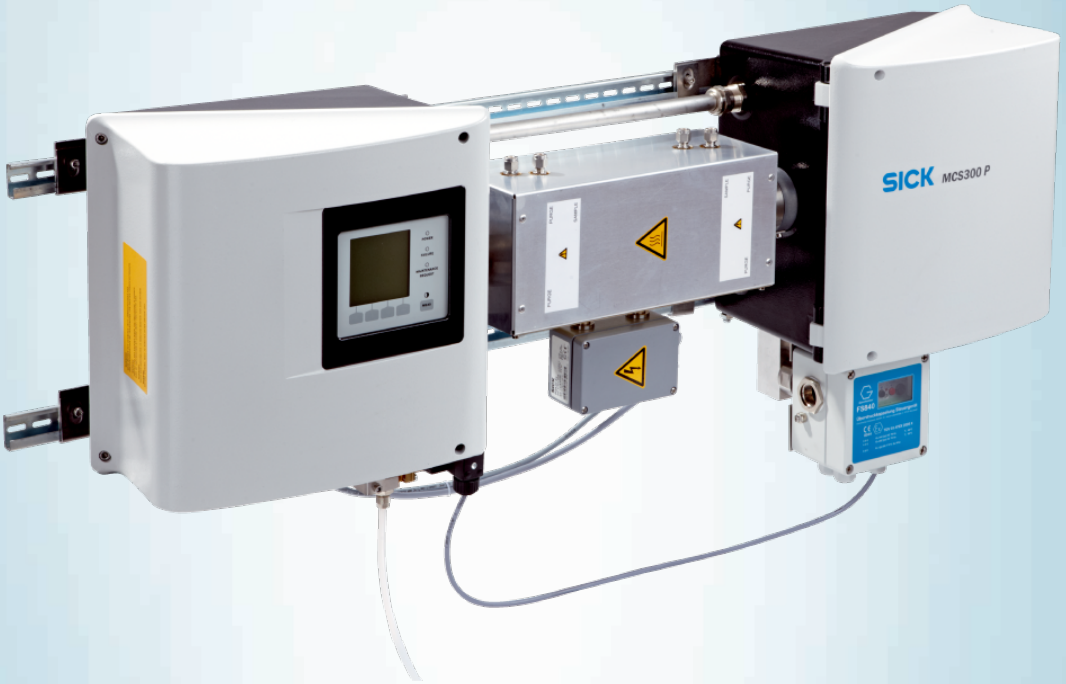
Product data sheet

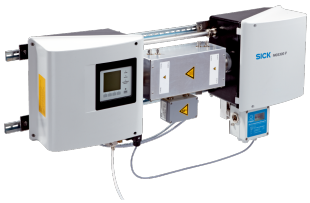


System MCS300P

MCS300P

GAS ANALYZERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
System MCS300P	On request

Our regional sales organization will help you to select the optimum device configuration.

Other models and accessories ➜ www.sick.com/MCS300P

Detailed technical data

Technical specifications

Measured values	Br_2, CCl_4, C_2Cl_4, CCl_2F_2, C_3F_6, CH_4, C_2H_2, C_2H_4, C_2H_6, C_3H_4, C_3H_6, C_3H_8, C_4H_6, C_4H_8, C_4H_{10}, C_6H_6, C_6H_{14}, C_7H_8, CH_3Cl, CH_2Cl_2, $CHCl_3$, C_2H_3Cl, $C_2H_2Cl_2$, $C_2H_4Cl_2$, C_2HCl_3, C_6H_5Cl, $C_6H_4Cl_2$, $CHCl_2F$, CH_3OH, C_3H_7OH, $C_2H_4(OH)_2$, CH_3CHO, HCOOH, $CH_3COOC_2H_3$, C_2H_2O, Cl_2, CO, CO_2, $COCl_2$, HCl, HCN, HF, H_2O, NH_3, NO, N_2O, NO_2, R-NCO, SO_2, SiF_4, many other IR / VIS active gases and liquids
Measurement principles	Interference filter correlation, Gas filter correlation
Spectral range	
VIS type:	300 nm ... 1,200 nm
IR type:	1,200 nm ... 12,000 nm
Measuring ranges	More than 60 measuring components available (depending on concentration and sample gas composition) Up to 6 components simultanously 2 measuring ranges per component Automatic measuring range switching (adjaustable) 2 limit values per component Measuring ranges depend on application and combination of measuring components
Response time (t_{90})	30 s ... 120 s Adjustable
Zero point drift	
VIS type	< 1 %: of smallest measuring range per day
IR type	< 2 %: of smallest measuring range per week
Detection limit	< 2 %: relative to measuring range end value
Ambient temperature	+5 °C ... +40 °C Temperature change maximum ±10 °C/h
Storage temperature	–20 °C ... +60 °C
Ambient humidity	≤ 80 % Non-condensing
Ex-approvals	
IECEx	Ex pxb IIC T3...T4 Gb

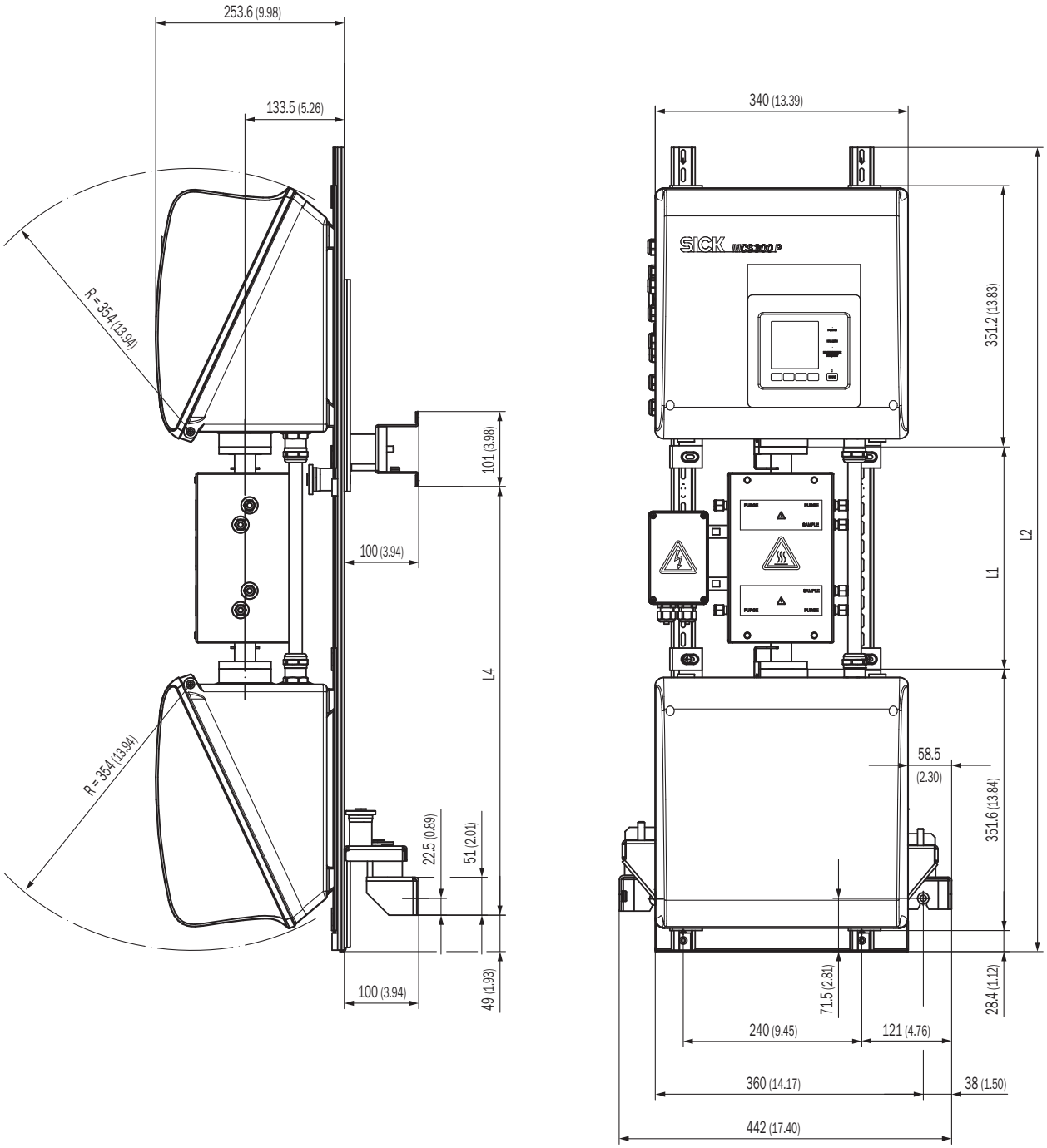
	Ex pzc IIC T3...T4 Gc Process cuvette: Ex eb IIC Gb
ATEX	II 2G Ex pxb IIC T4 Gb II 2G Ex pxb IIC T3 Gb Process cuvette: II 2G Ex e IIC Gb II 3G Ex pzc IIC T4 Gc II 3G Ex pzc IIC T3 Gc
Electrical safety	CE
Enclosure rating	IP65: measuring cuvette depending on version
Analog outputs	2 outputs: 0/4 ... 22 mA, 500 Ω Electrically isolated; max. number of outputs depends on application
Analog inputs	2 inputs: 0/4 ... 22 mA, 100 Ω Electrically isolated; max. number of inputs depends on application
Digital outputs	5 outputs: 2 power relays, electrically isolated; 3 outputs, potential-free; max. number of outputs depends on application
Digital inputs	4 inputs: Open contacts, potential-free; max. number of inputs depends on application
Modbus	✓
Remark	Not in the Ex-version
Type of fieldbus integration	TCP
Ethernet	✓
Remark	Not in the Ex-version
Function	Connection to SOPAS ET software or OPC server
Indication	Status LEDs: “Power,” “Failure,” and “Maintenance request” LC display
Input	Functional keys
Operation	Via LC-display Via SOPAS ET software (not in Ex-type)
Dimensions (W x H x D)	Dimensions may vary. For details, see the dimensional drawings.
Weight	See dimensional drawings
Material in contact with media	Measuring cuvette depending on version
Material	Aluminium, coated
Energy supply	
Voltage	Standard version 115 V AC, ± 10 % Standard version 230 V AC, ± 10 % Ex-version 230 V AC, ± 10 % Ex control device 230 V AC, ± 10 %
Frequency	Analyzer: 50 ... 60 Hz Ex control device: 48 ... 62 Hz
Power consumption	Analyzer: ≤ 230 VA With cuvette heating: ≤ 805 VA With 2nd heating: ≤ 1,450 VA
Corrective functions	Cross-sensitivity compensation of up to 6 interferents

Classifications

ECLASS 5.0	27150302
ECLASS 5.1.4	27150302
ECLASS 6.0	27150302
ECLASS 6.2	27150302
ECLASS 7.0	27150302
ECLASS 8.0	27150302
ECLASS 8.1	27150302
ECLASS 9.0	27150302
ECLASS 10.0	27150302
ECLASS 11.0	27150302
ETIM 5.0	EC001190
ETIM 6.0	EC001190
ETIM 7.0	EC001190
ETIM 8.0	EC001190
UNSPSC 16.0901	41115406

Dimensional drawing (Dimensions in mm (inch))

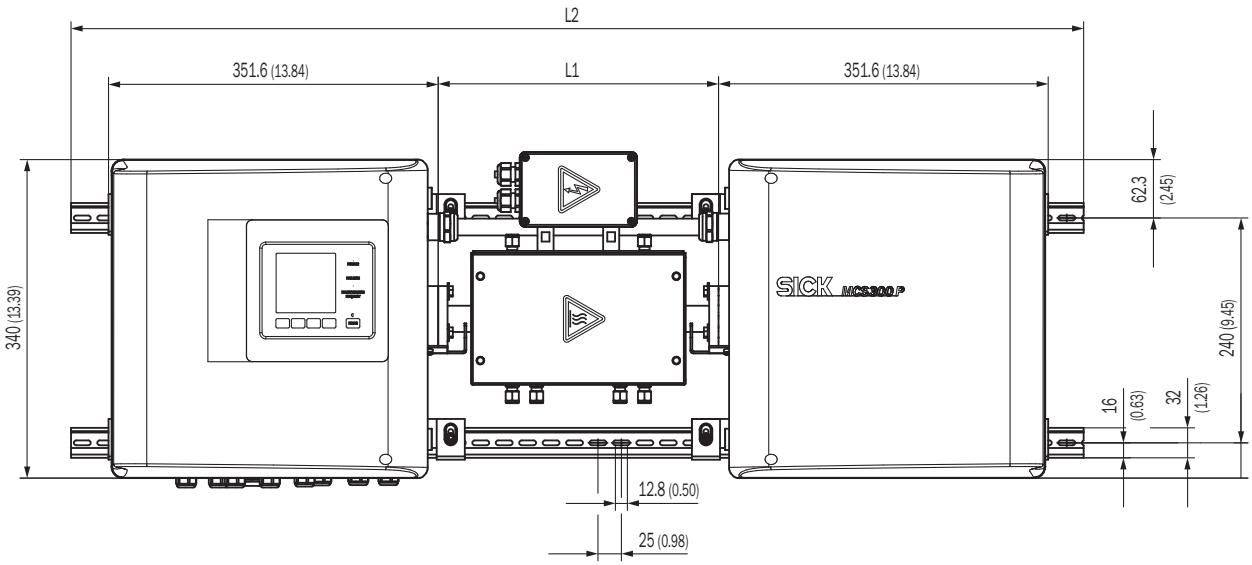
MCS300P, vertical

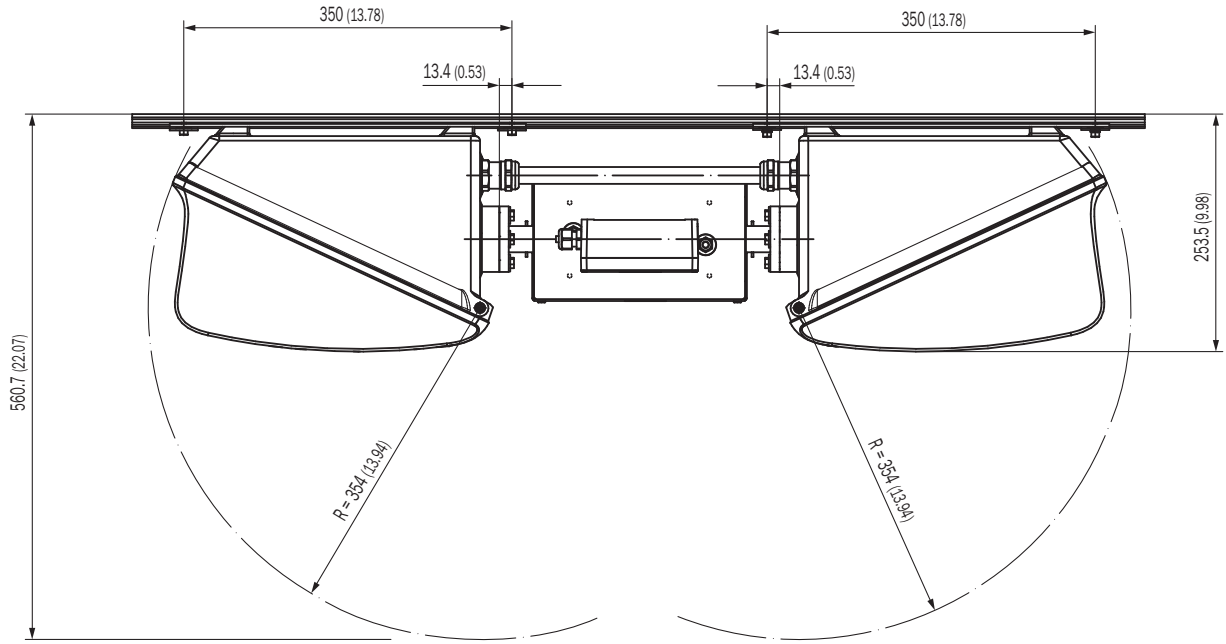


Cuvette	Length			Weight
	L1	L2	L4	Total
FGK	224 (8.82)	1000 (39.37)	494 (19.45)	39.5
PGK190, FGK	299 (11.77)	1080 (42.52)	569 (22.40)	43
PGK20	399 (15.71)	1180 (46.46)	669 (26.34)	45
PGK50	699 (27.52)	1480 (58.27)	969 (38.15)	51
PGK75	949 (37.36)	1730 (68.11)	1219 (47.99)	56

Cuvette	Length	Weight
All dimensions in mm (inch); all weights in kg		

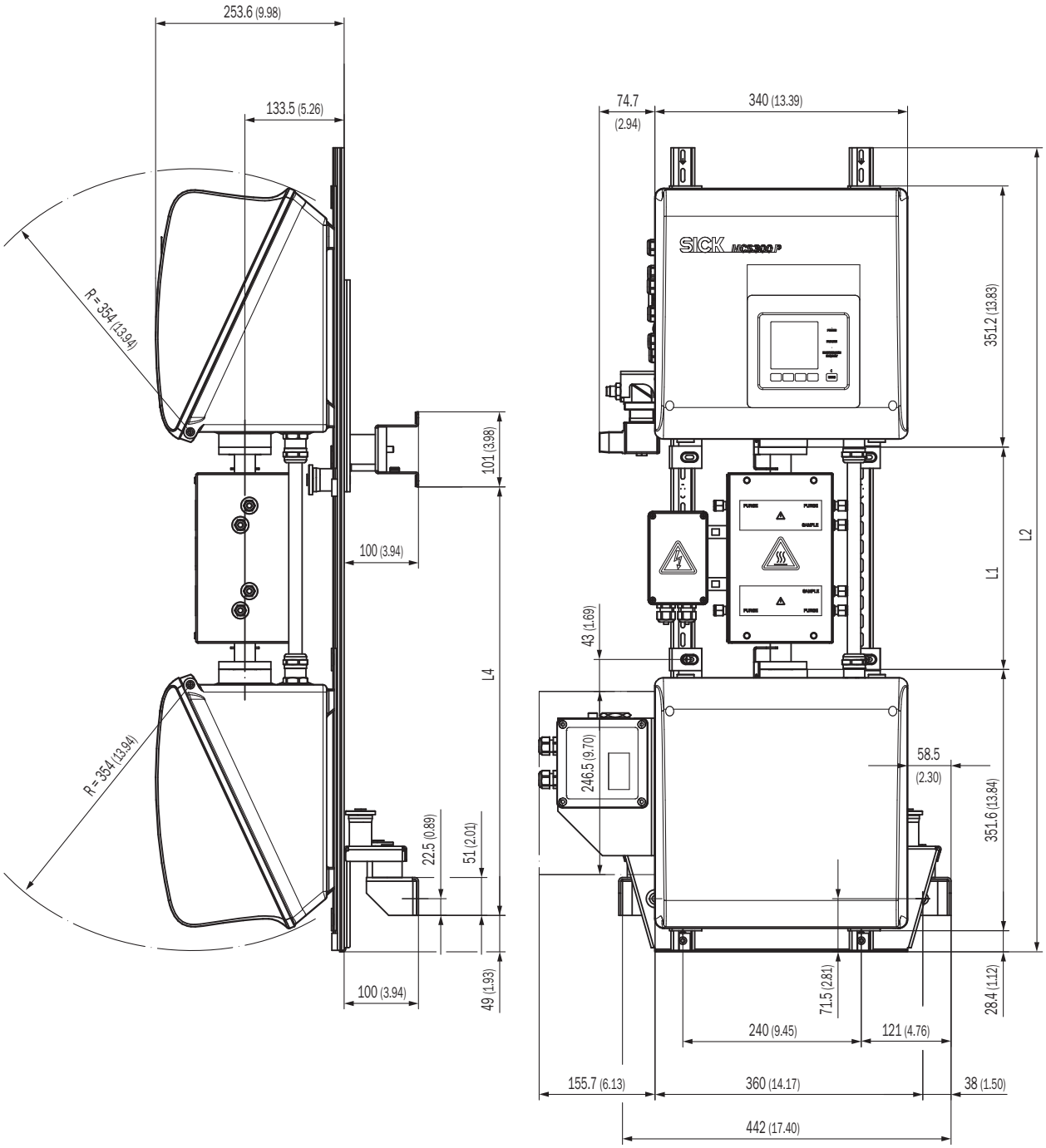
MCS300P, horizontal





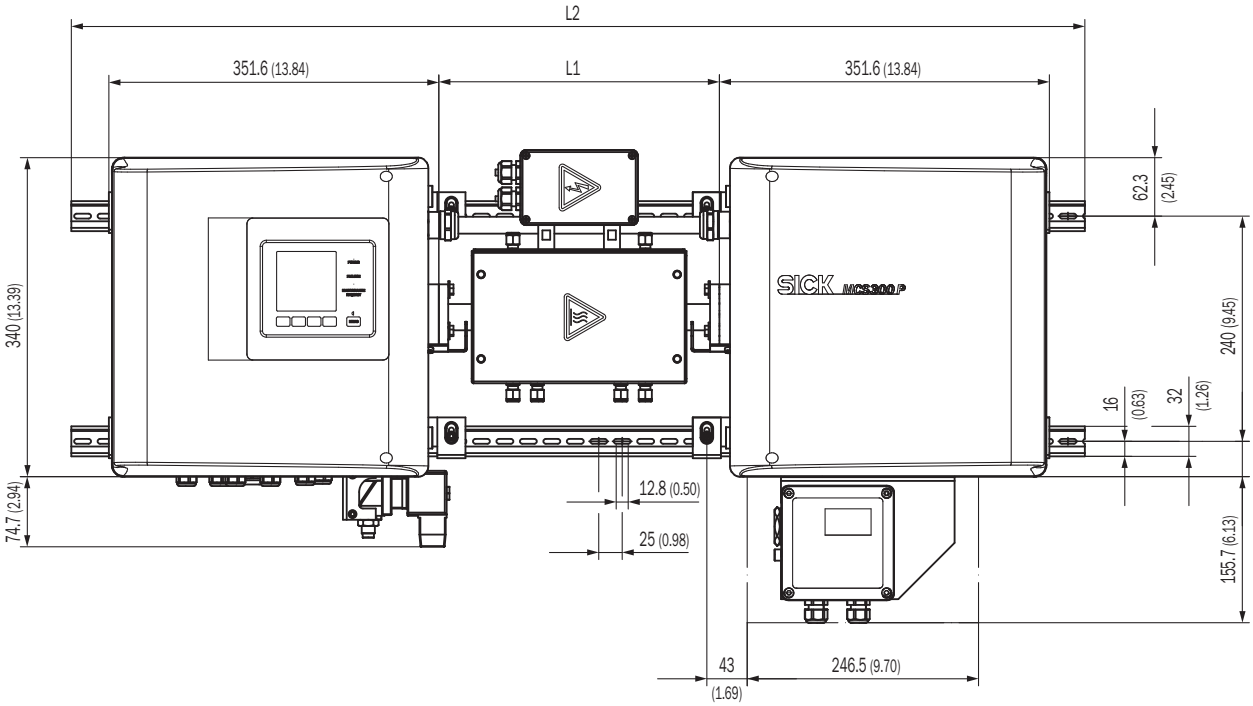
Cell	Length		Weight
	L1	L2	Total
FGK	168 ... 229	1,000	33.5
PGK10, FGK	299	1,080	37
PGK20	399	1,180	39
PGK50	699	1,480	45
PGK75	949	1,730	50
All dimensions in mm, all weights in kg			

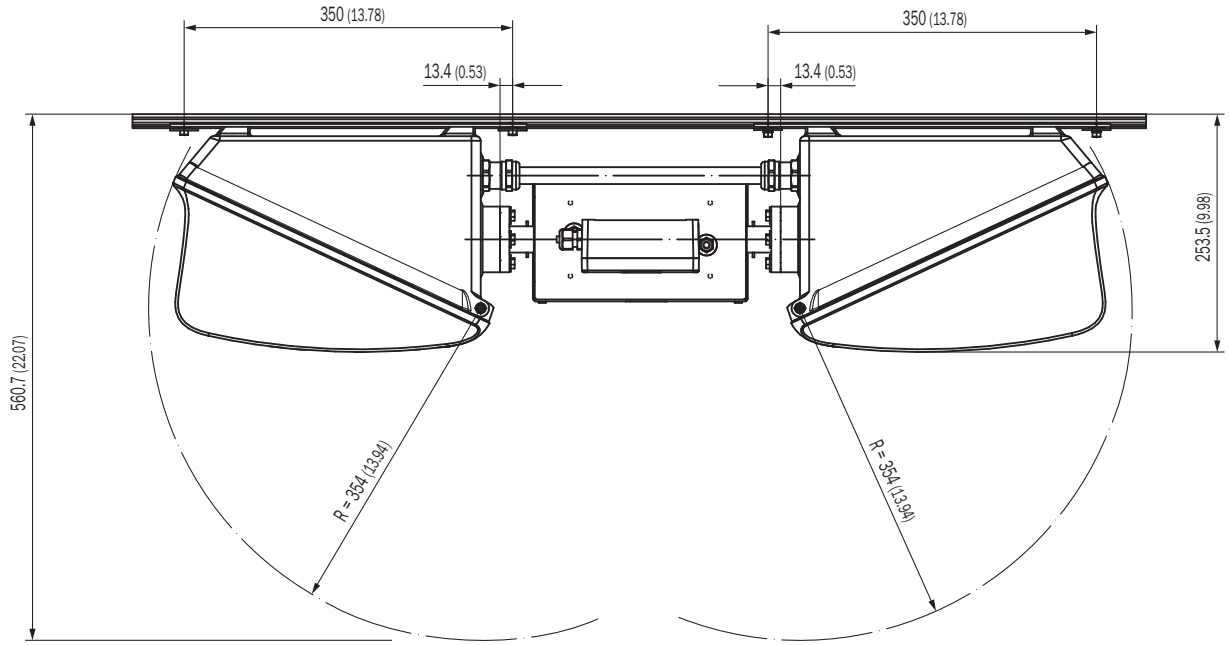
MCS300P Ex, vertical



Cuvette	Length			Weight
	L1	L2	L4	Total
PGK10 Ex	299 (11.77)	1080 (42.52)	569 (22.40)	43
PGK20 Ex	399 (15.71)	1180 (46.46)	669 (26.34)	45
PGK50 Ex	699 (27.52)	1480 (58.27)	969 (38.15)	51
PGK75 Ex	949 (37.36)	1730 (68.11)	1219 (47.99)	56
All dimensions in mm (inch); all weights in kg				

MCS300P Ex, horizontal





Cuvette	Length		Weight
	L1	**L2**	**Total**
PGK10 Ex	299 (11.77)	1080 (42.52)	37
PGK20 Ex	399 (15.71)	1180 (46.46)	39
PGK50 Ex	699 (27.52)	1480 (58.27)	45
PGK75 Ex	949 (37.36)	1730 (68.11)	50
All dimensions in mm (inch); all weights in kg			

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com