kamstrup

Tekhnichnyi pasport

ULTRAFLOW® 85
DN150-300

- Ultrazvukovyi datchyk potoku (q_p 150...1000 m^3/h)
- MID zatverdzhenyi dlia tepla ta BEK 1178 dlia vymiriuvannia kholodnogo potoku
- MID zatverdzhenyi dlia vymiriuvannia priamogo ta zvorotnogo potoku (dvostoronnii potik)
- Shvydka reaksiia dlia kontroliu protsesu
- Statychnyi datchyk, bez ruhomykh chastyn ta bez znoshuvannia
- Kompaktnyi dyzain
- Nizkyi vtraty tyisku
- Velykyi dynamichnyi diapazon
- Vyiskovo tochnyi
- Mizhnarodnyi

MID 2014/32/EU

CE M25 0200

EN 1434

DK-BEK 1178 – 06/11/2014

DK 268 25

EN 1434

Contents

Opis

ULTRAFLOW® 85 - tse statychnyi datchyk potoku, zasnovanyi na ultrazvukovomu vymiriuvalnomu pryntsypi, i rozroblenyi dlia vykorystannia v systemakh opalennia ta okholodzhennia, de voda vykorystovuietsia yak teplonosiich. Vin vykorystovuietsia peredusim yak pidrozdil teplovogo lichelnyka v kombinatsii z naborem TemperatureSensor 63 & 83 ta okremymy kalkuliatoramy MULTICAL® 603-S/603-U ta 803-A. Tsie typy MULTICAL® pidtrymuiut yurydychne vymiriuvannia dvostoronnogo potoku (priamyi ta zvorotnyi potik) z ULTRAFLOW® 85, shcho mozhe buty korysnym, napryklad, koly v deiakyi periody spozhyvaietsia teplova enerhiia, a v inshykh periody nadlyshkova teplova enerhiia postachaietsia do rozpodilnoi merezhi. Krim toho, tse dozvoliaie navit korotshi intervaly zboru obiemu do 0,5 s, shcho robyt tsei shvydky datchyk potoku osoblyvo prydatnym dlia rehuliuvannia promyslovykh protsesiv. ULTRAFLOW® 85 osnaschenyi displeiem, shcho pokazuie faktichnyi potik ta rizni statusni povidomlennia.

Pryamyi ta zvorotnyi potik vymiriuiutsia za dopomohoiu dvostoronnioi ultrazvukovoi tekhniky, zasnovanoi na metodi chasu prokhodzhennia. ULTRAFLOW® 85 vykorystovuie mikroprotsesornu tekhnolohiiu. Usi skhemy dlia rozrakhunku ta vymiriuvannia zibrani na odnii plati, shcho zabezpechuie kompaktnyi ta ratsionalnyi dyzain, a takozh vykliuchno vysokyi riven tochnosti vymiriuvannia ta dovhostrokovu stabilnist.

Trydratnyi syhnalnyi kabel vykorystovuietsia dlia pidkliuchennia ULTRAFLOW® 85 do okremogo kalkuliatora MULTICAL® chy inshogo obladnannia. Tse kabel vykorystovuietsia dlia zabyzpechennia datchyka potoku. Pry pidkliuchenni do MULTICAL® 603-S/603-U/803-A seriyne spilkuvannia zabezpechuietsia cherez tsei kabel, shcho dozvoliaie vymiriuvannia priamogo ta zvorotnogo potoku v poli. Dlia pravylnoho rozrakhunku enerhii v kalkuliatori, koly ULTRAFLOW® 85 vymiriuie zvorotnyi potik, datchyk potoku povynen buty vstanovlenyi na vykhodi bilia t2 (chy t3, zalezhno vid vykorystovanoho enerhoreiestru). Pry pidkliuchenni do inshogo obladnannia, nizh MULTICAL® 603-S/603-U/803-A, z ULTRAFLOW® 85 vydaiutsia obiemno-proportsiini impulsy. Vymiriuvannia zvorotnogo potoku v poli v tsomu vypadku ne pidtrymuietsia.

Yakshcho ULTRAFLOW® 85 vykorystovuietsia yak datchyk potoku dlia inshogo obladnannia, nizh kalkuliatory Kamstrup MULTICAL®, vin povynen buty pidkliuchenyi cherez Pulse Transmitter. Yakshcho ULTRAFLOW® 85 pidkliuchenyi do inshogo kalkuliatora z inshym koefitsientom lichelnyka, nizh togo, shcho postachaie ULTRAFLOW® 85, zamist tsogo vykorystovuietsia Pulse Divider. Pulse Transmitter ta Pulse Divider maiut galvanychno vidokremlenyi vyhid impulsu, vbudovane zabyzpechennia dlia ULTRAFLOW® ta ne pidtrymuiut vymiriuvannia zvorotnogo potoku v poli. Yakshcho vidstan mizh MULTICAL® ta ULTRAFLOW® 85 bilshe nizh 10 m, Pulse Transmitter dozvoliaie prodovzhennia pidkliuchnoho kabelia (do 100 m). Alternatyvno, Cable Extender Box mozhe buty vykorystanyi dlia tsiei mety dlia vidstanei do 30 m mizh MULTICAL® ta ULTRAFLOW® 85. Cable Extender Box ne pereshkodzhaie vymiriuvanniu priamogo ta zvorotnogo potoku v poli.

Vidpovidnist

Typove zatverdzhennia

ULTRAFLOW® 85 zatverdzhenyi yak teplovyi lichelnyk vidpovidno do MID 2014/32/EU:

Sertifikat EU-Type Examination	DK-0200-MI004-048
MID-sertyfikovanyi vidpovidno do Module D	DK-0200-MID-D-001

CE M25 0200

ULTRAFLOW® 85 zatverdzhenyi yak lichelnyk kholodnogo potoku vidpovidno do DK-BEK 1178 – 06/11/2014:

Systemne poznachennia	TS 27.02 019
Verifikatsiia	DANAK akredytatsiia 268

DK 268 25

Zvernit sia do Kamstrup A/S dlia dodatkovoi informatsii shchodo typovoho zatverdzhennia ta verifikatsii.

Standarty ta dokumenty

EN 1434:2022
OIML R75:2002
WELMEC 7.2:2023 (Traven 2024)

CE-markuvannia

ULTRAFLOW® 85 markovanyi vidpovidno do:

– EMC-direktyva	2014/30/EU
– LV-direktyva	2014/35/EU (razom z Pulse Transmitter chy Pulse Divider)
– PE-direktyva	2014/68/EU (kategoria I chy II)

Zatverdzheni dany lichelnyka

MID poznachennia

– Mekhanichne seredovyshche	M1 (vibratsii ta udary maloi znachushchosti) M2 (znachni chy vysokyi rivni vibratsii ta udariv)
– Elektromahnitne seredovyshche	E1 (zhytlovi, komertsiini ta lehki promyslovi budivli) E2 (inshi promyslovi budivli)
– Klimatychne seredovyshche	5…55 °C, kondensatsiia, zakryte rozmishchennia (vnutrishnia instalatsiia)
– Klas tochnosti	2 ta 3

EN 1434 poznachennia

– Ekologichnyi klas	C (vysoki elektrychni ta elektromahnitni umovy)
– Shvydky lichelnyk	Interval zboru obiemu (pidrozdil datchyka potoku) zalezhyt vid pidkliuchenoho kalkuliatora. Do 0,5 s z MULTICAL® 603-S/603-U/803-A. Potrebue zhyvlennia vid merezhi. Inakshe 1 s.

Tekhnichni dany

Elektrichni dany

Elektrichni dany Batareia Pidsvitka displeia VYMKNENA (MULTICAL® chy Pulse Transmitter/Pulse Divider)	3,6 VDC ± 0,1 VDC 3,65 VDC, D-element litii
Tryvalist roboty batarei (interval zaminy) – ULTRAFLOW® 85 ta MULTICAL® Seriynyi rezhym Impulsnyi rezhym – Pulse Transmitter/Pulse Divider	 Do 16 rokiv pry @ t_{BAT} < 30 °C Do 13 rokiv pry @ t_{BAT} < 30 °C 6 rokiv pry @ t_{BAT} < 30 °C (Y=3)
Zhivlennia vid merezhi Pidsvitka displeia UVIMKNENA – (MULTICAL® chy – Pulse Transmitter/Pulse Divider)	 230 VAC +15/-30 %, 50 Hz chy 60 Hz 24 VAC ± 50 %, 50 Hz chy 60 Hz
Rezervne zhyvlennia	Vbudovanyi kondensator usuvaiie operatsiini zboi cherez korotkotryvali pereboi zhyvlennia
Dovzhyna kabelia – Datchyk potoku – Pulse Transmitter/Pulse Divider – Cable Extender Box	 Maks 10 m Zalezhyt vid kalkuliatora – maks 100 m pry pidkliuchenni do MULTICAL® (Y=2) Zalezhyt vid kalkuliatora – maks 30 m pry pidkliuchenni do MULTICAL® (ne zabezpechuie galvanychnu vidokremlennia, ale pidtrymuie vymiriuvannia priamogo ta zvorotnogo potoku, a takozh rozshyreni kody informatsii)
Elektromahnitne seredovyshche	Vidpovidaie EN 1434 klas C, MID E1 ta E2
Impulsnyi vyhid – Typ – Vkhidnyi opir – Tryvalist impulsu – Chas pauzy	Galvanychno pidkliuchenyi (ULTRAFLOW®) Push-Pull 10 kΩ 2...6 ms Zalezhno vid potochnoi chastoty impulsiv

Tekhnichni dany

Mekhanichni dany

Klas tochnosti	2 ta 3
Elektromahnitne seredovyshche	Vidpovidaie EN 1434 klas C, MID E1 ta E2
Mekhanichne seredovyshche	MID M1 ta M2
Umovy navkolyshnoho seredovyshcha	5...55 °C, zakryte rozmishchennia (vnutrishnia instalatsiia)
Klas zakhystu - Klas zakhystu - Cable extender box - Pulse Transmitter/Pulse Divider	 IP68 IP68 IP67
Seredovyshche v datchyku potoku	Voda – rekomendovana yakist vody vidpovidno do CEN TR 16911 ta AGFW FW510
Temperatura seredovyshcha	2...150 °C chy vuzhchyi diapazon
Temperatura zberihannia (porozhnii datchyk)	-25...60 °C
Tryvalist tyisku	PN16, PS16 (DN300) PN25, PS25 or PN16, PS16 (DN150-250); dyv. markuvannia
Vymohy do priamoi vhidnoi trubky	0D (vidpovidno do EN 1434:2022 ta OIML R75:2002)
Kut instalatsii	Horizontally, vertically ta pid kutom

Pry temperaturi seredovyshcha vyshe 120 °C ULTRAFLOW® 85 povynen buty izolovanyi. Ne zakryvaiite otvir podovzhuvalnoi trubky pry izoliatsii ULTRAFLOW® 85.

Dani potoku

Nom. potik q_p [m³/h]	Faktor metra* [p/l]	Dynamichnyy diapazon q_p:q_i	q_s:q_p	Potik@125 Hz [m³/h] **	Min. vidriz [l/h]
150	1	100:1	2:1	450	750
250	0.6	100:1	2:1	750	1250
400	0.4	100:1	2:1	1125	2000
600	0.25	100:1	2:1	1800	3000
1000	0.15	100:1	2:1	3000	5000

* *Faktor metra z'yavlyayetsya z typovoyi etyketky.*

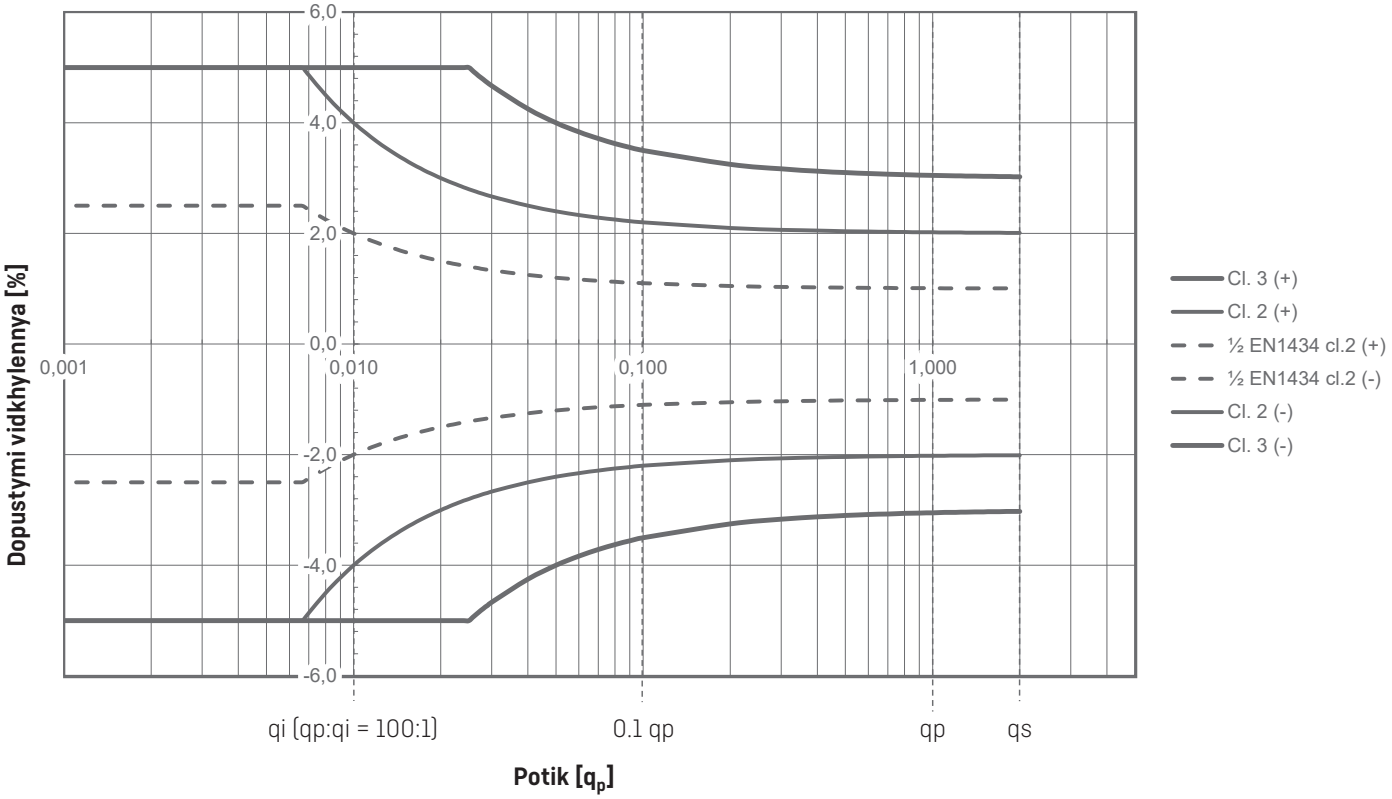
** *Nasyschenyy potik 125 Hz. Maksymal'na chastota impulsiv zberihayetsya pry vyshchomu pototsi.*

Tochnist' vymiryuvannya

Klasa 3	Ef = ±(3 + 0.05 q_p/q), ale ne vysche ±5 %
Klasa 2	Ef = ±(2 + 0.02 q_p/q), ale ne vysche ±5 %
Typovyy *	Ef = ±(1 + 0.01 q_p/q)

* Dokumentovano z DANAK-akredytovanym sertyfikatom pry pototsi q_i, 0.1 q_p ta q_p.

Dopustymi vidkhylennya datchyka potoku, q_p:q_i = 100:1 ta q_p:q_s = 2:1



Materialy

Vzmokli chasty

Korpus	Nerezna stal', W.no. 1.4308
Flantsy	Nerezna stal', W.no. 1.4301
Peretvoryuvach	Tytan
Prokladky	Volokno

Elektronnyy korpus

Podovzhuval'na trubka	Termoplast, 40 % skloarmovanyy polifenilensulfid (PPS)
Osnova	Termoplast, 10 % skloarmovanyy polikarbonat (PC)
Prozora kryshka	Termoplast, polikarbonat (PC)
Verkhnya kryshka	Termoplast, 10 % skloarmovanyy polikarbonat (PC)
Kryplennya dlya kalkulyatora	Termoplast, 10 % skloarmovanyy polikarbonat (PC)
Signalenyy kabel (opcional'no)	Silikonovyy kabel (3 x 0.5 mm^2)
Kabel z elektrozhyvlennya 24/230 VAC (opcional'no dlya Pulse Transmitter/Pulse Divider)	Kabel z PVC-obolonkoyu (2 x 0.75 mm^2)

Korpus, Cable Extender Box

Osnova, kryshka	Termoplast, akrylonitrilbutadienstyren (ABS)

Korpus, Pulse Transmitter/Pulse Divider

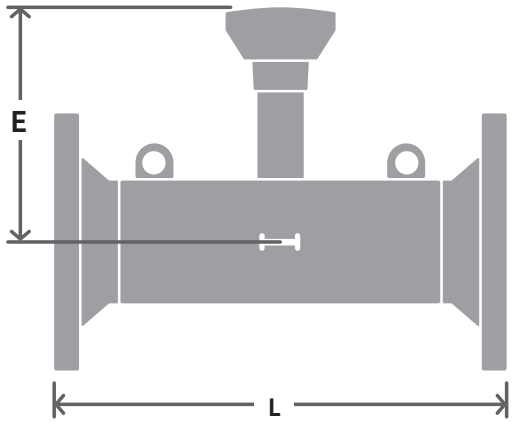
Osnova, kryshka	Termoplast, 10 % skloarmovanyy polikarbonat (PC)

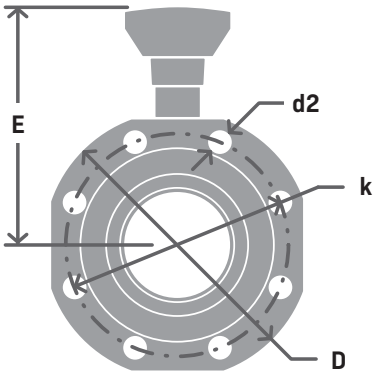
Typovyy pidsumok

Nom. potik q_p [m^3/h]	Rozmiry instalatsiyi	
150	DN150x500 mm	
250	DN150x500 mm	DN200x500 mm
400	DN200x500 mm	DN250x600 mm
600	DN250x600 mm	DN300x500 mm *
1000	DN300x500 mm *	

* *Til'ky PN16.*

Rozmirni eskizy





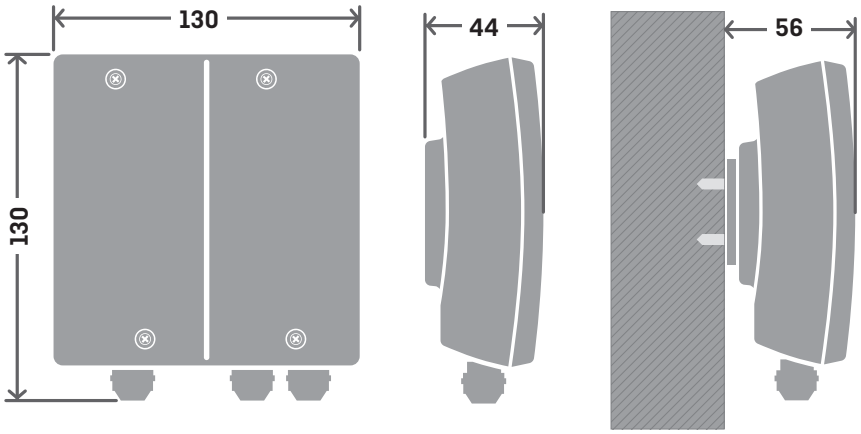
Flants z vystupom typ B, z vystupom vidpovidno do EN 1092-1

Nom. diametr [mm]	PN, PS	Nom. potik qp [m³/h]	L [mm]	D [mm]	k [mm]	Rez'ba		d2 [mm]	E [mm]	Pryblyzna vaga [kg]
						Kilkist	Bolty			
DN150	16, 16	150 & 250	500	285	240	8	M20	22	264	27
DN200	16, 16	250 & 400	500	340	295	12	M20	22	281	41
DN250	16, 16	400 & 600	600	405	355	12	M24	26	341	67
DN300	16, 16	600 &1000	500	460	410	12	M24	26	370	80

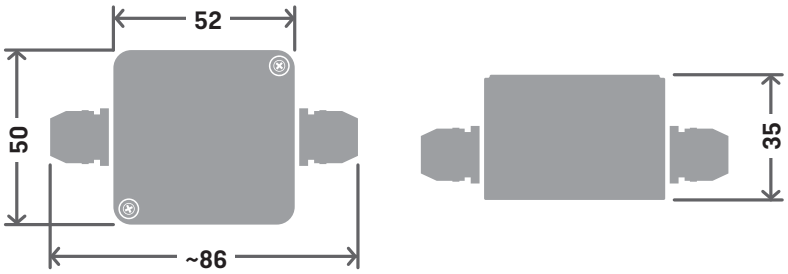
Nom. diametr [mm]	PN, PS	Nom. potik qp [m³/h]	L [mm]	D [mm]	k [mm]	Rez'ba		d2 [mm]	E [mm]	Pryblyzna vaga [kg]
						Kilkist	Bolty			
DN150	25, 25	150 & 250	500	300	250	8	M24	26	264	33
DN200	25, 25	250 & 400	500	360	310	12	M24	26	281	53
DN250	25, 25	400 & 600	600	425	370	12	M27	31	341	83

Rozmirni eskizy

Pulse Transmitter/Pulse Divider



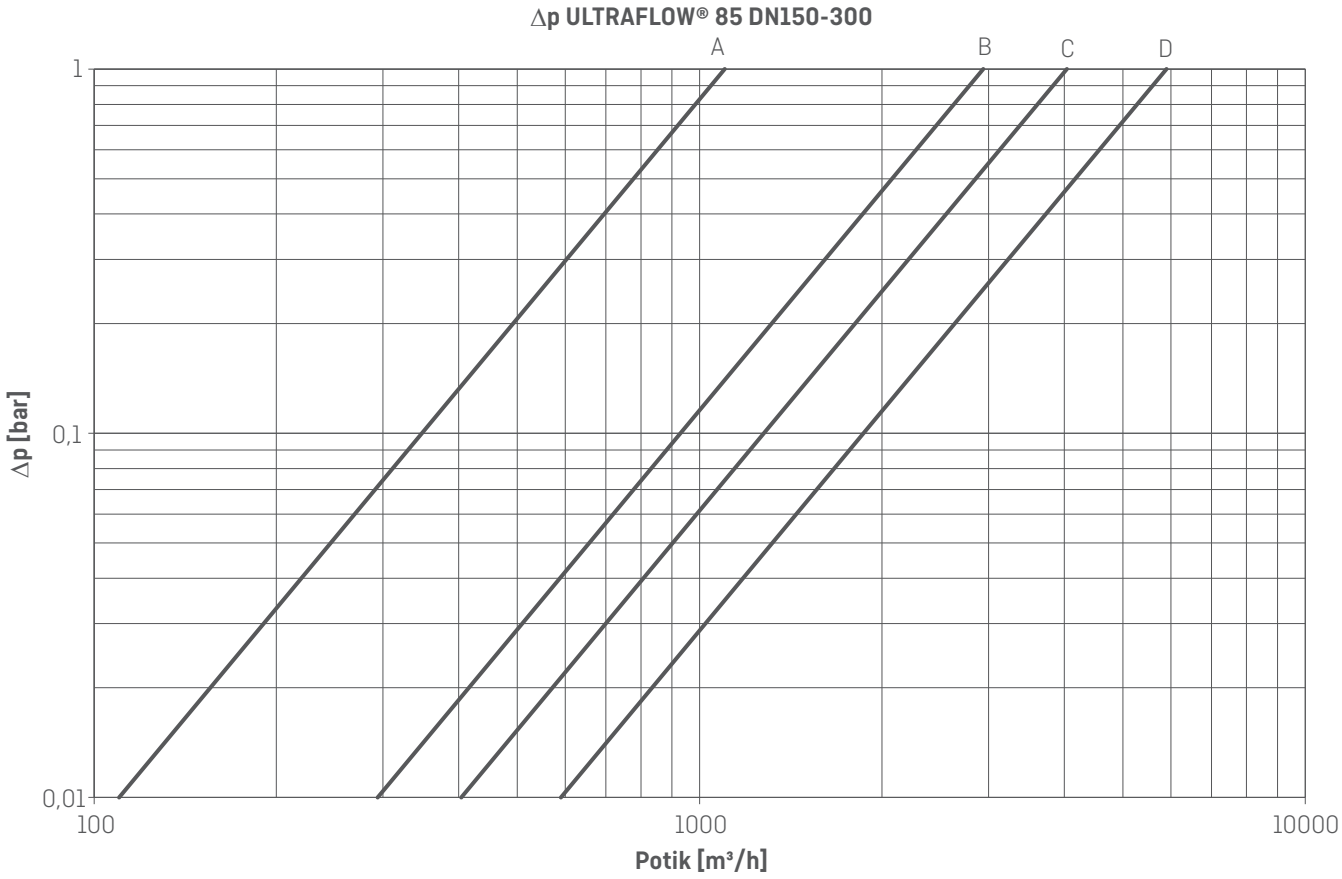
Cable Extender Box



Vtrata tysku

Hrafik	Nom. potik q_p [m³/h]	Typovyy nomer *	Nom. diametr [mm]	Dovzhyna [mm]	Δp@qp [bar]	kv	q@0.25 bar [m³/h]
A	150 250	65-85-FCxN-XXX 65-85-FDxN-XXX	DN150	500	0.02 0.06	1100	550
B	250 400	65-85-FDxP-XXX 65-85-FExP-XXX	DN200	500	0.02 0.04	1945	973
C	400 600	65-85-FExR-XXX 65-85-FFxR-XXX	DN250	600	0.02 0.04	2940	1470
D	600 1000	65-85-FFDS-XXX 65-85-FGDS-XXX	DN300	500	0.01 0.03	5900	2950

* *XXX - kod final'noyi zborky, zatverdzhennya toshcho - vyznachayetsya Kamstrup. Dekil'ka variantiv mozhe buty nedostupni v natsional'nykh zatverdzhennyakh. x = C (PN25) abo x = D (PN16).*



Instalyatsiya

⚠ Bud' laska, uvazhno prochytayte tsey rozdil pered ustanovkoyu lichelnyka.

U razi nepravylnogo montazhu zobovyazannya Kamstrup shchodo harantiyi bil'she ne zastosovuvatymutsya.

Pry pidklyuchenni do 230 V zhyvlennya isnuye ryzyk elektroshoku.

Pry robotakh z datchykom potoku v instalatsiyi isnuye ryzyk vytikannya (garachoyi) vody pid tyskom.

Pry temperaturi seredovyshcha vysche 60 °C datchyk potoku povynen buty zakhyshchenyy vid nenavmysnogo kontakty.

Pered ustanovkoyu datchyka potoku systema povynna buty proplachena.

Pravyl'ne polozhennya datchyka potoku (vkhid abo vykhid) z'yavlyayetsya z peredn'oyi markuvannya MULTICAL®. Napryamok potoku vpered vkazuyetsya strilkoyu na datchyku potoku.

⚠ ULTRAFLOW® 85 mozhe buty pidnyatyy til'ky za pidyomni kil'tsi.

Stupin' tysku: PN16, PS16 abo PN25, PS25. Dyvitsya markuvannya na flantsi abo etykettsi.

Temperatura seredovyshcha: 2...150 °C abo vuz'kyy diapazon. Dyvitsya markuvannya na etykettsi.

Mekhanichne seredovyshche: M1 ta M2 (fiksovana instalatsiya z minimal'nymy vibratsiyamy ta fiksovana instalatsiya z znachnym abo vysokym rivnem vibratsiy vidpovidno).

Elektromahnitne seredovyshche: E1 ta E2 (zhytlovi/legka promyslovist' ta promyslovist' vidpovidno).

Signalenyy kabel lichelnyka povynen buty prokladeno na vidstani min. 25 sm vid inshykh instalatsiy.

Umovy navkolyshn'oho seredovyshcha: Temperatura navkolyshn'oho seredovyshcha povynna buty v mezhakh 5...55 °C. Instalatsiya povynna buty v zakrytykh primishchennyakh (v seredyni).

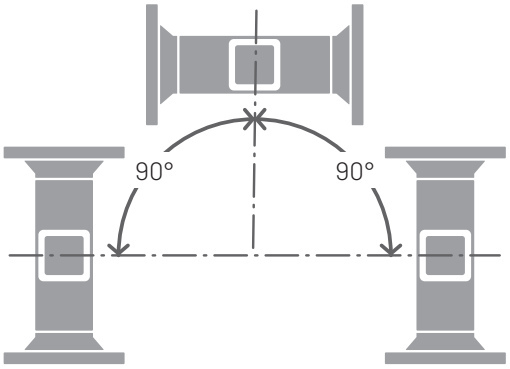
Klas zakhystu: IP68 – Datchyk potoku stiykyy, navit' za umov postiynoho zvolozhennya.

Izolyatsiya: ULTRAFLOW® 85 mozhe buty izolyovanyy. Pry temperaturi seredovyshcha vysche 120 °C ULTRAFLOW® 85 povynen buty izolyovanyy. Dlya detalei dyvitsya instruktsiyu z izolyatsiyi FILE100005249, yaku mozhe buty zavantazheno z www.kamstrup.com.

Tekhnichne obsluhovuvannya ta remont: Datchyk potoku perevireno okremo, tomu yoho mozhe buty vid'yednano vid kalkulyatora. Dozvoleno zaminyty prozoru kryshku ta 3-drotovyy kabel vid ULTRAFLOW® 85 na mistsi. Inshi remontni roboty povynni buty vykonani v maysternyi ta potrebuyut' podal'shoyi perevirky v akredytovaniy laboratoriyi.

Kut vstanovlennya ULTRAFLOW® 85

ULTRAFLOW® 85 mozhe buty vstanovlenyy horyzontal'no, vertykal'no abo pid kutom.



ULTRAFLOW® 85 zazvychaino oriyentovanyy horyzontal'no. U ts'omu vypadku korobka z elektronikoyu takozh povynna buty oriyentovana horyzontal'no, toblochky na boku, shchob dosyahty optymal'noi metrologichnoi produktyvnosti.

Ultrazvukovi shlyakhy v trubi datchyka potoku budut' vertykal'nymy, shcho ye optymal'nym u zv'yazku z mozhlyvym rozsharuvannyam seredovyshcha. Shchob zmenshyty mozhlyve rozsharuvannya pry minimal'nomu pototsi, rekomenduyet'sya izolyatsiya ULTRAFLOW® 85 i zokrema trub navkolo (do i pislya datchyka potoku).

Pislya zavershennya vstanovlennya, mozhe buty vkluchenyy potik vody. Spershu povynen buty vidkrytyy klapan na vstupnomu boku.

Pryamyy vkhid ULTRAFLOW® 85

ULTRAFLOW® 85 ne potrebuye ani pryamoho vkhodu, ani vykhodu, shchob vidpovidaty Dyrektyvi pro vymiryuval'ni prylady (MID) 2014/32/EU ta EN 1434. Til'ky v razi syl'nykh porushen' potoku pered lichelnykom bude neobkhidna pryama vkhidna dilyanka. My rekomenduyemo dotrymuvatysya rekomendatsiy u CEN TR 13582.

Robotnychyy tysk

Shchob zmenshyty ryzyk pomylok vymiryuvan' vnaslidok kavitatsii abo povitrya u vodi, rekomenduyet'sya pidtrymuvaty dostatniy statychnyy tysk na vykhodi datchyka potoku ne menshe 1.5 bar pry qp ta ne menshe 2.5 bar pry qs. Tse stosuyet'sya temperatur do pryblyzno 80 °C.

Elektrichne pidklyuchennya

Pidklyuchennya cherez Pulse Transmitter/Pulse Divider/Cable Extender Box

ULTRAFLOW® 85	->	Pulse Transmitter/Pulse Divider/ Cable Extender Box		->	MULTICAL®
		Input	Output		
Syniy (GND)	->	11	11A/11	->	11
Chervonyy (supply)	->	9	9A/9	->	9
Zhovtyy (signal)	->	10	10A/10	->	10

Pulse Transmitter/Pulse Divider zabezpechuyut' hal'vanichne roz'yednannya, ale ne pidtrymuyut' rozshyreni kody informatsii ta dvobichne vymiryuvannya potoku.

Cable Extender Box does not provide galvanic separation, but supports extended info codes and does not prohibit bi-directional flow measurement.

Pry vykorystanni dovhykh syhnal'nykh kabeliv, bud' laska, uvazhn'o rozglyan'te vstanovlennya. Povynno buty **shchonaimenshe 25 cm** mizh syhnal'nym kabelem ta usima inshymy kabeliamy cherez EMC.

Dlya dodatkovoi informatsii pro Pulse Transmitter/Pulse Divider ta Cable Extender Box, dyv. napryklad, tekhnichnyy opys UF54 DN15-125 (FILE100001282), yakyy mozhe buty zavantazhenyy z www.kamstrup.com.

ULTRAFLOW® 85 perevazhno z postachannyam vid merezhi, napryklad, cherez MULTICAL® 603-S/-U, shchob dosyahty, napryklad, nayvyshchoi chastoty vybyrannya ob'yemu.

U vypadku postachannya vid batereyi, tryvalist' roboty batereyi zalezhyt' vid bahat'oh parametriv, takykh yak, napryklad, data komunikatsii, rezhym intehratsii ta navkolyshnya temperatura. Dlya dodatkovoi informatsii, dyv. tekhnichnu dokumentatsiyu pidklyuchenoho MULTICAL® kalkulyatora.

ULTRAFLOW® 85	→	MULTICAL®		
11	→	11	GND	(Syniy)
9	→	9	+ 3.6 V	(Chervonyy)
10	→	10	⎍⎍⎍	(Zhovtyy)

Pidklyuchennya do kalkulyatora

Pry vykorystanni dovhykh syhnal'nykh kabeliv, bud' laska, uvazhn'o rozglyan'te vstanovlennya. Povynno buty **shchonaimenshe 25 cm** mizh syhnal'nym kabelem ta usima inshymy kabeliamy cherez EMC.

Typovi nomery ULTRAFLOW® 85

Typovyy nomer*	q_p [m³/h]	q_i [m³/h]	q_s [m³/h]	Dynamichnyy diapazon q_p:q_i	Pidklyuchennya [mm]	PN, PS [bar]	Dovzhyna [mm]
65-85-FCCN-XXX	150	1.5	300	100:1	DN150	25, 25	500
65-85-FDCN-XXX	250	2.5	500	100:1	DN150	25, 25	500
65-85-FDCP-XXX	250	2.5	500	100:1	DN200	25, 25	500
65-85-FECP-XXX	400	4	800	100:1	DN200	25, 25	500
65-85-FECR-XXX	400	4	800	100:1	DN250	25, 25	600
65-85-FFCR-XXX	600	6	1200	100:1	DN250	25, 25	600
65-85-FCDN-XXX	150	1.5	300	100:1	DN150	16, 16	500
65-85-FDDN-XXX	250	2.5	500	100:1	DN150	16, 16	500
65-85-FDDP-XXX	250	2.5	500	100:1	DN200	16, 16	500
65-85-FEDP-XXX	400	4	800	100:1	DN200	16, 16	500
65-85-FEDR-XXX	400	4	800	100:1	DN250	16, 16	600
65-85-FFDR-XXX	600	6	1200	100:1	DN250	16, 16	600
65-85-FFDS-XXX	600	6	1200	100:1	DN300	16, 16	500
65-85-FGDS-XXX	1000	10	2000	100:1	DN300	16, 16	500

* *XXX - kod dlya final'noyi zbyrky, zatverdzhennya toshcho - vyznachayetsya Kamstrup.*

Aksesuary

Opis	Typovyy nomer
Prokladka, DN150 PN16 (1 pc.)	1150-214
Prokladka, DN200 PN16 (1 pc.)	1150-215
Prokladka, DN250 PN16 (1 pc.)	1150-216
Prokladka, DN300 PN16 (1 pc.)	1150-164
Prokladka, DN150 PN25 (1 pc.)	1150-140
Prokladka, DN200 PN25 (1 pc.)	1150-139
Prokladka, DN250 PN25 (1 pc)	1150-141
2.5 m sylikonovyy kabel' (3-drotovyy)	5000-333
5 m sylikonovyy kabel' (3-drotovyy)	5000-259
10 m sylikonovyy kabel' (3-drotovyy)	5000-270
Kronshteyn dlya MULTICAL® 603	3026-1392
Cable Extender Box	66-99-036
Pulse Transmitter	66-99-903-YZ-XXX
Pulse Divider	66-99-907-YZ-XXX

Kabeli

ULTRAFLOW® 85 DN150-300, pry zamovlenni z MULTICAL® 603, dostavlyayetsya z 2.5 m syhnal'nym kabelem, za bachannyam 5 abo 10 m. Kabel' vstanovlenyy v elektronnu korobku ULTRAFLOW® 85 ta v MULTICAL® 603.

Koly ULTRAFLOW® 85 zamovlyayetsya z MULTICAL® 803, kalkulyator dostavlyayetsya v okremiy korobtsi. Vidpovidno, kabel' vstanovlenyy til'ky v elektronnu korobku ULTRAFLOW® 85.

ULTRAFLOW® 85 DN150-300, pry zamovlenni yak okremyy datchyk potoku, takozh dostupnyy z syhnal'nym kabelem dovzhynoyu 2.5, 5 abo 10 m. Pry vybori, kabel' vstanovlenyy v elektronnu korobku datchyka potoku.

Yakshcho ULTRAFLOW® 85 zamovlyayetsya razom z Pulse Transmitter abo Pulse Divider, kabel' dovzhynoyu 2.5 m, 5 m abo 10 m vstanovlenyy mizh datchykom potoku ta Pulse Transmitter/Pulse Divider.

Yakshcho Pulse Transmitter abo Pulse Divider zamovlyayutsya okremo, kabel' dovzhynoyu 2.5 m, 5 m abo 10 m mozhe buty vstanovlenyy na zamovlennya zavodom na vykhodi Pulse Transmitter/Pulse Divider.

Cable Extender Box dostavlyayetsya v usikh vypadkakh v okremiy upakovtsi bez kabelyu.

Kamstrup A/S • FILE100005899_A_UA_10.2025

Kamstrup A/S
Industrivej 28, Stilling
DK-8660 Skanderborg
T: +45 89 93 10 00
info@kamstrup.com
kamstrup.com