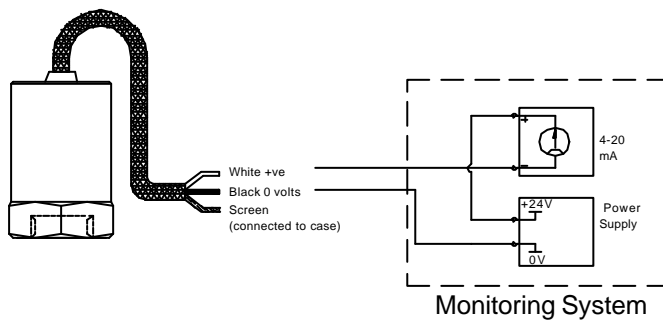
## Other Adapters



Mounting Adapters		
Product Code	From	To
MS005	Q/F Male	1/4" - 28 UNF Female
MS007	Q/F Male	10 - 32 UNF Female
MS008	Q/F Male	M8 Female
MS011	1/4" - 28 UNF Male	Q/F Female
MS013	1/4" - 28 UNF Male	Glue Base
MS033	1/4" - 28 UNF Male	Q/F Female
MS038	Q/F Male	M8 Conical Male
MS061	1/4" - 28 UNF Male	10 - 32 UNF Male
MS079	1/4" - 28 UNF Male	Q/F Female
MS106	Q/F Male	M10 Female

Isolation		
Product Code	From	To
MS034	1/4" - 28 UNF Male	1/4" - 28 UNF Female
MS093	Q/F Male	M8 Male

## System Connection



# PROGRAMMABLE LED INDICATOR



- 4-digit, 14-segment LED indicator
- Input for mA, V, RTD, TC and potmeter
- 2 relays and analogue output
- Universal supply voltage
- Front key programmable



## Application:

- Display for digital readout of current, voltage, temperature or 3-wire potentiometer signals.
- Process control with 2 potential-free relays and / or analogue output.
- For local readout in extremely wet atmospheres with a specially designed splash-proof cover.

## Technical characteristics:

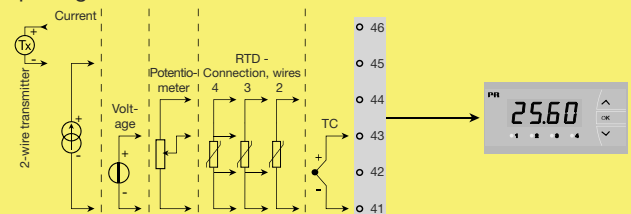
- 4-digit LED indicator with 13.8 mm 14-segment characters. Max. display readout -1999...9999 with programmable decimal point, relay ON / OFF-indication.
- All operational parameters can be adjusted to any application by use of the front keys.
- Help texts in eight languages can be selected via a menu item.
- PReview 5714 is available fully-configured according to specifications ready for process control and visualisation.
- In versions with relay outputs the user can minimise the installation test time by activating / deactivating each relay independently of the input signal.

## Mounting:

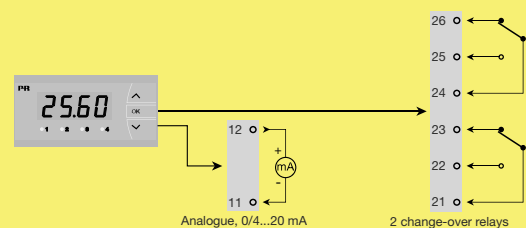
- To be mounted in front panel. The included rubber packing must be mounted between the panel cutout hole and the display front to obtain IP65 (NEMA 4) tightness. For extra protection in extreme environments, PReview 5714 can be delivered with a specially designed splash-proof cover as accessory.

## Applications

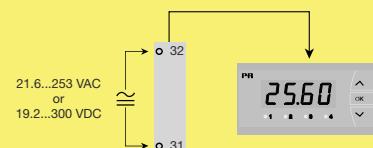
### Input signals:



### Output signals:



### Supply:



Order: 5714

Type	Version
5714	Standard . . . . . : A
	2 relays . . . . . : B
	Analogue output . . . . . : C
	Analogue output and 2 relays : D

**NB!** Please order the splash-proof cover separately.  
Order no. 8335.

**Electrical specifications:**

**Specifications range:**

-20°C to +60°C

**Common specifications:**

Supply voltage, universal ..... 21.6...253 VAC, 50...60 Hz  
or 19.2...300 VDC

**Consumption:**

Type	Internal consumption	Max consumption
5714A	2.2 W	2.5 W
5714B	2.7 W	3.0 W
5714C	2.7 W	3.0 W
5714D	3.2 W	3.5 W

Isolation voltage, test / operation..... 2.3 kVAC / 250 VAC  
Signal / noise ratio..... Min. 60 dB (0...100 kHz)  
Response time (0...90 %, 100...10 %), programmable:  
Temperature input..... 1...60 s  
Current / voltage input..... 0.4...60 s  
Calibration temperature..... 20...28°C  
Accuracy, the greater of general and basic values:

General values		
Input type	Absolute accuracy	Temperature coefficient
All	≤ ±0.1% of reading	≤ ±0.01% of reading / °C

Basic values		
Input type	Basic accuracy	Temperature coefficient
mA	≤ ±4 µA	≤ ±0.4 µA / °C
Volt	≤ ±20 µV	≤ ±2 µV / °C
Potentiometer	≤ ±0.1 Ω	≤ ±0.01 Ω / °C
Pt100	≤ ±0.2°C	≤ ±0.02°C / °C
Ni100	≤ ±0.3°C	≤ ±0.03°C / °C
TC type: E, J, K, L, N, T, U	≤ ±1°C	≤ ±0.05°C / °C
TC type: B, R, S, W3, W5, LR	≤ ±2°C	≤ ±0.2°C / °C

EMC immunity influence ..... < ±0.5% of reading

**Auxiliary supplies:**

2 wire supply (pin 46...45)..... 25...15 VDC / 0...20 mA  
Wire size, pin 41-46 (max.)..... 1 x 1.5 mm<sup>2</sup> stranded wire  
Wire size, others (max.) ..... 1 x 2.5 mm<sup>2</sup> stranded wire  
Relative humidity ..... < 95% RH (non cond.)  
Dimensions (HxWxD)..... 48 x 96 x 120 mm  
Cutout dimensions ..... 44.5 x 91.5 mm  
Tightness (mounted in panel)..... IP65  
Weight ..... 230 g

**RTD and potentiometer input:**

Input type	Min. value	Max. value	Standard
Pt100	-200°C	+850°C	IEC60751
Ni100	-60°C	+250°C	DIN 43760
Potentiometer	10 Ω	100 kΩ	-

**Input for RTD types:**

Pt10, Pt20, Pt50, Pt100, Pt200, Pt250,  
Pt300, Pt400, Pt500, Pt1000  
Ni50, Ni100, Ni120, Ni1000

Cable resistance pr. wire, RTD (max.) 50 Ω  
Sensor current, RTD ..... Nom. 0.2 mA  
Effect of sensor cable resistance  
(3- / 4-wire), RTD ..... < 0.002 Ω / Ω  
Sensor error detection, RTD..... Yes  
Short circuit detection, RTD..... < 15 Ω

**TC input:**

Type	Min. value	Max. value	Standard
B	+400°C	+1820°C	IEC 60584-1
E	-100°C	+1000°C	IEC 60584-1
J	-100°C	+1200°C	IEC 60584-1
K	-180°C	+1372°C	IEC 60584-1
L	-200°C	+900°C	DIN 43710
N	-180°C	+1300°C	IEC 60584-1
R	-50°C	+1760°C	IEC 60584-1
S	-50°C	+1760°C	IEC 60584-1
T	-200°C	+400°C	IEC 60584-1
U	-200°C	+600°C	DIN 43710
W3	0°C	+2300°C	ASTM E988-90
W5	0°C	+2300°C	ASTM E988-90
LR	-200°C	+800°C	GOST 3044-84

Cold junction compensation (CJC)  
via internally mounted sensor..... < ±1.0 °C  
Sensor error detection, all TC types.. Yes  
Sensor error current:  
when detecting ..... Nom. 2 µA  
else ..... 0 µA

**Current input:**

Measurement range ..... -1...25 mA  
Program. measurement ranges ..... 0...20 and 4...20 mA  
Input resistance ..... Nom. 20 Ω + PTC 25 Ω  
Sensor error detection:  
loop break 4...20 mA ..... Yes

**Voltage input:**

Measure range..... -20 mV...12 VDC  
Program. measurement ranges ..... 0...1 / 0,2...1 /  
0...10 / 2...10 VDC  
Input resistance ..... Nom. 10 MΩ

**Outputs:**

**Display:**  
Display readout ..... -1999...9999 (4 digits)  
Decimal point ..... Programmable  
Digit height ..... 13.8 mm  
Display updating..... 2.2 times / s  
Input outside input range is  
indicated by..... Explanatory text

**Current output:**

Signal range (span)..... 0...20 mA  
Programmable signal ranges..... 0...20 / 4...20 /  
20...0 / 20...4 mA  
Load (max.)..... 20 mA / 800 Ω / 16 VDC  
Load stability ..... ≤ 0.01% of span / 100 Ω  
Sensor error detection ..... 0 / 3.5 / 23 mA / none  
NAMUR NE 43 Upscale ..... 23 mA  
NAMUR NE 43 Downscale ..... 3,5 mA  
Output limitation:  
on 4...20 and 20...4 mA signals... 3,8...20,5 mA  
on 0...20 and 20...0 mA signals... 0...20,5 mA  
Current limit ..... ≤ 28 mA

**Relay outputs:**

Relay function..... Setpoint  
Hysteresis, in % / display counts ..... 0.1...25% / 1...2999  
On and Off delay ..... 0...3600 s  
Sensor error detection..... Make / Break / Hold  
Max. voltage ..... 250 VRMS  
Max. current ..... 2 A / AC  
Max. AC power ..... 500 VA  
Max. current at 24 VDC ..... 1 A

**Marine approval:**

Det Norske Veritas, Ships & Offshore. Stand. for Certific. No. 2.4

**GOST R approval:**

VNIIM, Cert. No. .... Ross DK.ME48.V01899

**Observed authority requirements: Standard:**

EMC 2004/108/EC  
Emission and immunity..... EN 61326  
LVD 73/23/EEC..... EN 61010-1  
UL, Standard for Safety..... UL 508