

# Electrochemical gas analyzers ДАХ-М



Gas analyzers are designed for continuous, automatic measuring of mass concentration of one of the hazardous substances in the air of working area and in the process media that contain hydrocarbons.

## Application

Monitoring of air of working areas of chemical, petrochemical, oil-refining and gas productions, other branches of industry. For application in the conditions of the Extreme North and the Arctic.



Principle of operation - electrochemical.

Type of gas analyzer - fixed,

automatic, single-channel.

Mode of operation - continuous.

Material of enclosure - carbon-filled polyamide / aluminum / stainless steel.

## Measuring ranges

Name	Measurement unit	Measuring range	Alarm thresholds values		Section of measuring range	Limits of permissible intrinsic error
			threshold 1	threshold 2		
ДАХ-М-XX-CO-200	mg/m <sup>3</sup>	from 0 to 200	20	100	from 0 to 20 from 20 to 200	$\Delta d = \pm 5 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-CO-1500	mg/m <sup>3</sup>	from 0 to 1500	*	*	from 0 to 200 from 200 to 1500	$\Delta d = \pm 50 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-H <sub>2</sub> S-40	mg/m <sup>3</sup>	from 0 to 40	10	40	from 0 to 10 from 10 to 40	$\Delta d = \pm 2 \text{ mg/m}^3$ $\Delta d = \pm (2 + 0,25 \cdot (C_{вх} - 10)) \text{ mg/m}^3$
ДАХ-М-XX-SO <sub>2</sub> -20	mg/m <sup>3</sup>	from 0 to 20	10	20	from 0 to 10 from 10 to 20	$\Delta d = \pm 2 \text{ mg/m}^3$ $\Delta d = \pm (2 + 0,25 \cdot (C_{вх} - 10)) \text{ mg/m}^3$
ДАХ-М-XX-Cl <sub>2</sub> -25	mg/m <sup>3</sup>	from 0 to 25	1	5	from 0 to 1 from 1 to 25	$\Delta d = \pm 0,25 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-NH <sub>3</sub> -600	mg/m <sup>3</sup>	from 0 to 600	20	100	from 0 to 20 from 20 to 600	$\Delta d = \pm 5 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-NH <sub>3</sub> -2000	mg/m <sup>3</sup>	from 200 to 2 000	*	*	over the whole range	$\Delta d = \pm 50 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-O <sub>2</sub> -30	volume fraction, %	from 0 to 30	23	18	from 0 to 2 from 2 to 10	$\Delta d = \pm 0,9\%$ , volume fraction
ДАХ-М-XX-NO <sub>2</sub> -10	mg/m <sup>3</sup>	from 0 to 10	2	10	over the whole range	$\Delta d = \pm 0,5 \text{ mg/m}^3$ $\Delta d = \pm (0,5 + 0,17 \cdot (C_{вх} - 2)) \text{ mg/m}^3$
ДАХ-М-XX-HCl-30	mg/m <sup>3</sup>	from 5 to 30	5	25	over the whole range	$\Delta d = \pm 1,25 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-RSH-5	mg/m <sup>3</sup>	from 0 to 5	1	4	from 0 to 1 from 1 to 5	$\Delta d = \pm 0,25 \text{ mg/m}^3$ $\delta d = \pm 25\%$
ДАХ-М-XX-Cl <sub>2</sub> -50	mg/m <sup>3</sup>	from 0 to 50	*	*	over the whole range	$\Delta d = \pm (2 + 0,15 \cdot C_{вх}) \text{ mg/m}^3$
ДАХ-М-XX-O <sub>2</sub> -10	volume fraction, %	from 0 to 10	2	4	over the whole range	$\Delta d = \pm (0,3 + 0,2 \cdot C_{вх})$ volume fraction
ДАХ-М-XX-N <sub>2</sub> O <sub>4</sub> -20	mg/m <sup>3</sup>	from 0 to 20	5	10	from 0 to 5 from 5 to 20	$\Delta d = \pm 1,25 \text{ mg/m}^3$ $\Delta d = \pm (1,25 + 0,25 \cdot (C_{вх} - 5)) \text{ mg/m}^3$
ДАХ-М-XX-O <sub>2</sub> -25	volume fraction, %	from 0 to 25	23	18	from 0 to 6 from 6 to 25	$\Delta d = \pm 0,2\%$ $\Delta d = \pm 0,4\%$
ДАХ-М-XX-NO-100	volume fraction, ppm	from 0 to 100	10	20	from 0 to 10 from 10 to 100	$\Delta d = \pm 3 \text{ ppm}$ $\Delta d = \pm (3 + 0,1 \cdot (C_{вх} - 10)) \text{ ppm}$
ДАХ-М-XX-NO-200	mg/m <sup>3</sup>	from 0 to 200	20	100	from 0 to 50 from 50 to 200	$\Delta d = \pm 5 \text{ ppm}$ $\Delta d = \pm (5 + 0,1 \cdot (C_{вх} - 50)) \text{ ppm}$

\* Set according to order.

\* C<sub>вх</sub>- actual value of measured component content at gas analyzer input.

## Operating temperature

> ДАХ-М-06-02-25: from - 20 to + 45°C;

> ДАХ-М-05ХН/-06ТРХН: from - 60 to + 50°C;

> The rest gas analyzers: from - 40 to + 50°C.

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## Power consumed, W, not more

> ДАХ-М-07, -07-Н - 0,8 W;

> ДАХ-М-01, -04, -05, -05Х, -06 - 2 W;

> ДАХ-М-06ТР, -06ТРХ - 3,5 W;

> ДАХ-М-05ХН, -06ТРХН - 7,5 W.

For power supply of gas analyzers ДАХ-М secondary power supply and alarm units БПС-21М are used.

Gas analyzers ДАХ-М are supplied with the set of cable gland (for armored cable, metal hose, tubing) on special order.

## Material of enclosure:

> ДАХ-М-01,-03,-04 - carbon-filled polyamide;

> ДАХ-М-05,-06,-07 - aluminum (stainless steel on special order).

## Basic technical characteristics

Gas analyzer version	Supply voltage, V	Digital indication	Explosion protection	Output signal	Degree of protection
ДАХ-М-01	10-24	+	1ExibIICT6X	4-20 mA	IP 54
ДАХ-М-03	10-16	-	1ExibIICT6X	4-20 mA	IP 54
ДАХ-М-04	10-16	-	1ExibIICT6X	4-20 mA	IP 54
ДАХ-М-05	10-32	+	1ExdIICT6X	4-20 mA	IP 66
ДАХ-М-05Х	10-32	+	1ExdIICT6X	4-20 mA, HART	IP 66
ДАХ-М-05ХН	10-32	+	1ExdIICT6X	4-20 mA, HART	IP 66
ДАХ-М-06	10-32	+	1ExdIICT6X	RS485	IP 66
ДАХ-М-06ТР	10-32	+	1ExdIICT6X	4-20 mA, relay (250V; 1,0A), RS485	IP 66
ДАХ-М-06ТРХ	10-32	+	1ExdIICT6X	4-20 mA, relay (250V; 1,0A), RS485, HART	IP 66
ДАХ-М-06ТРХН	10-32	+	1ExdIICT6X	4-20 mA, relay (250V; 1,0A), RS485, HART	IP 66
ДАХ-М-07	12-28	-	1ExdiaIICT6X	4-20 mA	IP 66
ДАХ-М-07Н	12-28	-	1ExdiaIICT6X	4-20 mA	IP 66

## Connection of gas analyzers

> ДАХ-М-01, -03, -04 is carried out through three-wire communication line;

> ДАХ-М-05/-06 is carried out through three-wire or four-wire communication line;

> ДАХ-М-07/-07Н is carried out through two-wire communication line.



## Delivery set

> Gas analyzer ДАХ-М;

> SPTA set;

> Documentation.