

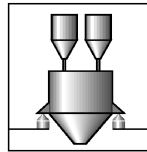
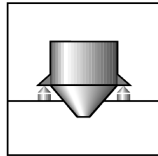
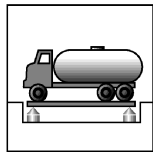


C16i ...

Digital Load Cell



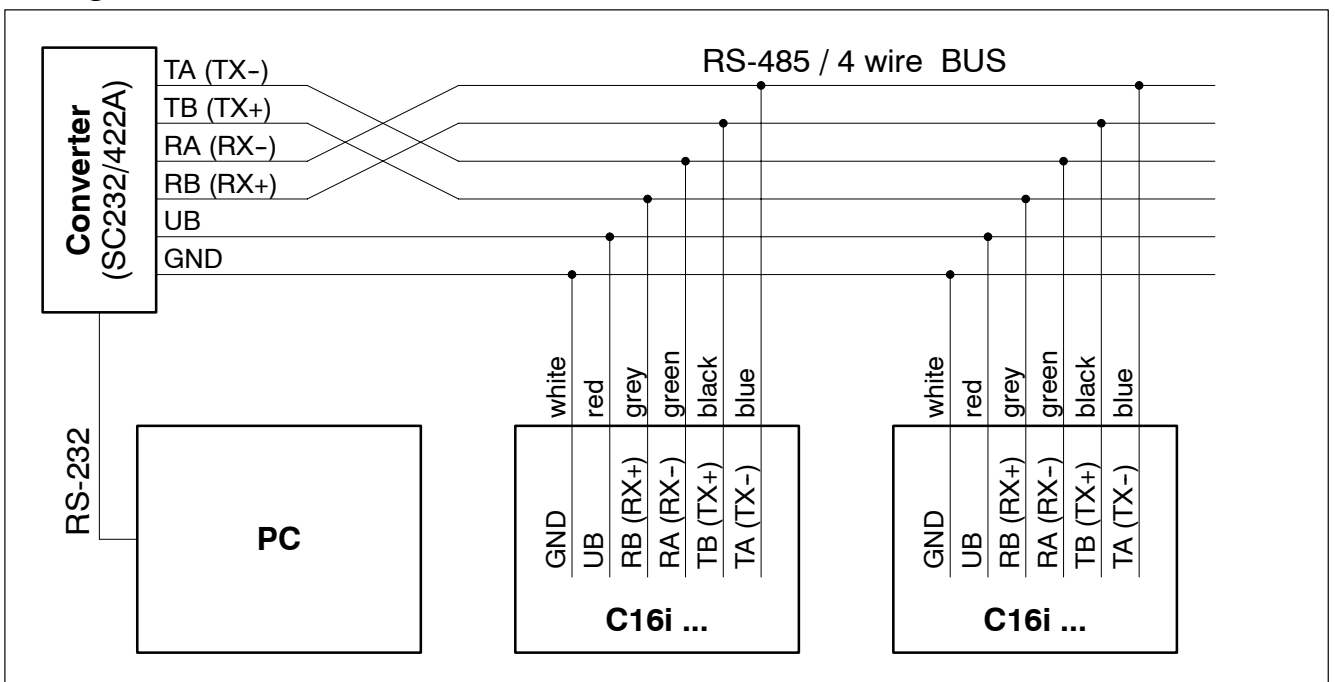
Max. capacities:
20t ... 60t



Special features

- Digital output signal (RS-485/4-wire)
- Self restoring rocker pin
- Simple to install
- Stainless steel material, laser welded, IP68
- Legal for trade verification according to OIML R60 up to 3000d
- Meets EMC / ESD requirements according to EN 45 501
- Inbuild overvoltage protection

Wiring code





Type		C16i D1				C16i C3			
Max. capacity (E_{max})		20t	30t	40t	60t	20t	30t	40t	60t
Accuracy class accord. to OIML R60 Max. numbers of load cell verification intervals (n_{LC})		D1 (0.0330%) 1000				C3 (0.0180%) 3000			
Min. load cell verification interval (v_{min})	% of E_{max}	0.0200				0.0100			0.0083
Min. scale verification interval (e_{min}) according to EN 45 501 [... LC = max. Number of load cells]	kg	-	-	-	-	5 [6 LC] 10 [10 LC]	10 [10 LC]	10 [6 LC] 20 [10 LC]	10 [4 LC] 20 [10 LC]
Sensitivity (C_n)	digit	1 000 000							
Sensitivity tolerance	%	$\leq \pm 0.0100$							
Temperature effect on sensitivity (TK_C) ¹⁾	% of C_n	$\leq \pm 0.0250$ ¹⁾				$\leq \pm 0.0080$ ¹⁾			
Temperature effect on zero signal (TK_0)	/ 10K	$\leq \pm 0.0285$				$\leq \pm 0.0140$			$\leq \pm 0.0116$
Hysteresis error (d_{hy}) ¹⁾	% of C_n	$\leq \pm 0.0330$ ¹⁾				$\leq \pm 0.0170$ ¹⁾			
Non-Linearity (d_{lin}) ¹⁾	% of C_n	$\leq \pm 0.0300$ ¹⁾				$\leq \pm 0.0180$ ¹⁾			
Creep (d_{cr}), 30 min.		$\leq \pm 0.0330$				$\leq \pm 0.0167$			
Reference excitation voltage (U_{ref})	V (DC)	12							
Nominal range of excitation voltage (B_U)		7 ... 15 ²⁾							
Current consumption	mA	50 ²⁾							
Resolution	Bit	20 (at 1Hz)							
Measuring rate	/ sec	100 50 25 12 6 3 2 1							
Filter mode 0	Hz	8 ... 0.05 (Low pass filter)							
Filter mode 1		8 ... 3 (Low pass filter)							
Asynchrone Interface		RS-485 / 4-wire (Cable lenght up to 500m)							
Baudrate	Baud	1200 ... 38400							
Number of bus adresses		max. 32							
Nominal temperature range (B_T)	°C [°F]	-10 ... +40 [14...104]							
Service temperature range (B_{tu})		-20 ... +70 [-4...158]							
Storage temperature range (B_{tl})		-50 ... +85 [-58...185]							
Limit load (E_L)	% of E_{max}	150							
Breaking load (E_d)		> 350							
Permissible dynamic load (F_{srel}) (vibration amplitude according to DIN 50100)		70							
Deflection at E_{max} (s_{nom}), approx.	mm	0.65	0.75	0.85	1.22	0.65	0.75	0.85	1.22
Weight (G) with cable, approx.	kg	2.2	2.4	3.0	3.8	2.2	2.4	3.0	3.8
Protection class according to EN60529 (IEC529)		IP68 (test conditions 100h at 1m water column) IP69K (water at high pressure, steam jet cleaning)							
Material:	Meas. body + housing Cable fitting Sealing Cable-sheath	stainless steel stainless steel neoprene thermoplastical elastomer							

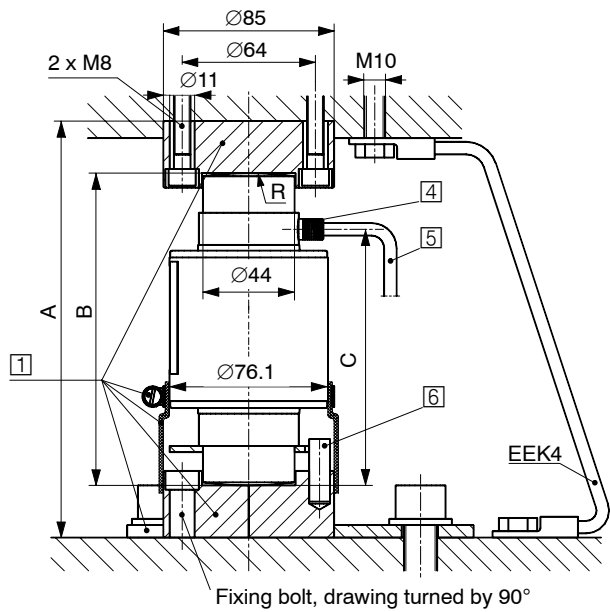
1) The data for Non-Linearity (d_{lin}), Hysteresis error (d_{hy}) and Temperature effect on sensitivity (TK_C) are typical values. The sum of these data meets the requirements for $p_{LC} = 0.8$ according to OIML R60.

2) Please refer to the power supply table in the Installation instructions!

Mounting variation 1:

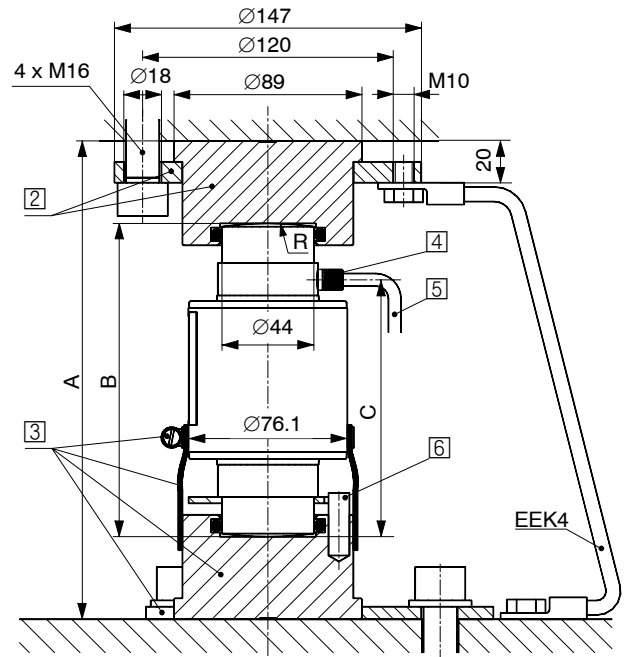
max. load per load cell = 40t

C16A + C16/ZOU44A

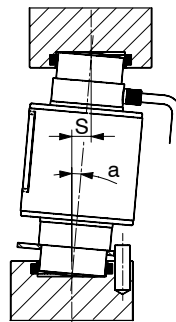
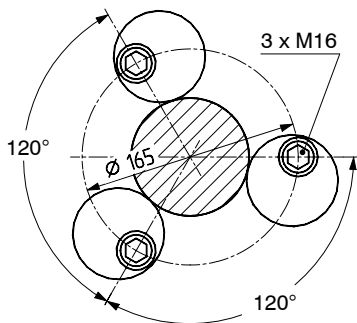


Mounting variation 2:

C16A + EPO3/50t + C16/EPU44A



Top view



- 1 C16/ZOU44A
- 2 EPO3/50t
- 3 C16/EPU44A
- 4 Entry fitting Ø10 for protective cable conduit
- 5 Cable length (standard):
20t + 30t = 12m;
40t + 60t = 20m
- 6 Dowel pin (rotation stop), Ø10 x 30, enclosed in the packing of the load cell

Mount. variation 1	E _{max} C16i	Thrust pieces above + below (1 set = 2 pcs.)		A	B	C	R Ball	a ²⁾	S _{max} ³⁾	F _R ⁴⁾ (% of applied load)	
										at S _{max}	at S = 1mm
20t 30t 40t 60t	C16/ZOU44A ¹⁾			200	150	123	130	5°	13	6.4	0.49
				200	150	123	160	5°	13	9.9	0.76
				200	150	123	180	5°	13	12.2	0.94
				260	210	157	220	3°	11	5.7	0.52

Mount. variation 2	E _{max} C16i	Thrust pieces above below		A	B	C	R Ball	a ²⁾	S _{max} ³⁾	F _R ⁴⁾ (% of applied load)	
										at S _{max}	at S = 1mm
20t 30t 40t 60t	EPO3/50t C16/EPU44A			229	150	123	130	5°	13	6.4	0.49
				229	150	123	160	5°	13	9.9	0.76
				229	150	123	180	5°	13	12.2	0.94
				289	210	157	220	3°	11	5.7	0.52

- 1) Max. load: 40t
- 2) Max. permissible skewing
- 3) Max. permissible lateral displacement of load introduction
- 4) Restoring force

Accessories (to be ordered separately)

Thrust pieces

Mounting Variation 1:

- **C16/ZOU44A** Thrust pieces (stainless steel) for above and below (1 Set = 2 pcs.), for use with C16.../≤60t up to a maximum load per load cell of 40 tons, incl. mounting set 2-9290.0070 (3 excentric washers, 90mm flexible tube, tube clip)

Mounting Variation 2:

- **EPO3/50t** Thrust piece for above, incl. spanner
- **C16/EPU44A** Thrust piece for below, incl. mounting set 2-9290.0070 (3 excentric washers, 90mm flexible tube, tube clip)

Serial-Converter

- Interface converter set **SC232/422A** (see separate Data sheet)



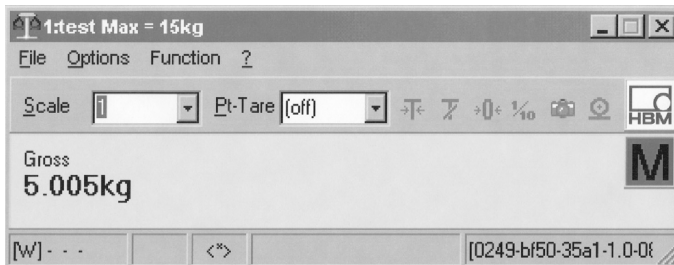
- Conversion of RS-232 in 4-wire-RS-422/485 or in 2-wire-RS-485 (adjustable)
- Galvanic separation
- High EMC-security (metallic housing)
- Power supply range 8 ... 30V DC
- Incl. plug-in power supply unit¹⁾ and PC-connection cable

1) Note:

The plug-in power supply unit supplies 12VDC/700mA and can be used for operation with up to 12x C16i load cells. **Please refer to the power supply table in the Installation instructions of the load cell!**

Software

- **TRADE** (see separate Data sheet)



- Display and storage of legal for trade weighing data
- No special requirements on the PC
- Substitutes indicator and alibi-printer
- Handles up to 8 scales
- PTB Test Certificate D09-00.34 and EU Scale Approval available
- Diagnostic functions
- Installation support as corner adjustment, calibration w/o weights, etc.



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