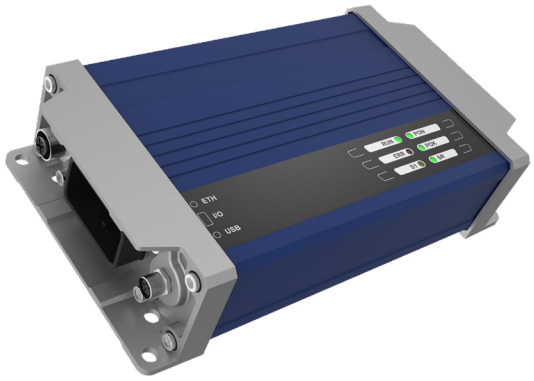
qSCALE S9 compact
Controller with integrated RCL/LMI core

Applications

- Telescopic Cranes, Lattice Boom Cranes, Rough Terrain Cranes
- Telescopic boom lifts, Articulated boom lifts, Truck-mounted Cranes/ boom lifts
- Telehandler

Special Features

- Rated capacity limiter
- Superior cycle-time
- Fast system start-up
- USB-interface for field-updates
- Compact and robust design



qSCALE S9 compact controller

Description

qSCALE S9 compact is a particularly resilient and robust rated capacity limiter (RCL, also known as load moment limiter or LMI). The controller features an integrated RCL/ LMI core and boasts an IP66/67 protection rating. qSCALE S9 compact is built into an extremely robust housing and is highly protected against shock, vibration, dust and water. This makes the controller particularly suitable for use in harsh environmental conditions.

qSCALE S9 compact controllers can be used in temperatures ranging from -40°C to +70°C and are resistant to shock and vibration according to EN 60721 3-5 as well as EMC protected according to EN 61000 and EN 7637.

Equipped with an i.mx6 UL @ 528 MHz processor and 139 MB DDR3 RAM, qSCALE S9 compact enables fast processing of machine control tasks. The programming of qSCALE S9 compact can be easily implemented with CoDeSys 2.3.

If remote access to the control system is required, the optional WebVisu interface lets users conveniently access the screens of a qSCALE S9 compact system using a web browser. Programmed in CoDeSys, it enables visualization and administration of all control variables and functions - without any need for programming skills!

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We reserve the right to make technical changes without prior notice. The individual specifications in this data sheet are warranted properties if they are expressly confirmed by us in writing in the respective case.

WIKA MOBILE CONTROL

Technical Specifications

qSCALE S9 compact	
CPU module	S9: Linux PreemtRT, CoDeSys 2.3, WebVisu (optional)
Processor	i.mx6 UL @ 528 MHz
RAM/Flash/Retain/SD	139 MB DDR3 / 235 MB / 2 MB / 2 GB (optional)
UPS-module	SuperCap-based: shutdown, retain-transfer RAM to flash
I/O count	IO18: 8 AI, 12 DI, 8 DO
8	AI (4...20mA) or VI (0...10V), 12bit, per SW individually configurable
4	DI_HSC (10KHz)
6	DI (HS)
2	DI_DIAG (HS/LS)
4	DO_CC (2 Aav)
4	DO static (1 Aav)
*	DO/DO_CC total current draw 8 Aav
2	CANopen (DS 301)
1	Sys-Bus (optional)
1	USB 2.0
1	Ethernet 10/100 BASE-TX
1	Cut-off relay (redundant, Cat. 3), 3A (directly CPU-driven)
Power supply	9..33 V DC specified operating condition 6..36 V DC limit for under-/ over-voltage like cold-cranking, …
Environment	
Ambient temperature	EN 60721 3-5: class 5K3 -40..+70°C (operating)
Ingress protection	IP66/67 (EN 60529)
Shock & vibration	EN 60721 3-5: class 5M3
EMC	EN 61000-4-2, EN 61000-4-4, EN 61000-6-2, EN 61000-4-5, EN 7637-2, EN 7637-3
Certification	
CE	EMC, RoHS
RCL	
EN 13000	similar to EN 13000 requirements
SAE J159	similar to SAE J159
Datalogger	similar to EN 13000

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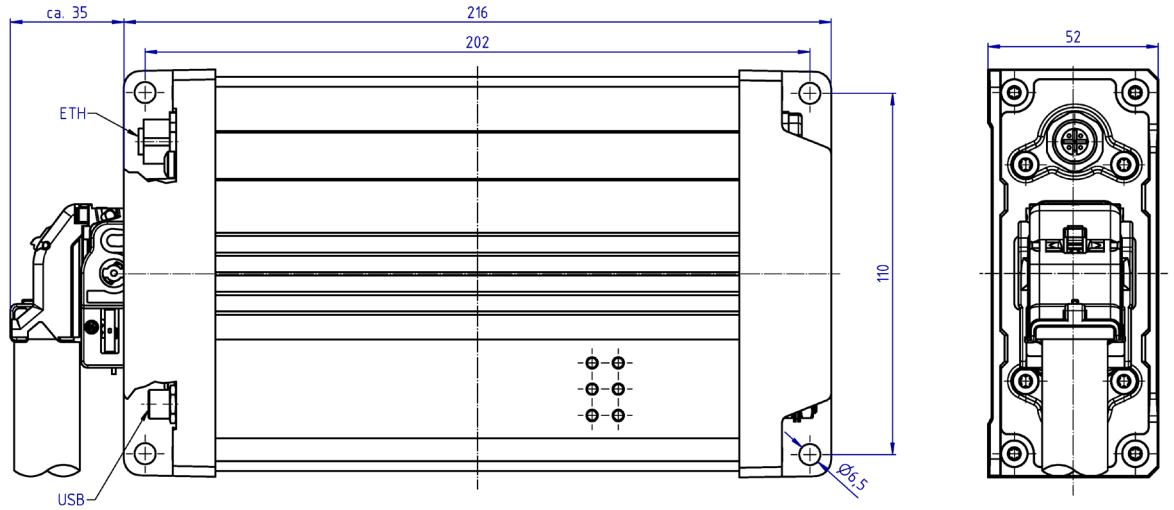
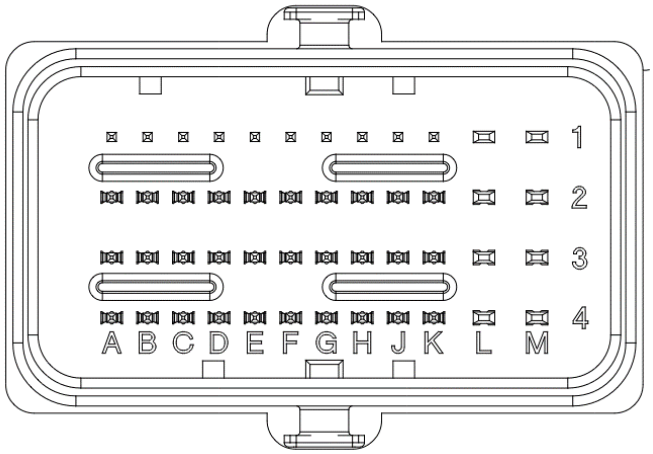
WIKA MOBILE CONTROL

Dimensions



Pin Assignment

I/O (Type: 48 pin MOLEX CMC Header SD-366380-002)



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Ethernet (M12 D-coded)

1	TX+
2	RX+
3	TX-
4	RX-
housing	SHLD

USB (M8 A-coded)

1	VCC_USB
2	D-
3	GND
4	D+
housing	SHLD

	A	B	C	D	E	F	G	H	J	K	L	M	
1	DO1 CC_2A	DO2 CC_2A	DO3 CC_2A	DO4 CC_2A	DO5 1A	DO6 1A	DO7 1A	DO8 1A	CAN1_H	NC	+UBP	-UB_PWR	1
2	DI1	DI2	DI3	DI4	DI5	DI6	DI1_DIAG HS/LS	DI2_DIAG HS/LS	CAN1_L	PWR_ON	+UBS	SHLD	2
3	DI1_HSC	DI2_HSC	DI3_HSC	DI4_HSC	NC	NC	optional SYS-BUS_H	optional SYS-BUS_L	CAN2_H	CUT-OFF	-UB	SHLD	3
4	VI1/AI1	VI2/AI2	VI3/AI3	VI4/AI4	VI5/AI5	VI6/AI6	VI7/AI7	VI8/AI8	CAN2_L	VI_GND	+UBP	-UB_PWR	4
	A	B	C	D	E	F	G	H	J	K	L	M	

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